

UNITED STATES TARIFF COMMISSION

SUMMARIES OF TRADE AND TARIFF INFORMATION

**Prepared in Terms of the Tariff Schedules
of the United States (TSUS)**

Schedule 5

**Nonmetallic Minerals and Products
(In 5 volumes)**

Volume 4

Pressed and Blown Glassware

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SUMMARIES OF TRADE AND TARIFF INFORMATION BY SCHEDULES

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FOREWORD

In an address delivered in Boston on May 18, 1917, Frank W. Taussig, distinguished first chairman of the Tariff Commission, delineated the responsibility of the newly established Commission to operate as a source of objective, factual information on tariffs and trade. He stated that the Commission was already preparing a catalog of tariff information--

designed to have on hand, in compact and simple form, all available data on the growth, development and location of industries affected by the tariff, on the extent of domestic production, on the extent of imports, on the conditions of competition between domestic and foreign products.

The first such report was issued in 1920. Subsequently three series of summaries of tariff information on commodities were published--in 1921, 1929, and 1948-50. The current series, entitled Summaries of Trade and Tariff Information, presents the information in terms of the tariff items provided for in the eight tariff schedules of the Tariff Schedules of the United States (abbreviated to TSUS in these volumes), which on August 31, 1963, replaced the 16 schedules of the Tariff Act of 1930.

Through its professional staff of commodity specialists, economists, lawyers, statisticians, and accountants, the Commission follows the movement of thousands of articles in international commodity trade, and during the years of its existence, has built up a reservoir of knowledge and understanding, not only with respect to imports but also regarding products and their uses, techniques of manufacturing and processing, commercial practices, and markets. Accordingly, the Commission believes that, when completed, the current series of summaries will be the most comprehensive publication of its kind and will present benchmark information that will serve many interests. This project, although encyclopedic, attempts to conform with Chairman Taussig's admonition to be "exhaustive in inquiry, and at the same time brief and discriminating in statement."

This series is being published in 62 volumes of summaries, each volume to be issued as soon as completed. Although the order of publication may not follow the numerical sequence of the items in the TSUS, all items are to be covered. As far as practicable, each volume reflects the most recent developments affecting U.S. foreign trade in the commodities included.

SUMMARIES OF TRADE AND TARIFF INFORMATION

SCHEDULE 5

Volume 4

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This volume, identified as Volume 5:4, is one of a series of 5 volumes on the nonmetallic minerals and products classified under schedule 5 of the Tariff Schedules of the United States (TSUS). Schedule 5 is divided into 3 parts, and this volume is one of two volumes that deal with glass and glass products classified in part 3 of schedule 5.

This volume comprises 19 summaries covering all glass and glass products (except foam glass, glass fibers in bulk, glass blocks, and small pieces of glass used for making mosaics and for other decorative purposes) classifiable under subparts A, C, and D of part 3 of schedule 5. The principal commodities covered in this volume are glass containers, household glassware, glass envelopes for incandescent lamps and vacuum tubes, glass articles used with artificial illumination (except that of candles), protective glasses for dials and gauges, glass Christmas ornaments, laboratory glassware, fused silica and fused quartz articles, and enamels, colors, and glazes used to decorate various articles. The complete list of glass and glass products covered herein is included in Appendix A to this volume.

Foam glass, glass fibers in bulk, glass blocks, and the small pieces of glass for decorative purposes are included in the volume covering subpart B--flat glass and products thereof--of part 3 of schedule 5.

Annual U.S. consumption of all of the glass products covered by this volume is unknown but large. In terms of value, annual apparent consumption of glass containers, household glassware, and glass envelopes for electrical devices--the three most important products--averaged \$1,047 million, \$244 million, and \$196 million, respectively, in 1962-66.

The United States was a net exporter of glass and glass articles during 1962-67. Annual exports of domestic merchandise were valued at an estimated \$70 million whereas the value of imports averaged \$42.5 million a year during the same period. Both exports and imports, however, were small relative to domestic consumption.

The principal foreign markets for domestically produced articles of glass were Canada and Latin America. In terms of value, approximately 75 percent of the exported glassware consisted of glass containers, household glassware, and glass envelopes for electrical apparatus. The United States was a substantial net exporter of glass containers and glass envelopes but a substantial net importer of household glassware.

In terms of value, approximately 50 percent of the annual imports of the glass articles covered by this volume consisted of household glassware, 15 percent, of illuminating glassware, 10 percent, of

fused silica and fused quartz articles, and 10 percent, of glass Christmas ornaments. West Germany, Japan, Italy, and France were the principal sources; other major suppliers were the United Kingdom and Czechoslovakia.

During the 1964-67 trade conference, the United States granted tariff concessions on all but three items—cut or engraved glass smokers' articles valued over \$3 each, other household glassware valued not over 30 cents each, and enamels, colors, and fluxes, other than ground or pulverized. Concessions amounting to 50 percent were made on all items except for certain varieties and value categories of household glassware.

Based on imports in 1967, full concessions were granted on items valued at \$27 million; partial concessions, ranging from 10 percent to 45 percent, were granted on items valued at nearly \$15 million. Imports of the three items on which concessions were not granted were valued at slightly over \$3 million in 1967.

<u>Commodity</u>	<u>TSUS</u> <u>item</u>
Glass containing over 95 percent silica by weight:	
In the mass-----	540.11
Rods, tubes, and tubing-----	540.41, 548.01
Laboratory glassware-----	547.53

Note.--For the statutory description see the Tariff Schedules of the United States Annotated (TSUSA-1968).

U.S. trade position

During the period 1962-66, U.S. consumption of fused silica, fused quartz, and articles thereof was large and growing. Imports were greater than exports but both were small relative to domestic consumption during this period.

Description and uses

Glass containing by weight over 95 percent silica (SiO_2), in crude or unworked masses and in the form of rods, tubes, tubing, and laboratory ware, is covered by this summary. ^{1/} Comparable glass articles containing less than 95 percent silica are included in a summary on items 540.43, 547.55, and 548.03 in this volume. Glass ampoules (item 547.51), gauge glasses (item 547.21), and glass tubing for electrical and electronic purposes (item 547.37) are also covered in summaries in this volume.

Fused silica is either opaque or translucent and is made from high-grade glass sand containing at least 99 percent of silica; fused quartz is transparent and is made from rock crystal that is essentially pure silica. Fused quartz or fused silica in the mass (crude) is an intermediate product which is reworked either by reheating or shaping while cold. The commodities covered by this summary are used because of their physical properties of chemical inertness, impermeability, low coefficient of expansion, and resistance to thermal shock.

The principal users of fused quartz and fused silica glassware are chemical and scientific laboratories and industrial plants. The articles other than industrial equipment and tubing consist chiefly of beakers, flasks, crucibles, muffles, retorts, and other high-silica laboratory ware. Industrial products, which usually are

^{1/} The TSUSA provided that fused quartz and fused silica shall be regarded as glass.

much larger pieces, include absorption vessels, traps, bends, pipes, and a number of other products. Rods, tubes, and tubing are used to fabricate special apparatus; tubes are also used in the manufacture of ultraviolet lamps. Some fused quartz is used to make optical mirrors and lenses.

U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

TSUS item	Commodity	Rate prior to Jan. 1, 1968	U.S. concessions granted in 1964-67 trade confer- ence (Kennedy Round)	
			First stage, effective Jan. 1, 1968	Final stage, effective Jan. 1, 1972
	Glass containing over 95 per- cent silica by weight:			
540.11	In the mass-----	15% ad val.	13% ad val.	7.5% ad val.
540.41	Rods, tubes, and tubing, all the foregoing not processed.	14% ad val.	12.5% ad val.	7% ad val.
547.53	Pharmaceutical, hygienic, and laboratory glassware, whether or not graduated or calibrated.	20% ad val.	18% ad val.	10% ad val.
548.01	Tubes and tubing with ends processed.	14% ad val	12.5% ad val.	7% ad val.

The tabulation above shows the column 1 rates of duty in effect prior to January 1, 1968; these rates had remained unchanged under the Tariff Schedules of the United States from August 31, 1963, through the end of 1967. Also shown are the first and final stages of the annual rate modifications resulting from concessions granted by the United States in the sixth round of tariff negotiations

concluded on June 30, 1967, under the General Agreement on Tariffs and Trade. These concessions, which amount to reductions of 50 percent on each item are being put into effect in five annual stages (see pertinent sections of the TSUSA-1968 reproduced in appendix A for the staged rates).

U.S. consumption, producers and production

Although no official statistics on U.S. consumption of fused silica and fused quartz articles are available, consumption is believed to have increased substantially during the period 1962-67.

Four firms produced finished and semifinished articles of fused silica and fused quartz; three were large multiproduct firms, whereas the fourth produced only articles of fused silica and fused quartz. In addition there were a number of firms that fabricated articles from purchased fused silica and fused quartz in the mass and from rods and tubes. Sales by the four principal producers are estimated to have increased from about \$12 million in 1962 to \$26 million in 1967.

No data are available on the sales of scientific and laboratory articles fabricated from purchased high-silica glass.

U.S. exports and imports

Annual exports of fused silica and fused quartz articles are estimated to have amounted to \$1 million to \$2 million in recent years.

The value of U.S. imports of high-silica glass products during 1962-67 ranged from a low of \$1.6 million in 1963 to a high of \$4.4 million in 1967 and almost doubled during the period (table 1). Approximately 70 percent of the value of annual imports was for rods, tubes, and tubing, 18 percent was for glass in the mass, and 12 percent was for laboratory ware.

West Germany was the principal source of these imports, accounting for about 50 percent of the total value. The United Kingdom, Japan and France, accounted for the greater part of the remainder (tables 2, 3, and 4).

Table 1.--Glass containing over 95 percent silica by weight: U.S.
imports by type, 1962-67

(In thousands of dollars)							
Type	1962	1963	1964	1965	1966	1967	
In the mass-----	<u>1/</u> 562	<u>1/</u> 210	423	607	715	602	
Rods, tubes,							
and tubing----	1,412	1,170	1,462	2,006	3,082	3,278	
Laboratory							
ware-----	342	211	258	307	439	514	
Total-----	2,316	1,591	2,143	2,920	4,236	4,394	

1/ Partly estimated.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 2.--Glass in the mass containing 95 percent silica by weight:
U.S. imports for consumption, by principal sources, 1962-67

(In thousands of dollars)						
Source	1962	1963	1964	1965	1966	1967
West Germany---	562	210	396	577	673	554
Japan-----	-	<u>1</u> /	14	23	39	23
France-----	-	-	<u>1</u> /	6	2	11
Other-----	-	-	2/ <u>13</u>	1	1	3/ <u>14</u>
Total-----	<u>4</u> /562	<u>4</u> /210	423	607	715	602

1/ Less than \$500.

2/ Includes imports valued at 12 thousand dollars from Taiwan.

3/ Includes imports valued at 9 thousand dollars from Canada.

4/ Partly estimated.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 3.--Glass rods, tubes, and tubing containing over 95 percent silica by weight: U.S. imports for consumption, by principal sources, 1962-67

(In thousands of dollars)							
Source	1962	1963	1964	1965	1966	1967	
West Germany-----	746	689	700	936	1,298	1,279	
France-----	210	233	413	581	951	1,027	
Japan-----	40	29	69	133	382	553	
United Kingdom---	323	149	106	149	230	350	
Switzerland-----	93	70	174	204	197	64	
Other-----	-	-	-	3	24	5	
Total-----	1,412	1,170	1,462	2,006	3,082	3,278	

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 4.--Laboratory glassware over 95 percent silica by weight: U.S. imports for consumption, by principal sources, 1962-67

(In thousands of dollars)

Source	1962	1963	1964	1965	1966	1967
United Kingdom-----	112	120	143	204	235	256
West Germany---	142	60	90	73	193	235
Japan-----	-	7	16	21	10	22
Other-----	1/88	24	10	8	1	1
Total-----	342	211	258	307	439	514

1/ Includes imports valued at 73 thousand dollars from Canada.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Note.--Because of rounding, figures may not add to the total shown.

<u>Commodity</u>	<u>TSUS item</u>
Glass in the mass, except fused silica and fused quartz-----	540.13
Waste glass-----	540.14

Note.--For the statutory description see the Tariff Schedules of the United States Annotated (TSUSA-1968).

U.S. trade position

Domestic consumption of glass in the mass and waste glass was supplied principally by domestic sources during 1962-66 and exports of these products were small.

Description and uses

This summary covers glass in the mass, waste or scrap glass, and patties or dallies of colored glass which are broken up to make glass mosaic tile. Glass in the mass containing over 95 percent silica (SiO_2) by weight (item 540.11) is covered in the summary on fused silica and fused quartz and articles thereof in this volume.

Glass in the mass, which is glass in crude or unworked blocks, discs, slabs, chunks, and similar forms, is used in the manufacture of other glass products. Waste or scrap glass, generally called cullet, is broken or crushed pieces of glass resulting from the production of glass and glass products. It is used in combination with other materials as part of the ingredients in the glass-furnace. About 30 percent of the glass-furnace batch (the mixture of ingredients used in making glass) consists of waste glass.

U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

TSUS item	Commodity	U.S. concessions granted in		
		Rate	1964-67 trade conference	
		prior to	(Kennedy Round)	
		Jan. 1,	First stage,	Final stage,
		1968	effective	effective
			Jan. 1, 1968	Jan. 1, 1972
	Glass in the mass:			
540.13	Other-----	21% ad	18.5% ad	10.5% ad
		val.	val.	val.
540.14	Waste and scrap			
	glass-----	4% ad	3.5% ad	2% ad
		val.	val.	val.

The tabulation above shows the column 1 rates of duty in effect prior to January 1, 1968; these rates had remained unchanged under the Tariff Schedules of the United States from August 31, 1963, through the end of 1967. Also shown are the first and final stages of the annual rate modifications resulting from concessions granted by the United States in the sixth round of tariff negotiations concluded on June 30, 1967 under the General Agreement on Tariffs and Trade. These concessions, which amount to reductions of 50 percent, are being put into effect in five annual stages (see pertinent sections of the TSUSA-1968 reproduced in appendix A for the staged rates).

Comment

Domestic consumption during 1962-66, of glass in the mass was small; consumption of waste glass, on the other hand, was large since every glass producer and fabricator creates some waste glass. Little waste glass entered trade channels, however, since most waste glass was consumed by the producer. Domestic producers supplied most of the U.S. requirements for both these forms of glass.

Statistics on exports of these forms of glass combined have been reported only for 1965, and the years since. In 1965 exports (by value) amounted to \$281,000; they jumped to \$633,000 in 1966, but dropped to \$267,000 in 1967. Japan was the principal export market, accounting for nearly two-thirds of the total exports in 1965, nearly three-fourths in 1966, and about one-fourth in 1967. Other important

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markets were France, the United Kingdom, and Canada.

Imports of glass in the mass and waste or scrap glass have been reported in official statistics only since August 31, 1963. During the period 1964-67, annual imports of glass in the mass averaged nearly \$54,000, and ranged from a low of \$39,000 in 1964 to a high of \$62,000 in 1966 (table 1). France was the principal source of imports, accounting for one-half to three-fourths of the total in each year. Annual imports of waste or scrap glass averaged \$75,000 during 1964-67 and ranged from a low of \$63,000 in 1967 to a high of \$93,000 in 1966. The United Kingdom supplied from 50 to 80 percent of the total annual imports of waste glass.

Table 1.--Glass in the mass, other, and waste or scrap glass: U.S. imports for consumption and exports of domestic merchandise, 1962-67

(In thousands of dollars)

(in thousands of dollars)

Year	Imports <u>1/</u>			Exports <u>2/</u>
	Glass	Waste	Total	
	in the mass	glass		
1962-----	43	-	43	<u>3/</u>
1963-----	50	46	96	<u>3/</u>
1964-----	39	81	120	<u>3/</u>
1965-----	59	65	124	281
1966-----	62	93	155	633
1967-----	55	63	118	269

1/ Partly estimated for years prior to 1964.2/ Includes glass in the mass and waste or scrap glass.3/ Not separately reported prior to Jan. 1, 1965.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

Table 2.--Glass in the mass, other, and waste or scrap glass: U.S.
imports for consumption, by principal sources, 1963-67

(In thousands of dollars)

Source	1963	1964	1965	1966	1967
United Kingdom-----	33	67	34	53	52
France-----	21	27	31	45	42
Japan-----	9	12	17	11	10
Italy-----	26	6	19	14	7
Other-----	7	8	23	32	7
Total-----	96	120	124	155	118

Source: Compiled from official statistics of the U.S. Department of Commerce.

<u>Commodity</u>	<u>TSUS item</u>
Glass frostings and powder-----	540.15

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

U.S. trade position

Annual domestic consumption of glass frostings and powder was valued at an estimated several million dollars during 1962-66. During this period, the value of imports averaged \$70,000 a year, while that of exports averaged an estimated \$200,000.

Description and uses

Glass frostings and powder are small fragments produced by grinding waste glass. Waste and scrap glass (item 540.14) and glass in the mass (item 540.11, -.13) are covered in other summaries in this volume.

Glass frostings are coarse granules and flakes, while powder is more finely ground, usually to the consistency of flour. Frostings, also called tinsel, are used primarily for decorative purposes on greeting cards, costumes, Christmas tree decorations, and display advertising. Small quantities are also used in luminous paint. Glass powder is used primarily as an abrasive in matchheads and on match-book covers and matchboxes.

U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

TSUS item	Commodity	Rate prior to Jan. 1, 1968	U.S. concessions granted in 1964-67 trade confer- ence (Kennedy Round) First stage, : Final stage, effective : effective Jan. 1, 1968: Jan. 1, 1972
540.15	Glass, crushed, powder- ed or flaked (frostings)-----	15% ad val.	13% ad val.: 7.5% ad val.

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The tabulation above shows the column 1 rate of duty in effect prior to January 1, 1968, which had remained unchanged under the Tariff Schedules of the United States from August 31, 1963, through the end of 1967. Also shown are the first and final stages of the annual rate modifications resulting from a concession granted by the United States in the sixth round of tariff negotiations concluded on June 30, 1967, under the General Agreement on Tariffs and Trade. This concession, which amounts to a reduction of 50 percent, is being put into effect in five annual stages (see pertinent sections of the TSUSA-1968 reproduced in appendix A for the staged rates).

Comment

Annual U.S. consumption of frostings and powder is estimated to have been about several million dollars in recent years. Consumption is believed to have increased slightly during 1962-67 primarily because of increasing demand for glass powder which amounted to approximately 80 percent of consumption during this time.

U.S. producers supplied virtually all of the quantities of frostings and powder consumed in the United States. Frostings were manufactured by one firm situated on the east coast. Glass powder was manufactured by several large domestic glass firms as a byproduct of the manufacture of glass; however, two concerns situated in the northeastern part of the United States, accounted for the predominant portion of the domestic output of glass powder.

Exports of glass powder and frostings are estimated to have amounted to approximately \$200,000 a year during 1962-67. Sweden was the most important purchaser, receiving about a third of the total exports. France and Japan also accounted for a large share of the glass frostings and powder exported.

Imports, which consisted almost entirely of glass frostings, ranged in value from \$54,000 in 1964 to \$90,000 in 1965 and averaged \$70,000 a year during 1962-67. Japan, the principal foreign supplier, accounted for half of the imports of these commodities, followed by West Germany and Sweden (see accompanying table).

Glass frostings and powder: U.S. imports for consumption, by principal sources, 1963-67

(In thousands of dollars)

Source	: 1963	: 1964	: 1965	: 1966	: 1967
Japan-----	1/	20	48	33	40
West Germany-----	1/	30	19	9	8
Sweden-----	1/	-	12	9	5
All other-----	1/	4	11	2/ 16	3/ 21
Total-----	4/ 63	54	90	67	74

1/ Not separately reported prior to Aug. 31, 1963.

2/ Includes imports valued at 11 thousand dollars from Canada.

3/ Includes imports valued at 9 thousand dollars from Canada.

4/ Partly estimated.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

CommodityTSUS
item

Ceramic enamels, colors, glazes and fluxes----- 540.21, -.27

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

U.S. trade position

During 1962-66, the United States was probably the world's largest producer of ceramic enamels, colors, glazes, and fluxes, and was on an export basis by a wide margin.

Description and uses

This summary covers ceramic enamel, color, flux, and glaze preparations usually in the form of powder, granules, and lumps that are used to decorate or make impermeable the surfaces of numerous manufactured products.

These commodities are carefully compounded mixtures of nonmetallic substances that are applied to the surface, then heated to form a glassy (vitreous) coating that adheres to the surface. Although these mixtures become glasslike in their end use, most of them are wholly or partly in a glassy state at an earlier stage of manufacture.

Ceramic enamels consist almost entirely of vitreous or porcelain enamels used for coating metal articles, and are usually marketed in the form of lumps or powder. Vitreous enamel frit is composed of small friable particles produced by quenching the molten enamel mixes in water; it lacks only final grinding with small amounts of clay and an opacifier to become finished enamel.

Glazes are prepared mixtures that are applied as a coating to ceramic articles which are then fired to convert the coating to a glassy state (glaze) thereby decorating the finished product or making it impermeable.

Colors are carefully compounded ceramic materials containing a flux and small percentages of coloring agents (metallic oxides) and are used to decorate finished products. Ceramic fluxes are used to lower the fusing (glass-forming) temperature of the mixtures to which they are added.

The commodities covered by this summary are applied to pottery, glassware, tile, cooking utensils, wall panels, bathroom fixtures, and household appliances such as washers, driers, ranges, and refrigerators.

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U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

TSUS item	Commodity	Rate prior to Jan. 1, 1968	U.S. concessions granted in 1964-67 trade conference (Kennedy Round)	
			First stage, effective Jan. 1, 1968	Final stage, effective Jan. 1, 1972
	Enamels, colors, glazes, and fluxes, all the foregoing of: glass, frit, or calcine:			
540.21:	Ground or pulver- ized-----	12.5% ad val.	11% ad val.	6% ad val.
540.27:	Other-----	34% ad val.	<u>1/</u>	<u>1/</u>

1/ Duty status not affected by trade conference.

The tabulation above shows the column 1 rates of duty in effect prior to January 1, 1968; these rates had remained unchanged under the Tariff Schedules of the United States from August 31, 1963, through the end of 1967. Also shown are the first and final stages of the annual rate modification resulting from a concession on item 540.21 granted by the United States in the sixth round of tariff negotiations concluded on June 30, 1967 under the General Agreement of Tariffs and Trade. This concession, which amounts to a reduction of about 50 percent, is being put into effect in five annual stages (see pertinent sections of the TSUSA-1968, reproduced in appendix A, for the staged rates). No concession was granted in the sixth round on item 540.27.

Comment

U.S. consumption of enamels, colors, glazes, and fluxes is believed to have increased steadily during 1962-66, principally because of increased production and sales of household appliances and bathroom fixtures that are coated with these materials.

U.S. shipments of vitreous enamel frit and ceramic colors were valued at \$37 million in 1954, \$44 million in 1958, and \$62 million in 1963. The value of shipments in 1966 is estimated to have been about \$80 million. If captive production was included, however, the value of annual domestic production of enamel frit and colors would amount

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to several times the value of annual shipments. Enamel frit made up about 60 percent of the value of annual shipments.

Enamels, colors, glazes, and fluxes were produced for sale to the trade by six firms, two of which were engaged exclusively in making these products. The other four were principally engaged in the production of other commodities (primarily chemicals). All six firms were situated in northeastern United States.

Many other firms, engaged in the production of home appliances, bathroom fixtures, and glassware, produced some ceramic enamels and colors for their own use.

U.S. exports of enamel frit and colors during 1962-67 are estimated to have amounted to about \$3.5 million a year, most of which was shipped to Canada, Japan, and Latin America.

Annual imports of enamels, colors, glazes, and fluxes decreased in value from \$165,000 in 1963 to \$84,000 in 1967 (see accompanying table). Nearly all of the imports consisted of specialty products not produced in the United States. The United Kingdom and West Germany, and to a lesser extent, Mexico, were the principal suppliers of the imported products.

Ceramic enamels, colors, glazes, and fluxes: U.S. imports for consumption, by principal sources, 1963-67

(In thousands of dollars)

Item and principal source	1963	1964	1965	1966	1967
Ceramic enamels, colors, glazes, and fluxes:					
Ground or pulverized:					
United Kingdom-----	55	63	72	62	32
France-----	4	5	14	7	-
West Germany-----	20	5	6	9	9
All other-----	1/ 58	11	10	5	2/ 32
Total-----	137	84	102	83	73
Other:					
Mexico-----	7	23	15	9	10
All other-----	3/ 21	6	5	2	1
Total-----	28	29	19	11	11
Grand total-----	165	113	122	94	84

1/ Includes imports valued at 42 thousand dollars from Japan.

2/ Includes imports valued at 21 thousand dollars from Canada.

3/ Includes imports valued at 20 thousand dollars from West Germany.

Source: Compiled from official statistics of the U.S. Department of Commerce.

<u>Commodity</u>	<u>TSUS</u> <u>item</u>
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Solid glass spheres-----	540.33, -.37
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Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

U.S. trade position

U.S. consumption of solid glass spheres is estimated to have amounted to \$10 million to \$12 million a year during 1962-66. Imports, which were about equal to exports, supplied about 1 percent of annual consumption.

Description and uses

Solid glass spheres are frequently called glass shot, globules, ballotini, or industrial marbles (children's toy marbles are covered in schedule 7, pt. 5). Glass spheres are made by heating irregularly shaped pieces of glass waste to approximately the melting point. The small spheres (under 6 mm. in diameter) are formed by suspending the waste glass in the gas-fired furnace; the large spheres are formed by passing the heated waste glass through a rotating auger.

Although most of the glass spheres produced are made from soda-lime glass, some--principally for use by the chemical industry--are made from heat-resistant borosilicate glass.

The most important use for solid glass spheres is as a reflecting medium in highway signs and paints. Paint is applied to the sign or road surface, and then glass spheres less than 1 millimeter in diameter, are blown onto the wet paint. Spheres less than 1 millimeter in diameter are also used to preen and clean metal parts. The beads are projected at high speeds against the metal articles to remove burrs and other surface blemishes, and to produce a satinlike finish on the part.

Glass spheres, generally called marbles, are used as packing in fractionating columns and as separators in agitators used principally in the chemical and petroleum industries. Some spheres are still used in the manufacture of imitation jewelry; however, plastic spheres have practically replaced glass spheres for this use.

U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

TSUS item	Commodity	U.S. concessions granted		
		Rate	in 1964-67 trade confer-	
		prior to:	ence (Kennedy Round)	
		Jan. 1, 1968	First stage,	Final stage,
			effective	effective
			Jan. 1, 1968	Jan. 1, 1972
	Solid glass globules			
	and balls, spherical			
	or approximately			
	spherical in shape,			
	colored or not col-			
	ored, for whatever			
	use intended:			
540.33	Not over 6 mm. in	35% ad	31% ad val.	17.5% ad val.
	diameter.	val.		
540.37	Over 6 mm. in diam-	25% ad	22% ad val.	12.5% ad val.
	eter.	val.		

The tabulation above shows the column 1 rates of duty in effect prior to January 1, 1968; these rates had remained unchanged under the Tariff Schedules of the United States from August 31, 1963 through the end of 1967. Also shown are the first and final stages of the annual rate modifications resulting from concessions granted by the United States in the sixth round of tariff negotiations concluded on June 30, 1967 under the General Agreement on Tariffs and Trade. These concessions, which amount to reductions of 50 percent on each item, are being put into effect in five annual stages (see pertinent sections of the TSUSA-1968 reproduced in appendix A for the staged rates).

U.S. consumption and production

Estimated annual U.S. consumption of solid glass spheres during 1962-66 was about 100 million pounds, valued at \$10 million to \$12 million. In general, consumption was equal to U.S. production since imports and exports were nearly equal in size and were equivalent to about 1 percent of annual production.

About 75 percent of annual consumption consisted of glass spheres used in reflective highway paints. The use of spheres as packing and separators in industrial, chemical, and petroleum equipment was

equivalent to about 15 percent of annual consumption. Most of the remainder were used to preen and clean metal articles and as a reflective medium on photographic screens.

Domestic producers

Five firms manufactured glass spheres in the United States during 1962-66. Two were in the Middle Atlantic States, and the other three were in the Mississippi Valley area. Three of the firms manufactured only spheres with diameters of less than 1 millimeter, principally for use in reflective highway paint, and one produced only the larger spheres for use in chemical and petroleum equipment, whereas the fifth firm produced a full range of spheres. Two of the firms were large multiproduct concerns; the other three were relatively small firms that produced only glass spheres and related products.

Exports

Annual exports of glass spheres are estimated to have amounted to about \$100,000 in recent years. The larger spheres, or marbles, were exported to Europe for use in industrial, chemical, and petroleum equipment; the smaller spheres under 1 millimeter in diameter, were exported to Canada for use in reflective highway paint, and to Mexico for use in the manufacture of tourist trinkets.

Imports

Imports of solid glass spheres were not reported separately in official import statistics until August 31, 1963. During the period 1964-67, imports of glass spheres ranged in value from a low of \$89,000 in 1966 to a high of \$110,000 in 1964 (table 1). In each of the years, 1964-67, at least 70 percent of annual imports were spheres not over 6 millimeters in diameter. Imports consisted principally of glass marbles made from borosilicate glass, for use by the chemical and petroleum industries; virtually no spheres for use in reflective highway paints were imported. By quantity, Japan was the largest supplier of glass spheres during 1964-67, but in terms of value, West Germany accounted for most of the imports (table 2).

SOLID GLASS SPHERES

Table 1.--Solid glass spheres: U.S. imports for consumption, by specified diameters, 1964-67

Item	1964	1965	1966	1967
Solid glass spheres:				
Not over 6 mm. in diameter-	\$77,320	\$79,498	\$73,354	\$69,060
Over 6 mm. in diameter-----	32,314	27,131	15,796	27,443
Total-----	109,634	106,629	89,150	96,503

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 2.--Solid glass spheres: U.S. imports for consumption, by principal sources, 1964-67

Country	1964	1965	1966	1967
	Quantity (1,000 spheres)			
Japan-----	350	167	217	178
West Germany-----	95	106	90	72
United Kingdom-----	18	21	30	-
Other-----	1	10	28	1/ 227
Total-----	464	304	365	477
	Value (1,000 dollars)			
Japan-----	20	11	12	12
West Germany-----	84	88	66	65
United Kingdom-----	4	5	3	-
Other-----	2	3	8	1/ 20
Total-----	110	107	89	97

1/ Includes 213,000 spheres valued at 14 thousand dollars from Canada.

Source: Compiled from official statistics of the U.S. Department of Commerce.

GLASS RODS, TUBES, AND TUBING AND
LABORATORY GLASSWARE

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<u>Commodity</u>	<u>TSUS</u> <u>item</u>
Glass rods, tubes, and tubing-----	540.43, 548.03
Laboratory glassware-----	547.55

Note.--For the statutory description see the Tariff Schedules of the United States Annotated (TSUSA-1968).

U.S. trade position

U.S. consumption of glass rods, tubes, tubing, and laboratory 1/glassware during 1962-66, was large and was supplied by domestic producers. Exports exceeded imports but both were small relative to domestic consumption.

Description and uses

This summary covers rods, tubes, tubing, and laboratory glassware, made of conventional soda-lime and borosilicate glass. Similar glass articles containing over 95 percent silica (SiO_2) by weight (items 540.41, 547.53, and 548.01) are covered in this volume in the summary on fused quartz and fused silica. Summaries on gauge glasses (item 547.21), glass ampoules (item 547.51), and glass tubing for electrical and electronic purposes (item 547.37) are also included in this volume.

Rods, tubes, and tubing are used primarily in forming laboratory glassware, pharmaceutical containers, and medical instruments. Large quantities are also used by the dairy and petroleum industries.

Laboratory glassware includes a wide variety of glass articles designed for laboratory, industrial, pharmaceutical, or hygienic applications. Most of these articles are made from borosilicate glass which is more resistant to shock than is soda-lime glass. Soda-lime glass is used only where shock resistance is not an important factor.

Laboratory glassware has several different types of users including schools, hospitals, industrial laboratories, and medical and scientific research institutions. Nearly all of these institutions and firms demand high quality precision ware, often on short notice

1/ For the purposes of this summary, laboratory glassware refers to pharmaceutical, hygienic, and laboratory glassware.

GLASS RODS, TUBES, AND TUBING AND
LABORATORY GLASSWARE

and, with few exceptions, only the domestic glassware industry is in a position to supply them.

Conventional soda-lime glassware was used almost exclusively by secondary schools in the United States. Borosilicate ware was used by nearly all of the firms and institutions in science and industry.

U.S. tariff treatment

The column 1 (or trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

TSUS item	Commodity	Rate prior to Jan. 1, 1968	U.S. concessions granted in 1964-67 trade conference (Kennedy Round)	
			First stage, effective Jan. 1, 1968	Final stage, effective Jan. 1, 1972
	Glass containing not over 95 percent silica by weight:			
540.43	Rods, tubes, and tubing, all the foregoing not processed.	32.5% ad val.	29% ad val.	16% ad val.
547.55	Pharmaceutical, hygienic, and laboratory glassware, whether or not graduated or calibrated.	42.5% ad val.	38% ad val.	21% ad val.
548.03	Tubes and tubing with ends processed.	32.5% ad val.	29% ad val.	16% ad val.

The tabulation above shows the column 1 rates of duty in effect prior to January 1, 1968; these rates had remained unchanged under the Tariff Schedules of the United States from August 31, 1963 through the end of 1967. Also shown are the first and final stages of the annual rate modifications resulting from concessions granted by the United States in the sixth round of tariff negotiations concluded on June 30, 1967, under the General Agreement on Tariffs and Trade (GATT). These concessions which amount to reductions of about 50 percent are being

put into effect in five annual stages (see pertinent sections of the TSUSA-1968 reproduced in appendix A for the staged rates).

Comment

U.S. consumption and production of the commodities covered by this summary are unknown but believed to be large and increasing. Domestic consumers were supplied almost wholly by U.S. producers during the period 1962-66.

Laboratory glassware encountered competition from similar articles made from plastic and fused silica or fused quartz. Plastic laboratory ware was used particularly by secondary schools but sales of such ware have retarded only slightly the expansion of the market for similar articles of glass.

During 1962-66, laboratory glassware was produced by about 100 firms in over 100 plants situated throughout the United States. Of these firms, five were large multiproduct concerns and the others were small companies producing glassware from tubing purchased from the larger producers.

Data on exports of laboratory glassware made from soda-lime and borosilicate glass were not separately reported during 1962-67 but annual exports are estimated to have amounted to about \$3 to \$4 million during this time. Most of the exported glassware went to Canada, Mexico, and Latin America.

The value of U.S. imports of laboratory glassware rose steadily during 1962-67, to slightly over \$1.1 million in 1967, which was more than double the 1962 figure (see accompanying table). About 85 to 90 percent of the imports (by value) during this 6-year period consisted of finished articles; the remainder was composed of rods, tubes, and tubing.

West Germany accounted for an average 45 percent, the United Kingdom 21 percent, and Japan 15 percent of the total value of annual imports. The remainder came from several other countries.

GLASS RODS, TUBES, AND TUBING AND
LABORATORY GLASSWARE

Table 1.--Laboratory glassware: U.S. imports for consumption,
by principal sources, 1962-67

(In thousands of dollars)						
Source	1962	1963	1964	1965	1966	1967
West Germany-----	124	215	308	300	417	530
United Kingdom-----	144	110	161	158	178	196
Japan-----	65	78	90	98	154	177
Other-----	138	111	93	115	182	230
Total-----	471	514	652	671	931	1,133

Source: Compiled from official statistics of the U.S. Department of Commerce.

<u>Commodity</u>	<u>TSUS</u> <u>item</u>
Optical glass <u>1</u> /:	
Synthetic optical crystal ingots-----	540.61
Lens blanks-----	540.63 -.65
Other optical glass, and polarizing material---	540.67

Note.--For statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

U.S. trade position

The value of U.S. consumption of optical glass during 1962-66 is estimated to have averaged about \$12 million a year. Exports were more than five times as great as imports and were equivalent to about a fourth of estimated U.S. production. Imports amounted to nearly 5 percent of U.S. consumption.

Description and uses

This summary covers not-optically-worked 2/ articles such as optical glass in any form, non-optical-glass blanks for corrective lenses, and synthetic optical crystals in the form of ingots, sheets, and blanks for optical elements. It also includes polarizing material not cut to shape or mounted for use as polarizing optical elements. Optically worked articles are included in summaries on items 708.01 to 708.93.

Optical glass is clear, high-quality glass that meets precision specifications as to its chemical composition, homogeneity, and freedom from physical defects. It is used to manufacture lenses for spectacles, and lenses and prisms for scientific and optical instruments such as binoculars, telescopes, microscopes, and cameras. Non-optical-glass blanks for corrective spectacles are made of plate or sheet glass that does not meet the specifications for optical glass.

1/ For the purposes of this summary, the term "optical glass" is used to describe collectively the items herein.

2/ For the purposes of the TSUS, the term "not optically worked" means that the glass or the synthetic optical crystals have not been subjected to any grinding or polishing incident to surface shaping for producing optical properties.

Synthetic optical crystals include sodium, potassium, and silver chlorides, potassium and cesium bromides, and the fluorides of lithium, which are then sawn or cleaved into blanks that are subsequently optically processed into prisms, lenses, and windows. The finished products are principally used in infrared and ultraviolet optics, X-ray analysis, and in certain military and space devices.

Polarizing material is principally used to make optical elements for use in scientific instruments and certain lighting devices.

U.S. tariff treatment

The column 1 (or trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

TSUS item	Commodity	Rate prior to Jan. 1, 1968	U.S. concessions granted in 1964-67 trade conference (Kennedy Round)	
			First stage,	Final stage,
			effective	effective
			Jan. 1, 1968	Jan. 1, 1972
	Optical glass in			
	any form, in-			
	cluding blanks			
	for spectacle			
	lenses and for			
	other optical			
	elements; non-			
	optical-glass			
	blanks for cor-			
	rective spec-			
	tacle lenses;			
	synthetic			
	optical crys-			
	tals in the			
	form of ingots,			
	segments of			
	ingots, sheets,			
	or blanks for			
	optical			
	elements; all			
	the foregoing			
	not optically			
	worked; polar-			
	izing material,			
	in plates or			
	sheets, not			
	cut to shape			
	or mounted for			
	use as polar-			
	izing optical			
	elements:			
540.61	Synthetic optical:	16.5% ad	9% ad val.	5% ad val.
	crystals in	val.		
	the form of			
	ingots.			
	Lens blanks:			
540.63	Spectacle lens	20% ad	18% ad val.	10% ad val.
	blanks.	val.		
540.65	Other lens	40% ad	36% ad val.	20% ad val.
	blanks.	val.		
540.67	Other optical	50% ad	45% ad val.	25% ad val.
	glass and	val.		
	synthetic			
	optical cry-			
	stals; polar-			
	izing material.			

The tabulation above shows the column 1 rates of duty in effect prior to January 1, 1968, which had remained unchanged under the Tariff Schedules of the United States from August 31, 1963, through the end of 1967. Also shown are the first and final stages of the annual rate modification resulting from concessions granted by the United States in the sixth round of tariff negotiations concluded on June 30, 1967, under the General Agreement on Tariffs and Trade. These concessions, which amount to reductions of about 50 percent, are being put into effect in five annual stages (see pertinent sections of the TSUSA-1968 reproduced in appendix A for the staged rates).

U.S. consumption

The value of annual U.S. consumption of optical glass is estimated to have averaged about \$12 million during the period 1962-66. Of this value, approximately 75 percent was for lens blanks for corrective spectacles, 20 percent was for laboratory, photographic, and industrial uses, and 5 percent was for military and space applications.

U.S. production and producers

The value of U.S. production of optical glass is estimated to have averaged \$15 million a year during the period 1962-66. U.S. production is believed to have declined during this time as a result of increased imports of foreign made spectacles and instruments (predominantly cameras) of which optical glass is an important component.

Optical glass, except for synthetic optical crystals, was produced during 1962-66 by five firms situated in the northeastern part of the United States. These firms were large multiproduct concerns with optical-glass production only a small part of their total output. Virtually all of the synthetic optical crystal ingots and blanks were manufactured by large chemical producers.

Several hundred fabricating firms situated throughout the United States purchased optical-glass blanks from the above-mentioned firms and fabricated finished lenses, prisms, and other optical products. Most of these fabricators were engaged in the production of spectacle lenses.

U.S. exports

The value of U.S. exports has remained fairly constant in recent years, amounting to \$3.8 million in 1962 and \$3.4 million in 1966. During 1962-66, about 88 percent of the exports consisted of spectacle lens blanks, 9 percent of other lens blanks and 3 percent, of other optical glass.

More than half of the optical glass exported went to Canada, Mexico and Brazil. The balance was shipped to numerous countries of Latin America and Europe.

U.S. imports

The value of annual imports of optical glass has risen sharply in recent years, increasing from \$314,000 in 1964 to \$1,161,000 in 1967 (See accompanying table). The increase in value was due principally to greater imports of "other lens blanks," whose value more than tripled during the 1964-67 period. In 1967, the latest year for which detailed statistics are available, 48 percent of the value of imports was for "other lens blanks", and 44 percent was for "other optical glass", the remainder was for spectacle lens blanks. Most of the imports were custom-made specialty items not produced in the United States.

During 1964-67, West Germany supplied about 80 percent (by value) of total imports, while Japan supplied 11 percent, France 4 percent, the United Kingdom 3 percent, and other countries 2 percent.

OPTICAL GLASS, NOT OPTICALLY WORKED

Table 1.--Optical glass: U.S. imports for consumption,
by principal sources, 1963-67

(In thousands of dollars)

Source	1963 ^{1/}	1964	1965	1966	1967
West Germany-----	552	258	374	719	898
Japan-----	15	37	71	91	107
France-----	2	8	^{2/}	29	87
United Kingdom-----	6	5	23	29	33
Other-----	12	6	2	20	36
Total-----	587	314	470	888	1,161

^{1/} Partly estimated.^{2/} Less than \$500.

Source: Compiled from official statistics of the U.S. Department of Commerce.

CommodityTSUS
item

Glass containers----- 545.11, -.17, -.21, -.25, -.27

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

U.S. trade position

In terms of value, U.S. consumption of glass containers averaged a billion dollars annually during the period 1962-66. Nearly all of these containers were supplied by domestic sources. Exports were 10 times as great as imports, but both were small relative to domestic consumption.

Description and uses

This summary covers glass containers (with or without their closures) used for the packing, transporting, or marketing of merchandise, and for home canning and preserving. Glass containers that are imported empty and those that are imported filled but can be reused are covered by this summary. ^{1/} Glass ampoules, (item 547.51), and perfume bottles fitted with ground glass stoppers for boudoir use, (items 546.46 to 546.50), are treated in separate summaries in this volume.

Virtually all glass containers made in the United States are manufactured by a continuous, automated process. New manufacturing techniques are constantly employed as the industry develops thinner, lighter, and stronger glass containers.

Glass containers are used to package, transport, and market various types of liquids and solids such as foods, beverages, pharmaceuticals, perfumes, and chemical products.

^{1/} See TSUS general headnote 6 (b).

U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

TSUS item	Commodity	Rate prior to Jan. 1, 1968	U.S. concessions granted in 1964-67 trade conference (Kennedy Round)	
			First stage, effective Jan. 1, 1968	Final stage, effective Jan. 1, 1972
	Containers (except ampoules) chiefly used: for the packing, transporting, or marketing of merchan- dise, and containers chiefly used for home canning and preserving: all the foregoing, of glass, with or without their closures and whether or not coated with plastics materials: Ordinarily used for perfume or other toilet preparations: or if fitted with or designed for use: with ground glass stoppers:			
545.11	Produced by auto- matic machine--	10% ad val.	9% ad val.	5% ad val.
545.17	Otherwise pro- duced-----	32% ad val.	28.5% ad val.	16% ad val.
545.21	Other:			
	Holding not over 1/4 pint-----	23¢ per gross	20¢ per gross	11¢ per gross
545.25	Holding over 1/4 pint but not over 1 pint-----	3/4¢ per lb.	0.65¢ per lb.	0.37¢ per lb.
545.27	Holding over 1 pint-----	2/3¢ per lb.	0.35¢ per lb.	0.2¢ per lb.

The tabulation above shows the column 1 rates of duty in effect prior to January 1, 1968; these rates had remained unchanged under the

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Tariff Schedules of the United States from August 31, 1963, through the end of 1967. Also shown are the first and final stages of the annual rate modification resulting from concessions granted by the United States in the sixth round of tariff negotiations concluded on June 30, 1967 under the General Agreement on Tariffs and Trade (GATT). These concessions, which amount to reductions of about 50 percent, are being put into effect in five annual stages (see pertinent sections of the TSUSA-1968, reproduced in appendix A, for the staged rates). The ad valorem equivalents on items 545.21, 545.25, and 545.27 were 6, 10.8, and 3 percent, respectively, in 1967.

U.S. consumption

Apparent consumption of glass containers during 1962-66 continued the upward trend of previous years; the value rose 21 percent during the 5-year period. Consumption was valued at \$1,181 million in 1966, nearly all of which was supplied by domestic producers (table 1). Consumption of the various types of containers closely corresponded to U.S. shipments (table 2) since imports were very small relative to domestic consumption. U.S. consumption amounted to about 150 glass containers per person per year.

The principal products competing with glass containers were containers made of metal, plastics, and paper. The chief advantages of the competing articles are their convenience and relative (to glass) unbreakability.

U.S. production

U.S. production of glass containers was valued at an annual average of \$1,067 million during 1962-67 (table 1) and was sufficient to meet nearly all of domestic glass container requirements. Approximately 2 percent of U.S. production was exported during this period.

Domestic shipments of glass containers for domestic consumption paralleled consumption during 1962-66, rising from 24,803 million units (table 2), valued at \$988 million, in 1962, to 29,389 million units, valued at \$1,178 million, in 1966. For the 5-year period there was a 24-percent rise in quantity and a 21-percent rise in value. Annual domestic shipments during the period 1962-66 averaged 26,880 million units, valued at \$1,067 million, which was 24 percent greater in volume and 19 percent greater in value than similar averages for the preceding 5 years.

Although shipments of containers for food increased during 1962-66 (table 2), their ratio to total shipments declined from 41 percent in 1962 to 37 percent in 1966. In contrast, shipments of beverage containers

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increased sharply, and the corresponding ratio rose from 33 to 41 percent during the same period. The annual average of 9,875 million beverage containers for 1962-66 was 69 percent greater than that for the preceding 5-year period. The marked increase in shipments of beverage containers is attributed largely to wide consumer acceptance of disposable glass bottles.

Containers for pharmaceutical preparations and perfume and toiletry products amounted to 12 and 8 percent, respectively, of the average annual shipments of containers in 1962-66. Shipments of containers for household chemicals declined from 5 to 3 percent of total shipments during this time principally because of increased use of plastic containers in this application.

U.S. producers

In 1967 glass containers were manufactured in the United States by 42 firms operating 111 plants which were widely scattered throughout the country to supply the large number of consumers at minimal transportation cost. About 45 plants were situated in the southern section, 31 in the northeastern, 18 in the western, and 17 in the northern section of the United States. Some of the largest firms had subsidiaries and branch plants abroad.

Producers ranged in size from small shops with an output of a few thousand dollars a year, to huge concerns with an annual production of more than \$100 million. The smaller firms employed only a handful of workers and were usually engaged in the production of other glass products also. The dozen largest companies, however, were well diversified and produced numerous glass products, as well as other products not directly connected with the glass container industry. Products other than glass containers produced by the larger firms were not, as a rule, manufactured in the same establishments with glass containers.

Glass container manufacturers expanded their productive capacity in recent years. Several new plants were opened, and existing facilities of some of the larger establishments were enlarged and modernized.

U.S. exports

Exports of glass containers were relatively small, amounting to less than 2 percent of U.S. production during the period 1962-66. The value of U.S. exports of glass containers rose from \$16.6 million in 1962 to \$22.4 million in 1966, and averaged about \$18.6 million a year (table 1). Of the total exports during this time, 43 percent were beverage bottles, 37 percent were pharmaceutical containers, and 20 percent were food and chemical containers.

Most of the glass containers exported in 1962-66 went to Canada, which received about half of U.S. exports each year, and Venezuela, which received about a tenth (table 3). Latin America (including Venezuela) received about two-fifths of the exports.

U.S. imports

In terms of value, U.S. imports of glass containers during 1962-67 averaged about \$2 million a year, which amounted to less than one-half percent of annual domestic consumption. The value of imports increased in these years, however, rising 62 percent (table 4). More than half of the value of total imports in recent years was for containers designed for the packaging of perfumes and toiletry products. Most of the other glass containers imported into the United States during this time were alcoholic beverage bottles, consisting mainly of specialty items imported empty to bottle foreign wines and liquors in the United States. In recent years imports of the smaller bottles consisted principally of dummy liquor bottles for use in display windows.

More than half of the imports of glass containers (by value) came from France during 1962-67 (table 4). Most of the French bottles were for perfume and cosmetics and were imported because they were either specialty products not produced in the United States or prestige items. The majority of the rest of the container imports originated in Japan (25 percent), Canada (5 percent), and countries of Western Europe.

GLASS CONTAINERS

Table 1.--Glass containers: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, 1962-67.

(In thousands of dollars)					
Year	Production	Imports	Exports	Apparent consumption	
1962-----	1,004,261	1,525	16,641	989,145	
1963-----	998,921	1,679	16,539	984,061	
1964-----	1,046,522	1,686	18,044	1,030,164	
1965-----	1,086,821	1,925	19,451	1,069,295	
1966-----	1,200,722	2,438	22,393	1,180,767	
1967-----	<u>1/</u>	2,359	21,093	<u>1/</u>	

1/ Not available.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 2.--Glass containers: U.S. domestic shipments 1/, by type of container, 1962-66.

(In millions of containers)						
Containers for	1962	1963	1964	1965	1966	
Food products-----	10,068	10,072	10,508	11,024	10,788	
Beverages-----	8,077	8,902	9,745	10,611	12,039	
Pharmaceutical prepara-						
tions-----	3,253	3,109	3,188	3,393	3,428	
Perfumes and toiletry						
products-----	2,045	2,026	2,106	2,194	2,299	
Household chemicals-----	1,358	1,278	1,061	991	837	
All products-----	24,803	25,387	26,607	28,213	29,389	

1/ For domestic use.

Source: Compiled from official statistics of the U.S. Department of Commerce.

GLASS CONTAINERS

Table 3.--Glass containers: U.S. exports of domestic merchandise, by principal markets, 1962-67.

(In thousands of dollars)						
Market	1962	1963	1964	1965	1966	1967
Canada-----	8,638	7,868	8,399	8,650	9,547	9,835
Venezuela-----	2,050	1,628	2,155	2,645	1,993	1,774
Guatemala-----	471	618	721	1,109	1,073	610
Panama-----	657	763	815	911	937	937
Dominican						
Republic-----	721	767	778	195	563	331
Philippine						
Republic-----	412	453	602	524	703	556
Ecuador-----	338	398	474	509	626	591
Costa Rica-----	284	346	455	324	353	387
Other-----	3,070	3,698	3,645	4,584	6,598	6,072
Total	16,641	16,539	18,044	19,451	22,393	21,093

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 4.--Glass containers: U.S. imports for consumption, by principal sources, 1962-67.

(In thousands of dollars)						
Source	1962	1963	1964	1965	1966	1967
France-----	737	925	1,012	1,112	1,283	1,188
Japan-----	384	444	426	491	598	598
Canada-----	69	73	40	86	183	153
Switzerland-----	1/	2	2	10	80	85
Italy-----	59	70	66	54	86	72
West Germany-----	69	51	13	14	42	61
Other-----	173	141	127	158	166	202
Total-----	1,491	1,706	1,686	1,925	2,438	2,359

1/ Not available.

Source: Compiled from official statistics of the U.S. Department of Commerce.

<u>Commodity</u>	<u>TSUS</u> <u>items</u>
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Glass inners-----	545.31 -.37
-------------------	-------------

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

U.S. trade position

U.S. consumption of glass inners for vacuum vessels was virtually all supplied by domestic producers during 1962-66. Exports were equal to about 2 percent of U.S. production; imports were negligible.

Description and uses

The glass inners covered by this summary are the double-walled internal glass cylinders of vacuum bottles and containers. Complete vacuum bottles are covered in another volume in a summary on items 790.59, -.62.

Glass inners are made by fitting a specially-blown glass cylinder inside a larger, similarly made glass cylinder; plastic ribs are used to keep the cylinders separate and to make the space between uniform. The area between is then partially evacuated and sealed off by fusing together the ends of the cylinders. The completed inner is then inserted into a plastic or metal jacket to form a vacuum bottle.

Vacuum bottles are used primarily to keep food and beverages near their initial temperature for 4 to 8 hours.

U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

TSUS item	Commodity	Rate prior to Jan. 1, 1968	:U.S. concessions granted :in 1964-67 trade confer- : ence (Kennedy Round) :First stage, : effective :Jan. 1, 1968	:Final stage, : effective :Jan. 1, 1972
	Glass inners designed for vacuum flasks or for other vacuum vessels:			
545.31	Having a capacity of not over 1 pint.	8¢ each + 40% ad val.	7¢ each + 36% ad val.	4¢ each + 20% ad val.
545.34	Having a capacity of over 1 but not over 2 pints.	15¢ each + 40% ad val.	13¢ each + 36% ad val.	7¢ each + 20% ad val.
545.35	Having a capacity of over 2 but not over 4 pints.	20¢ each + 40% ad val.	18.9¢ each + 36% ad val.	10.5¢ each + 20% ad val.
545.37	Having a capacity of over 4 pints.	33¢ each + 40% ad val.	29¢ each + 36% ad val.	16.5¢ each + 20% ad val.

The tabulation above shows the column 1 rates of duty in effect prior to January 1, 1968; these rates had remained unchanged under the Tariff Schedules of the United States from August 31, 1963, through the end of 1967. Also shown are the first and final stages of the annual rate modifications resulting from concessions granted by the United States in the sixth round of trade negotiations concluded on June 30, 1967, under the General Agreement on Tariffs and Trade. These concessions, which amount to reductions of about 50 percent on each item, are being put into effect in five annual stages (see pertinent sections of the TSUSA-1968 reproduced in appendix A for the staged rates).

The average ad valorem equivalents of the compound rates of duty in effect at the end of 1967, based on imports in 1967, were as follows:

<u>TSUS item</u>	<u>Percent</u>
545.31-----	40.7
545.34-----	58.1
545.35-----	43.2
545.37-----	1/41.8

1/ Based on imports in 1966.

U.S. consumption

Estimated annual U.S. consumption in terms of value, of glass inners for vacuum bottles ranged between \$20 and \$25 million in recent years. Approximately 90 percent of the inners were installed in new vacuum bottles; the remainder were used for replacement.

Consumption of inners has been relatively steady in recent years notwithstanding the development of the "widemouth" bottle, which is designed to hold semisolid foods. The changes in consumption patterns from workmen's and school lunch boxes to general recreational uses, plus the development of polyvinyl foam insulating containers, has tended to limit the use of vacuum bottles.

Consumption of replacement inners follows the trend of consumption of vacuum bottles. There usually are differences in design between the inners installed in the bottles manufactured by one producer and those of another. Interchangeability, therefore, is virtually impossible.

U.S. producers and production

During the period 1962-66, three firms produced vacuum bottle inners in the United States--two in New England and the third in the southeast. Two firms produced both inners and complete vacuum bottles; the other firm, a large glass company, produced only inners.

The value of U.S. production of inners ranged between \$20 million and \$25 million a year, of which about \$3 million was for inners for replacement purposes.

Exports and imports

Exports of glass inners and vacuum bottles were not separately classified before January 1, 1965. During the period 1965-67, annual exports of inners averaged 3.9 million units, valued at \$502,000 (table 1); annual exports of vacuum bottles (each containing a

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a glass inner) averaged \$1.6 million annually. Based on quantity, exports to Canada constituted more than 80 percent of the total exports of inners during 1965-67. Canada, Venezuela, and Iran were the principal export markets for vacuum bottles.

Annual imports of glass inners, which were equal to less than one-tenth percent of domestic consumption, averaged about 28,000 units, valued at \$16,600 during 1963-67 (table 2). Japan, Italy, and West Germany supplied the bulk of the small imports during 1963-67 (table 2). Imported inners were not suitable for installation into domestically produced jackets, and were used only as replacement parts for imported vacuum containers.

Table 1.--Glass inners designed for vacuum vessels: U.S. production, imports for consumption, and exports of domestic merchandise, 1963-67

Year	Production ^{1/}	Imports for		Exports	
		consumption			
		Quantity	Value	Quantity	Value
		Units		Units	
1963-----	\$22,900,000	90,498	\$50,014	2/	2/
1964-----	22,300,000	10,024	5,802	2/	2/
1965-----	21,800,000	12,428	2,071	2,759,081	\$333,591
1966-----	2/	6,964	6,437	2,855,586	506,968
1967-----	2/	20,931	18,693	6,082,856	666,424

^{1/} Estimated; based on the production of thermostatic containers.

^{2/} Not available.

Source: Imports and exports compiled from official statistics of the U.S. Department of Commerce.

GLASS INNERS DESIGNED FOR VACUUM VESSELS

Table 2.—Glass inners designed for vacuum vessels: U.S. imports for consumption, by principal sources, 1963-67

Source	1963	1964	1965	1966	1967
Quantity (units)					
Japan-----	61,036	-	36	1,150	75
Hong Kong-----	13,739	-	-	-	-
United Kingdom-----	4,698	-	-	32	-
Italy-----	418	9,456	12,392	3,924	46
All other-----	1/ 10,607	568	-	1,840	2/ 20,810
Total-----	90,498	10,024	12,428	6,946	20,931
Value					
Japan-----	\$18,435	-	\$130	\$2,041	\$365
Hong Kong-----	5,829	-	-	-	-
United Kingdom-----	2,713	-	-	608	-
Italy-----	5,106	\$5,205	1,941	1,930	280
All other-----	1/ 17,931	597	-	1,858	2/ 18,048
Total-----	50,014	5,802	2,071	6,437	18,693

1/ Includes 5,200 units, valued at \$2,633, from Czechoslovakia, and 2,821 units, valued at \$4,999, from Canada.

2/ All from West Germany.

Source: Compiled from official statistics of the U.S. Department of Commerce.

<u>Commodity</u>	<u>TSUS item</u>
Globes and shades-----	545.53
Lamp bases-----	545.55
Chimneys-----	545.65
Other-----	545.67

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

U.S. trade position

U.S. consumption of illuminating glassware was valued at \$39 million in 1966. Imports are estimated to have supplied about 11 percent of consumption in 1962-66 while about 7 percent of U.S. production was exported.

Description and uses

This summary covers illuminating glassware used in connection with artificial illumination except candle illumination. In addition to globes and shades, lamp bases, and chimneys, illuminating glassware includes complete lamps, lanterns, and light fixtures; as well as glass parts for illuminating articles.

Glass lenses and filters for lighting and signal purposes (items 545.61 and 545.62), reflecting lenses and buttons (items 545.63 and 545.64), and prisms and other glass articles (of a type used in chandeliers and wall brackets) and articles made therefrom (item 545.57) are covered in other summaries in this volume. Glass envelopes (bulbs) for incandescent lamps (item 547.31) are also covered in a summary in this volume.

Illuminating glassware is made by pressing or blowing molten glass into molds of the desired shape. The two main manufacturing methods are the hand process wherein the molten glass is introduced into the mold manually, and the machine process wherein the molten glass is fed automatically.

Illuminating glassware varies widely in form and shape and may be either clear or colored, transparent or translucent, plain or decorated. Common decorating processes include silk-screen printing, cutting, hand painting, application of decals, spray painting, sandblasting, and acid etching. (The latter two processes impart a satinlike finish to the glass).

Globes and shades are used extensively with virtually every type of lighting equipment, particularly that used for street lighting and in interior lighting of commercial and industrial buildings. Chimneys are the glass cylinders that were traditionally used with kerosene or oil burning

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lamps, but the vast majority of which are today used with electrical fixtures. Some are still used in lanterns on farms, in camping, for street repair, and for railroad signaling.

Glass lamp bases range in size, shape, type, and quality from small, undecorated, machine-made opal-glass bases, to exquisitely formed bases of Venetian glass and intricately cut bases of lead crystal. They are used principally in table and boudoir lamps and occasionally in wall lamps.

Other illuminating glassware, (item 545.67), includes glass lamps and fixtures, parts not separately enumerated such as founts, breaks, and columns, as well as complete lamps, lanterns, pendants, and all other complete light fixtures of glass.

U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

TSUS item	Commodity	Rate prior to Jan. 1, 1968	U.S. concessions granted in 1964-67 trade conference (Kennedy Round)	
			First stage, effective Jan. 1, 1968	Final stage, effective Jan. 1, 1972
	Illuminating articles :			
	for use in the :			
	household or else- :			
	where in connection :			
	with artificial il- :			
	lumination (except :			
	candle illumination): :			
	in such manner as to:			
	pass, reflect, re- :			
	fract, disperse, :			
	color, or otherwise :			
	affect the light for:			
	practical or orna- :			
	mental purposes; and:			
	parts of any of the :			
	foregoing articles; :			
	any of the foregoing:			
	of glass, and not :			
	optically worked: :			
545.53	Globes and shades-----	28% ad val.	25% ad val.	14% ad val.
545.55	Lamp bases-----	24% ad val.	21.5% ad val.	12% ad val.
545.65	Chimneys-----	30% ad val.	27% ad val.	15% ad val.
545.67	Other, except prisms :			
	and lenses and :			
	filters-----	24% ad val.	21.5% ad val.	12% ad val.

The tabulation above shows the column 1 rates of duty in effect prior to January 1, 1968; these rates had remained unchanged under the Tariff Schedules of the United States from August 31, 1963, through the end of 1967. Also shown are the first and final stages of the annual rate modifications resulting from concessions granted by the United States in the sixth round of tariff negotiations concluded on June 30, 1967 under the General Agreement on Tariffs and Trade. These concessions, which amount to a reduction of 50 percent on each item, are being put into effect in five annual stages (see pertinent sections of the TSUSA-1968 reproduced in appendix A for the stages rates).

U.S. consumption and production

The estimated value of apparent consumption of illuminating glassware increased from \$31 million in 1962 to \$39 million in 1966 (table 1). During the five-year period, 1962-66, estimated consumption rose about 41 percent, probably reflecting an increase in unit value rather than an increase in quantity.

Although consumption of illuminating glassware has increased somewhat in recent years, it has failed to keep up with the expanding market for light fixtures of all types. This is attributed to the increased use of competitive materials such as plastics for globes and shades, and wood and metal for lamp bases. In addition, the expanded use of electrical signals on railroads, electrical warning lights on highway construction projects, and outside lighting on farms has sharply decreased the use of lantern chimneys and globes.

During the period 1962-66, the value of annual production (shipments) increased from an estimated \$31 million in 1962 to \$37 million in 1966 (table 1). Although the value of production showed an upward trend (a 29 percent increase for the five-year period, 1962-66), the annual quantity produced is believed to have stayed about the same from 1962 to 1966. The portion of the U.S. market for illuminating glassware that is supplied by domestic producers gradually diminished during 1962-66.

U.S. production of illuminating glassware, mostly globes and shades, consisted principally (79 percent by value) of products for interior lighting fixtures.

U.S. producers

Illuminating glassware was produced in 1967 by 30 to 40 firms situated chiefly in the upper Ohio Valley. A few of these producers were large companies making a wide range of products, including household and industrial glassware. These large firms produced illuminating glassware by machine methods utilizing automatic or semiautomatic equipment.

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The small firms, which made up the major portion of the U.S. producers, specialized in the manufacture of illuminating glassware. These firms usually employed fewer than 100 persons and used hand-blown or hand-pressed production techniques.

U.S. exports

The value of estimated exports of illuminating glassware declined from about \$3 million in 1962 to \$2.4 million in 1966 (table 1).

In terms of value, globes and shades made up over three-fourths and chimneys about one-sixth of annual exports in recent years. The remainder consisted of lamp bases, lamp parts (such as founts, breaks, and columns), and other illuminating glassware articles.

Canada was the principal recipient of the exported articles. The export market also included South America and Asia.

U.S. imports

The value of imports of illuminating glassware has shown an upward trend in recent years. The value of annual imports nearly doubled during the 6-year period, 1962-67, rising to more than \$4.8 million in 1966, but then declined to \$3.8 million in 1967 (table 2). The upward trend was due both to price increases and to rising demand.

About 46 percent of the value of the imports was for globes and shades, 21 percent for lamp bases, and 5 percent for lamp chimneys. The remainder consisted principally of lamp parts largely of the types not manufactured in the United States. During 1962-67, the value of imports of lamp parts and other illuminating glassware articles rose from \$130,000 in 1962 to over \$1 million in 1967. During this same period, the value of imported globes and shades rose slightly, while the value of imported lamp bases declined.

West Germany supplied an average 22 percent of the 1962-67 imports (by value) of illuminating glassware but its dominant role declined from 33 percent in 1962 to 20 percent in 1967 (table 2). Approximately three-fourths of this glassware was globes, shades, and lamp bases. Italy also declined in importance as the second largest supplier of illuminating glassware. Most of the imports from Italy were evenly distributed between globes and shades, lamp bases, and lamp parts.

Both Mexico and France increased shipments to the United States during 1962-67, Mexico's share rising from less than 1 percent to nearly 12 percent (1965-67) of the U.S. market for imported illuminating glassware. Lamp chimneys, globes, and shades were the principal articles imported

from Mexico. France sent mostly globes, shades, and lamp bases during 1962-67.

The other two major sources of imported illuminating glassware, Sweden and Japan, accounted for 10 and 7 percent, respectively, of the imports in 1962-67. Sweden shipped mostly globes and shades; Japan, lamp parts. The many other countries that accounted for the remainder of the imports sent chiefly globes and shades and lamp parts and other illuminating glassware.

ILLUMINATING GLASSWARE

Table 1.--Illuminating glassware: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, 1962-67

(In thousands of dollars)

Year	Production	Imports	Exports	Apparent consumption ^{1/}	Ratio of imports to consumption
					<u>Percent</u>
1962	^{1/} 31,000	2,586	^{1/} 2,976	30,610	9
1963	^{1/} 32,500	3,182	^{1/} 2,700	32,982	10
1964	32,904	3,605	^{1/} 2,585	33,924	11
1965	35,347	4,119	^{2/} 2,500	36,966	11
1966	36,676	4,842	^{2/} 2,400	39,118	12
1967	^{3/}	3,850	^{3/}	^{3/}	^{3/}

^{1/} Partly estimated

^{2/} Estimated.

^{3/} Not available.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 2.--Illuminating glassware: U.S. imports for consumption, by principal sources, 1962-67

(In thousands of dollars)

Source	1962	1963	1964	1965	1966	1967
West Germany-----	848	934	999	922	864	760
Italy-----	573	633	672	633	774	642
France-----	251	283	423	472	573	565
Mexico-----	14	73	255	477	572	413
Sweden-----	288	353	450	444	443	242
Japan-----	185	200	244	395	326	258
Other-----	427	706	562	776	1,290	970
Total-----	2,586	3,182	3,605	4,119	4,842	3,850

Source: Compiled from official statistics of the U.S. Department of Commerce.

<u>Commodity</u>	<u>TSUS item</u>
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Glass articles used in chandeliers-----	545.57
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Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

U.S. trade position

Annual U.S. consumption of prisms and similar glass articles was valued at several million dollars, 1962-66. Nearly all of these glass products came from foreign countries. There was virtually no U.S. production or exports during 1962-66.

Description and uses

The principal articles covered by this summary are glass prisms and similar small crystal ware used in the assembly of chandeliers and wall brackets. Wholly crystal chandeliers and wall brackets or combination metal and crystal chandeliers in chief value of glass are also covered herein, as are certain larger crystal parts (such as glass chandelier arms) used primarily in chandeliers.

Certain glass articles, which are frequently used in glass chandeliers but which are chiefly used in other illuminating articles, such as lamps, are covered in a summary on item 545.67 in this volume. Combination crystal and metal chandeliers in chief value of metal, are covered in another summary on item 653.39.

The prisms and other small crystal ware are pressed to various shapes and subsequently polished to a high luster. The highest quality prisms are pressed from glass having a high lead content (such glass is more refractive) and subsequently are fully polished on a cork or wooden wheel. Less expensive prisms are pressed from ordinary lime glass (or glass containing a relatively low lead content) and are finished either by fire polishing, acid polishing, or "half" polishing on a wooden wheel.

U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

TSUS item	Commodity	Rate prior to Jan. 1, 1968	U.S. concessions granted in 1964-67 trade confer- ence (Kennedy Round)	
			First stage, effective Jan. 1, 1968	Final stage, effective Jan. 1, 1972
545.57	Illuminating glass- ware: Prisms and other glass arti- cles of a type used in chande- liers and wall brackets, and articles made therefrom.	24% ad val.	21.5% ad val.	12% ad val.

The tabulation above shows the column 1 rate of duty in effect prior to January 1, 1968, which had remained unchanged under the Tariff Schedules of the United States from August 31, 1963, through the end of 1967. Also shown are the first and final stages of the annual rate modifications resulting from a concession granted by the United States in the sixth round of tariff negotiations concluded on June 30, 1967, under the General Agreement on Tariffs and Trade. This concession, which amounts to a reduction of 50 percent, is being put into effect in five annual stages (see pertinent sections of the TSUSA-1968 reproduced in appendix A for the staged rates).

As indicated in general headnote 3(e) mentioned above, products of the U.S.S.R. and other designated Communist countries, which account for a significant portion of imports entered under item 545.57, are dutiable at the TSUS column 2 rate of 60 percent ad valorem.

Comment

During the period 1962-67, U.S. consumption of the commodities covered in this summary approximated imports since--as previously noted--U.S. production and exports were virtually nonexistent. The estimated value of annual consumption rose from \$2.5 million in 1962

to \$3.7 million in 1967 (see accompanying table), although minor declines occurred in 1963 and 1967. The marked increase is attributed to a combination of an upward price trend and an expanding volume of imported articles.

West Germany, which is the principal source of prisms and similar glass articles, gradually expanded its dominance of the U.S. market from 36 percent in 1962 to 47 percent in 1965 before declining to about 43 percent in 1967. Japan's share of the U.S. market was sharply reduced from 28 to 16 percent during 1962-67 while Czechoslovakia retained its normal position of about 20 percent. Italy, although a minor supplier in earlier years, nearly tripled its share (increasing from 5 to 13 percent) of the U.S. market in the 6-year period.

The preponderant portion of the imports consist of prisms and similar crystal articles which were imported by several firms (situated chiefly in New York City) which design and assemble complete chandeliers for distribution to lighting-fixture houses and department stores across the country. Importation of wholly crystal, or combination crystal and metal, chandeliers constitute a minor but significant portion of total imports.

Table 1.--Glass articles used in chandeliers: Imports for consumption, by principal sources, 1962-67

(In thousands of dollars)						
Country	1962	1963	1964	1965	1966	1967
Dutiable at column 1						
rate of duty:						
West Germany-----	894	930	1,057	1,638	1,711	1,596
Japan-----	704	584	505	721	666	604
Italy-----	136	118	152	247	415	463
Austria-----	111	69	65	101	127	111
Other-----	131	141	119	156	228	213
Total-----	1,976	1,842	1,898	2,863	3,147	2,987
Dutiable at column 2						
rate of duty 1/-----	518	523	612	610	658	691
Grand total-----	2,494	2,365	2,510	3,473	3,805	3,678

1/ All from Czechoslovakia except for a thousand dollars' worth from Hungary in 1962 and 1963.

Source: Compiled from official statistics of the U.S. Department of Commerce.

<u>Commodity</u>	<u>TSUS</u> <u>item</u>
Glass lenses and filters-----	545.61, -.62
Glass reflectors-----	545.63, -.64

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

U.S. trade position

The United States was nearly self-sufficient in the production of glass lenses, filters, and reflectors during 1962-66. Imports supplied only about 3 percent of U.S. demand; exports were several times greater than imports.

Description and uses

This summary covers glass lighting and signaling articles and parts thereof, not optically worked, used to transmit or reflect artificial light. It includes lenses and filters that transmit light, and lenses, buttons, and other glass articles that reflect light projected on them.

Related glass articles such as chandelier prisms (item 545.54), gauge glasses (item 547.21), and glass covers (items 547.15 and 547.16) are included in summaries in this volume. Optically worked lenses are covered in schedule 7, volume 2.

Glass lighting articles included in this summary are made from conventional soda-lime glass or, when heat resistance is needed, from borosilicate glass. The articles may be colored or clear. Although there are many standard shapes and sizes, most of these articles are designed for specific applications.

Manufacturing methods consist of preparing molten glass to specification and then pressing or molding it into the desired shape. Finishing processes include annealing and tempering, polishing, frosting, and grinding. The finished product may possess in varying combinations--high physical strength, high resistance to heat and chemicals, good light and color distribution and transmission, permanence of shape, and precise dimensions.

The great bulk of these commodities are used in marine, highway, railroad, and aeronautical traffic-controlling devices, with switchboard and panel lights, and in various automotive light fixtures. They are also used with vehicle lights, as lenses for overhead lights in industrial and commercial buildings, and with floodlights.

U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

TSUS item	Commodity	U.S. concessions granted		
		Rate in 1964-67 trade confer- ence (Kennedy Round)	First stage, effective January 1, 1968	Final stage, effective January 1, 1972
	Illuminating articles for or use in the household or elsewhere in connec- tion with artificial illumination (except candle illumination) in such manner as to pass, reflect, re- fract, disperse, or concentrate, or otherwise affect the light, for practical or ornamental purposes; articles of which reflect or collect or artificial light directed on them for use as, or in connec- tion with, signs, or signals; and parts of any of the foregoing articles; any of the foregoing, of glass, and not optically worked:			
545.61	Lenses and filters, and parts thereof, for lighting and signaling purposes:	26.5% ad val.	23.5% ad val.	13% ad val.
545.62	If Canadian article and original motor vehicle equipment:	Free	1/	1/
545.63	Reflecting lenses, but- tons; and other re- flecting articles used as, or in connection with, signs or signals:	24% ad val.	21.5% ad val.	12% ad val.
545.64	If Canadian article and original motor vehicle equipment:	Free	1/	1/

1/ Duty-free status not affected by trade conference.

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The tabulation above shows the column 1 rates of duty in effect prior to January 1, 1968; these rates had remained unchanged under the Tariff Schedules of the United States from August 31, 1963, through the end of 1967. Also shown are the first and final stages of the annual rate modifications resulting from concessions granted by the United States in the sixth round of tariff negotiations concluded on June 30, 1967, under the General Agreement on Tariffs and Trade. These concessions, which amount to a reduction of about 50 percent, are being put into effect in five annual stages (see pertinent sections of the TSUSA-1968 reproduced in appendix A for the staged rates).

The duty-free treatment of Canadian articles for original motor-vehicle equipment use (items 545.62 and 545.64) was established pursuant to concessions in the United States-Canadian automotive agreement signed in January 1965. From August 31, 1963, through January 17, 1965, imports of lenses and filters had been dutiable at 26.5% ad valorem under item 545.61, and imports of reflecting lenses had been dutiable at 24 percent ad valorem under item 545.63.

U.S. consumption

The value of apparent consumption of light-transmitting and light-reflecting glass articles rose from an estimated \$6.2 million in 1962 to \$8.3 million in 1966 (table 1), most of which was for light-transmitting lenses and filters. Most of the increase was attributed to rising demand for highway and street traffic-lighting glassware.

Although consumption of glass lighting and signaling articles increased in 1962-66, similar articles made from plastics captured a growing proportion of the total market for these items during this period. Reflective lenses were particularly affected and both consumption and production are believed to have declined as plastic prismatic reflectors were substituted for glass reflectors.

U.S. producers and production

U.S. production of the commodities covered by this summary rose during 1962-66 paralleling the apparent increase in consumption. The estimated value of production in 1962 was just under \$7 million compared with \$9 million in 1966 (table 1).

A few producers that manufactured large quantities of lenses by machine methods accounted for most of the U.S. production of lenses and filters. Several smaller firms produced special types of lenses in limited quantities. Production of glass lenses amounted to only a part of the total production of most of these firms; none produced

lenses only. Reflective glass articles were produced by several companies.

U.S. exports and imports

The value of annual U.S. exports (chiefly glass lenses) is estimated to have exceeded \$1 million during 1962-67. About two-thirds of these exports went to Canada.

The value of imports of lighting and signaling glassware ranged from \$179,000 in 1963 to \$323,000 in 1967 and averaged \$255,000 a year (table 2). Since 1963 about 71 percent of the imports (by value) have consisted of light-transmitting lenses and filters; the remainder, of reflecting lenses and buttons.

The imported glass articles were chiefly replacement parts for imported foreign cars and motorcycles and simple reflectors of the type marketed by variety stores for use on children's bicycles and automobile license plates.

West Germany supplied 47 to 63 percent of the imports (in terms of value) during 1962-67 (table 2). Japan supplied about 15 percent after 1964, while imports from the United Kingdom declined sharply from about 14 percent of the total in 1962 to about 3 percent in 1967. The remainder of the imported lighting and signaling glassware came from a number of countries, including Sweden, Canada, and France.

Table 1.--Lenses, filters, and reflecting articles: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, 1962-67

Year	Produc- tion <u>1</u> / :	Imports :	Exports <u>2</u> / :	Apparent consump- tion :	Ratio of imports to con- sumption
	<u>1,000</u> dollars	<u>1,000</u> dollars	<u>1,000</u> dollars	<u>1,000</u> dollars	Percent
1962-----	6,961	<u>1</u> / 190	1,000	6,151	3
1963-----	7,520	<u>1</u> / 179	1,000	6,699	3
1964-----	6,921	304	1,000	6,225	5
1965-----	9,647	261	1,000	8,908	3
1966-----	9,043	275	1,000	8,318	3
1967-----	<u>3</u> /	323	1,000	<u>3</u> /	<u>3</u> /

1/ Partly estimated.

2/ Estimated.

3/ Not available.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 2.--Lenses, filters, and reflecting articles: U.S. imports for consumption, by principal sources, 1962-67

(In thousands of dollars)

Source	1962 ^{1/}	1963 ^{1/}	1964	1965	1966	1967
West Germany-----	108	101	143	123	174	202
Japan-----	<u>2/</u>	1	29	40	41	47
Sweden-----	5	15	25	19	15	10
United Kingdom-----	27	27	37	33	7	8
Canada-----	<u>2/</u>	-	48	16	15	7
France-----	45	30	2	1	-	7
Other-----	5	6	20	28	23	41
Total-----	190	179	304	261	275	323

^{1/} Partly estimated; data not separately reported until Aug. 31, 1963.

^{2/} Less than \$500.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 3.--Glass lenses and filters: U.S. imports for consumption, by principal sources, 1962-67

Source	1962	1963	1964	1965	1966	1967
Quantity (1,000 pieces)						
West Germany-----	1/	1/	1,181	915	861	704
United Kingdom-----	1/	1/	76	99	36	63
Japan-----	1/	1/	56	86	70	42
Italy-----	1/	1/	12	6	9	33
Other-----	1/	1/	13	28	31	47
Total-----	1/	1/	1,339	1,134	1,008	890
Value (1,000 dollars)						
West Germany-----	2/ 101	2/ 87	134	123	128	159
United Kingdom-----	2/ 20	2/ 19	23	29	7	7
Japan-----	3/	2/ 2	25	35	34	28
Italy-----	2/ 1	3/	7	2	6	22
Other-----	2/ 33	2/ 23	8	7	10	22
Total-----	2/ 156	2/ 131	196	197	185	238

1/ Not available; data not separately reported until Aug. 31, 1963.

2/ Partly estimated.

3/ Less than \$500.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 4.--Glass reflecting lenses: U.S. imports for consumption, by principal sources, 1962-67

(In thousands of dollars)

Source	1962 ^{1/}	1963 ^{1/}	1964	1965	1966	1967
West Germany-----	7	13	9	16	46	44
Japan-----	-	1	4	6	7	19
Sweden-----	1	12	20	15	15	10
Austria-----	-	-	4	5	12	4
Canada-----	-	-	47	16	4	1
Other-----	26	22	22	5	1	5
Total-----	34	48	107	63	85	83

^{1/} Partly estimated; data not separately reported until Aug. 31, 1963.

Source: Compiled from official statistics of the U.S. Department of Commerce.

<u>Commodity</u>	<u>TSUS</u> <u>item</u>
Glass Christmas ornaments:	
Beads-----	545.81
Other-----	545.85, -.87

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

U.S. trade position

Annual U.S. consumption of glass Christmas ornaments in 1962-66 is estimated to have been valued at several million dollars, nearly half of which was supplied by imports. U.S. exports are believed to have been negligible during this period.

Description and uses

Christmas ornaments covered by this summary are glass beads, balls, bells, drums, cones, and other shapes designed primarily for use as tree decorations. Christmas ornaments of other materials, including plastics, (item 772.95, -.97) and Christmas tree decorations of tinsel wire, lame, bullion, or metalized yarns (or any combinations of these), (item 748.15) are covered in other summaries.

Glass Christmas ornaments are thin-walled, blown-glass articles usually mass-produced by machine in a highly automated process that rapidly turns out great numbers of standard, undecorated blanks in various shapes and sizes. Most of the standard ornaments are manufactured directly from molten glass but some are made from purchased glass tubing that is subsequently heated and blown into the desired shape. The more elaborate ornaments are produced by hand or in simple machines.

The blanks are then decorated by machine or hand using a variety of decorating techniques.

Christmas ornaments are used chiefly in the decoration of Christmas trees, but many are also used to decorate wreaths, packages, table centerpieces, and commercial window and counter displays.

U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

TSUS item	Commodity	Rate prior to Jan. 1, 1968	:U.S. concessions granted :in 1964-67 trade confer- : ence (Kennedy Round)	
			:First stage, : effective :Jan. 1, 1968	:Final stage : effective :Jan. 1, 1972
	: Christmas ornaments of			
	: glass:			
545.81	: Beads-----	: 12% ad	: 10.5% ad	: 6% ad val.
		: val.	: val.	: val.
	: Other:			
545.85	: Valued not over \$7.50:	: 40% ad	: 36% ad val.	: 20% ad
	: per gross.	: val.	: val.	: val.
545.87	: Valued over \$7.50	: 25.5% ad	: 22.5% ad	: 12.5% ad
	: per gross.	: val.	: val.	: val.

The tabulation above shows the column 1 rates of duty in effect prior to January 1, 1968; these rates had remained unchanged under the Tariff Schedules of the United States from August 31, 1963, through the end of 1967. Also shown are the first and final stages of the annual rate modifications resulting from concessions granted by the United States in the sixth round of tariff negotiations concluded on June 30, 1967, under the General Agreement on Tariffs and Trade. These concessions, which amount to a reduction of about 50 percent, are being put into effect in five annual stages (see pertinent sections of the TSUSA-1968 reproduced in appendix A for the staged rates).

U.S. consumption

Annual U.S. consumption of Christmas ornaments is estimated to have risen sharply in recent years. From 1962 to 1966 the number of ornaments consumed in the United States increased by about 60 percent while their value rose about 70 percent. The greater rise in value was due to a slight increase in unit values during this period.

Consumption of domestically produced ornaments other than glass beads, increased at a slightly greater rate than that of imported ornaments. The ratio between domestically produced and imported ornaments by value remained about the same, however, indicating that the unit value increases occurred principally in imported ornaments.

Population growth and an increasing preference for single-color tree arrangements stimulated the demand for Christmas ornaments. A few ornaments made from other materials, principally unbreakable plastics, competed directly with glass ornaments, as did a variety of articles used to decorate Christmas trees, homes, and business establishments at Christmas time.

U.S. producers and production

Data on domestic production of Christmas ornaments are not available for publication, but both quantity and value are known to have increased during 1962-67.

Most of the U.S. production of blanks during this time was accounted for by one large glass manufacturing firm that marketed a great variety of glass products. Christmas ornaments, however, were only a small part of that producer's total sales. Most of the blanks produced were sold in undecorated form to about four firms that decorated and then distributed the finished articles into wholesale channels. Most of these decorators also produced and decorated some ornaments in their own plants. In addition, one other firm manufactured blanks from purchased glass tubing and decorated sizable quantities of ornaments.

The decorators purchased the ornaments from the principal manufacturer at various stages of production (clear or silvered, lacquered or unlacquered, capped or uncapped) and completed the decorating process in their own plants. These ornaments were further decorated by silk screen stenciling, by hand painting, or by semiautomatic machines that brush-paint simple designs. Most of the ornaments produced in the United States are solid-colored, conventionally shaped ornaments.

Some of the firms that decorated ornaments supplemented their own ornament lines by distributing imported ornaments. The largest of these decorators accounted for about one-half of the sales of domestically produced ornaments during 1962-66 and is believed to have been the largest importer during this period.

U.S. exports and imports

U.S. exports, if any, are believed to have been negligible during the period 1962-67.

The value of U.S. imports of glass Christmas ornaments fluctuated in recent years, averaging slightly more than \$3 million a year (table 1). Annual imports of glass beads in 1963-67 fluctuated irregularly, but averaged about 5 percent of the total value of imports of all glass Christmas ornaments. (Separate data on imports of such beads are not available for years prior to 1963).

Annual imports of ornaments other than glass beads, averaged about 1.5 million gross, valued at about \$3.2 million, in 1962-67 compared with an average of 1.2 million gross, valued at \$2.4 million, during the preceding 5-year period. The changes amounted to a 22-percent increase in quantity and a 33-percent increase in value over the 1957-61 period.

Ornaments valued at not over \$7.50 per gross, made up 92 percent of the quantity and 51 percent of the value of imported Christmas ornaments (except glass beads) in 1962-67, in contrast with 93 and 60 percent, respectively, in 1957-61. The value of imports of ornaments valued at over \$7.50 rose sharply in recent years, reflecting slight increases in quantity and marked increases in unit values.

Japan was the principal source--accounting for 70 percent of the quantity and 49 percent of the value--of imported ornaments valued at not over \$7.50 per gross in 1962-67 (table 2). Poland accounted for an additional 22 percent of the quantity and 38 percent of the value of the imports. The remainder came from a number of countries including Czechoslovakia and West Germany.

During 1962-67 the great bulk of the ornaments valued at over \$7.50 per gross came from West Germany which accounted for about 75 percent of the quantity and 74 percent of the value (table 3). Japan, Austria, and Italy supplied most of the remainder.

GLASS CHRISTMAS ORNAMENTS

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Table 1.--Glass Christmas ornaments 1/: U.S. imports for consumption, by principal sources, 1962-67

(In thousands of dollars)						
Source	1962	1963	1964	1965	1966	1967
West Germany-----	1,040	1,270	1,166	1,200	1,465	1,564
Japan-----	901	770	1,010	1,004	1,111	1,411
Poland-----	917	450	526	567	648	608
Austria-----	158	214	124	207	113	210
Italy-----	62	74	49	70	176	168
All other-----	137	93	101	132	156	195
Total-----	3,215	2,871	2,976	3,180	3,669	4,156

1/ Includes glass Christmas beads.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 2.--Christmas ornaments ^{1/} valued not over \$7.50 per gross:
U.S. imports for consumption, by principal sources, 1962-67

Source	: 1962	: 1963	: 1964	: 1965	: 1966	: 1967
	:	:	:	:	:	:
	Quantity (1,000 gross)					
	:	:	:	:	:	:
Japan-----	1,114	1,044	825	828	771	1,150
Poland-----	440	218	236	259	304	326
Republic of Korea-----	-	-	-	-	22	65
Czechoslovakia-----	42	24	20	24	25	41
West Germany-----	41	77	22	19	28	21
Other-----	23	69	36	12	32	9
Total-----	1,660	1,432	1,139	1,142	1,182	1,612
	:	:	:	:	:	:
	Value (1,000 dollars)					
	:	:	:	:	:	:
Japan-----	774	683	725	686	749	1,050
Poland-----	878	430	504	540	619	564
Republic of Korea-----	-	-	-	-	15	41
Czechoslovakia-----	110	48	49	65	87	116
West Germany-----	193	178	97	96	92	63
Other-----	79	199	40	21	46	19
Total-----	2,034	1,538	1,415	1,408	1,608	1,853
	:	:	:	:	:	:

^{1/} Does not include glass Christmas beads.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 3.--Christmas ornaments 1/ valued over \$7.50 per gross: U.S. imports for consumption, by principal sources, 1962-67

Source	1962	1963	1964	1965	1966	1967
Quantity (1,000 gross)						
West Germany-----	70	90	80	79	93	97
Japan-----	11	3	8	11	13	10
Austria-----	7	3	8	12	6	13
Italy-----	3	3	1	2	6	4
Other-----	5	3	6	7	4	6
Total-----	96	102	103	111	122	130
Value (1,000 dollars)						
West Germany-----	847	1,092	1,069	1,102	1,374	1,501
Japan-----	127	41	113	133	170	133
Austria-----	96	52	107	194	98	205
Italy-----	59	72	49	69	176	165
Other-----	52	31	44	86	48	66
Total-----	1,181	1,288	1,382	1,584	1,866	2,070

1/ Does not include glass Christmas beads.

Source: Compiled from official statistics of the U.S. Department of Commerce.

<u>Commodity</u>	<u>TSUS</u> <u>items</u>
Household glassware:	
Full lead crystal-----	546.11, -.13, -.17
Venetian or Murano-----	546.21, -.23, -.25
Bubble glass-----	546.35
Pressed, tempered-----	546.38
Other glassware:	
Smokers' articles-----	546.40, -.42, -.43, -.44
Perfume bottles-----	546.46, -.48, -.49, -.50
Other-----	546.52, -.54, -.56, -.58, -.59

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

U.S. trade position

U.S. consumption of household glassware was large and many times greater than either imports or exports during 1962-66. Imports exceeded exports considerably. Exports were equal to about 6 percent of domestic production.

Description and uses

This summary covers a great variety of glass articles chiefly used in the household or elsewhere for preparing, serving, or storing food or beverages (or food or beverage ingredients). It also includes other glass household items, smokers' articles, and art and ornamental objects. For the purposes of this summary, the term "household glassware" is used to describe collectively the items herein.

Glass containers (items 545.11 -.27) designed for packing, transporting, and marketing merchandise and for home canning and preserving are covered in another summary in this volume.

Household glassware is produced in a wide range of styles, sizes, colors, qualities, and prices. Commercially, the most important items are tumblers, goblets, other stemware, cups, plates, saucers, miscellaneous tableware, ash trays, fancy perfume bottles, 1/ vases, and the art and ornamental pieces.

1/ Empty bottles sold primarily for decorative value. Bottles as commercial containers for perfume are covered in a summary on items 545.11 and 545.17 in this volume.

Most household glassware is made by machine or hand methods that press or blow molten glass into molds of the desired shape. The principal distinction between machine- and hand-made glassware is in the method of delivering the gob (or "gather") of molten glass to the forming molds. In the machine method, the molten glass is fed automatically from a tank, whereas in the hand method, the molten glass is fed manually. Some glassware is still made (principally in Europe) by the traditional offhand method of hand-gathering molten glass and forming it without the use of a mold.

Approximately 84 percent of the household glassware output in the United States in recent years was machine-made. Nearly all of the remainder was produced by the hand-made process as only very small quantities were made by the traditional offhand method.

In the United States, producers of machine-made glassware differ in many respects from those that make hand-made glassware. The former produce a large volume of low-priced utility glassware in rather large plants with the use of elaborate mechanical equipment. Makers of hand-made glassware produce higher priced or even luxury glassware in smaller plants with relatively simple equipment. In addition, domestically produced hand-made glassware gets strong competition from imports, almost all of which are hand-made, whereas little machine-made glassware is imported. In view of these differences, machine- and hand-made household glassware are treated separately in this summary.

U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

TSUS item	Commodity	Rate prior to Jan. 1, 1968	U.S. concessions granted in 1964-67 trade confer- ence (Kennedy Round)	
			First stage, effective Jan. 1, 1968	Final stage, effective Jan. 1, 1972
	:Articles chiefly used in:			
	: the household or			
	: elsewhere for pre-			
	: paring, serving, or			
	: storing food or bev-			
	: erages, or food or			
	: beverage ingredi-			
	: ents; smokers' arti-			
	: cles, household			
	: articles, and art			
	: and ornamental ar-			
	: ticles, all the			
	: foregoing not spe-			
	: cially provided			
	: for:			
	: Glassware made of			
	: glass containing			
	: by weight over 24			
	: percent lead			
	: monoxide:			
546.11	: Valued not over	: 40% ad	: 36% ad val.	: 20% ad val.
	: \$1 each.	: val.		
546.13	: Valued over \$1 but	: 28% ad	: 25% ad val.	: 14% ad val.
	: not over \$3 each.	: val.		
546.17	: Valued over \$3	: 21% ad	: 18.5% ad	: 10.5% ad
	: each.	: val.	: val.	: val.

HOUSEHOLD GLASSWARE

TSUS item	Commodity	U.S. concessions granted		
		Rate	in 1964-67 trade confer-	ence (Kennedy Round)
		prior	to	First stage, Final stage,
		Jan. 1,	effective	effective
		1968	Jan. 1,	Jan. 1,
			1968	1972
	:Articles chiefly used in:			
	: the household or			
	: elsewhere, etc--Con.:			
	: Glassware, other than			
	: the foregoing,			
	: decorated with			
	: metal flecking,			
	: glass pictorial			
	: scenes, or glass			
	: thread- or ribbon-			
	: like effects, any			
	: of the foregoing			
	: embedded or intro-			
	: duced into the			
	: body of the glass-			
	: ware prior to its			
	: solidification;			
	: millefiori glass-			
	: ware:			
	: Valued not over \$1			
	: each:			
546.21	: Smokers' arti-	: 24% ad	: 21.5% ad	: 12% ad val.
	: cles.	: val.	: val.	
546.23	: Other-----	: 40% ad	: 36% ad val.	: 20% ad val.
	: val.			
546.25	: Valued over \$1	: 25.5% ad	: 22.5% ad	: 12.5% ad
	: each.	: val.	: val.	: val.
546.35	: Glassware, other than	: 25.5% ad	: 24% ad val.	: 20% ad val.
	: the foregoing, col-	: val.		
	: ored prior to soli-			
	: dification, and			
	: characterized by			
	: random distribution			
	: of numerous bubbles,			
	: seeds, or stones,			
	: throughout the mass			
	: of the glass.			

TSUS item	Commodity	Rate prior to Jan. 1, 1968	U.S. concessions granted in 1964-67 trade confer- ence (Kennedy Round)	
			First stage, effective Jan. 1, 1968	Final stage, effective Jan. 1, 1972
	:Articles chiefly used in: : the household or : elsewhere, etc--Con.:			
546.38	: Glassware, other than : the foregoing, : pressed and tough- : ened (specially : tempered), chiefly : used for preparing, : serving, or storing : food or beverages, : or food or beverage : ingredients. : Other glassware: 1/ : Smokers' articles:	: 25% ad : val.	: 22.5% ad : val.	: 12.5% ad : val.
546.40	: Valued not over : \$1 each.	: 24% ad : val.	: 23.5% ad : val.	: 22.5% ad : val. 2/
546.42	: Valued over \$1 but : not over \$3 : each. : Valued over \$3 : each:	: 35% ad : val.	: 32% ad val. : val.	: 22.5% ad : val.
546.43	: Cut or : engraved.	: 22.5% ad : val.	: 3/ :	: 3/ :
546.44	: Other----- : Perfume bottles fit- : ted with ground : glass stoppers:	: 30% ad : val.	: 28% ad val. : val.	: 22.5% ad : val.
546.46	: Valued not over : \$1 each.	: 32% ad : val.	: 29% ad val. : val.	: 17.5% ad : val.
546.48	: Valued over \$1 but : not over \$3 : each. : Valued over \$3 : each:	: 35% ad : val.	: 31% ad val. : val.	: 17.5% ad : val.
546.49	: Cut or : engraved.	: 22.5% ad : val.	: 21% ad val. : val.	: 17.5% ad : val.
546.50	: Other----- :	: 30% ad : val.	: 27% ad val. : val.	: 17.5% ad : val.

See footnotes at end of tabulation.

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HOUSEHOLD GLASSWARE

TSUS item	Commodity	Rate prior to Jan. 1, 1968	U.S. concessions granted in 1964-67 trade confer- ence (Kennedy Round)	
			First stage, effective Jan. 1, 1968	Final stage, effective Jan. 1, 1972
	Articles chiefly used in: the household or elsewhere, etc--Con.			
	Other glassware: 1/			
	Other:			
546.52	Valued not over \$0.30 each.	50% ad val.	3/	3/
546.54	Valued over \$0.30 but not over \$1 each.	50% ad val.	46% ad val.	30% ad val.
546.56	Valued over \$1 but not over \$3 each.	35% ad val.	34% ad val.	30% ad val.
	Valued over \$3 each:			
546.58	Cut or engraved.	22.5% ad val.	21% ad val.	15% ad val.
546.59	Other-----	30% ad val.	27% ad val.	15% ad val.

1/ TSUS items 546.40, -.42, -.43, -.44, -.46, -.48, -.49, -.50, -.52, -.54, -.56, -.58, and -.59 are new tariff classifications effective Jan. 1, 1968. These items replaced TSUS items 546.41, -.45, -.51, -.53, -.55, and -.57, which were used from Aug. 31, 1963, to Dec. 31, 1967. The new TSUS numbers and the corresponding old TSUS numbers are as follows:

<u>New</u>	<u>Old</u>	<u>New</u>	<u>Old</u>
546.40-----	546.41	546.50-----	546.57 (pt.)
546.42-----	546.53 (pt.)	546.52-----	546.51 (pt.)
546.43-----	546.55 (pt.)	546.54-----	546.51 (pt.)
546.44-----	546.57 (pt.)	546.56-----	546.53 (pt.)
546.46-----	546.45	546.58-----	546.55 (pt.)
546.48-----	546.53 (pt.)	546.59-----	546.57 (pt.)
546.49-----	546.55 (pt.)		

2/ 3-stage rate, final stage effective Jan. 1, 1971.

3/ Duty status not affected by trade conference.

The tabulation above shows the column 1 rates of duty in effect prior to January 1, 1968; these rates had remained unchanged under the Tariff Schedules of the United States from August 31, 1963, through the end of 1967. Also shown are the first and final stages of the annual rate modifications resulting from concessions granted by the United States in the sixth round of trade negotiations concluded on June 30, 1967, under the General Agreement on Tariffs and Trade. The concessions, which range from about 17 percent to 50 percent, are being put into effect in five annual stages, except for item 546.40, which is a three-stage concession. (See pertinent sections of the TSUSA-1968 reproduced in appendix A for the staged rates).

U.S. consumption

The apparent consumption shown in tables 1, 2, and 3 is understated because imports are given in foreign value which is not comparable with the wholesale value shown for U.S. production and exports.

Apparent consumption of household glassware, continuing the upward trend of previous years, rose 45 percent during the 5-year period 1962-66. This percentage increase is overstated somewhat; the data for 1964-66 are more nearly representative of the industry (see footnote 1, table 1). For the 3-year period, 1964-66, the value of apparent consumption averaged \$267 million a year.

Percentage data shown in the U.S. production section of this summary are representative of the kinds of household glassware consumed in the United States. Table and kitchenware, glass tumblers, and stemware, in that order, were the principal articles of household glassware consumed during the period 1962-66.

Household glassware competed with china, earthenware, and a great variety of like household articles made from plastics, paper, metal, and wood. Art and ornamental household glassware competed with similar art and ornamental objects made from a wide range of materials.

Machine-made glassware.--Apparent consumption of machine-made glassware--which makes up the bulk of household glassware consumed--has been increasing and averaged \$208 million a year during the 3-year period 1964-66. This level of consumption would be increased only slightly if the foreign value of imports was converted to its wholesale value in the United States. About half of the machine-made household glassware consumed in the United States during 1962-66 was tableware and kitchenware. Large quantities of tumblers and stemware were also consumed.

Hand-made glassware.--Although the apparent consumption shown in table 3 is considerably understated, as previously noted, the upward trend in the data is believed to be fairly constant. The rise in the value of consumption from \$47 million in 1962 to \$66 million in 1966 amounted to a 44 percent increase during the 5-year period 1962-66, that is believed to be representative for this segment of the household glassware industry.

Consumption of hand-made glassware consists principally of stemware and tableware.

U.S. production

Production data available for 1962 and 1963 are not comparable with the data for succeeding years; the 3-year period 1964-66 is believed to be representative of the entire 5-year period 1962-66. The value of annual production of household glassware declined from \$261 million in 1964 to \$254 million in 1965 and then rose to \$275 million in 1966 (table 1). In terms of value, about 46 percent of U.S. production was tableware and kitchenware, 28 percent was tumblers, 11 percent was stemware, and the remainder consisted of a great variety of household glassware. Virtually all of glassware produced domestically was machine-made.

In terms of value, production of tableware and kitchenware declined about 7 percent, but production of tumblers and stemware increased 13 percent and 25 percent, respectively, during the period 1964-66.

Machine-made glassware.--The value of annual production of machine-made glassware during 1964-66 averaged about \$223 million (table 2), of which approximately 52 percent was accounted for by tableware and kitchenware, 30 percent by tumblers, and 7 percent by stemware. The remainder represented smokers' accessories, novelty glass articles, and glass art and ornamental objects.

In the 3-year period 1964-66 production (by value) of tableware and kitchenware declined about 7 percent, while output of stemware rose 25 percent and that of tumblers by 12 percent.

Hand-made glassware.--The value of production of hand-made glassware rose steadily from \$32 million in 1962 to \$45 million in 1966, a 41 percent increase during this time (table 3). Approximately 50 percent of the output during 1962-66 consisted of tableware and kitchenware; 31 percent, of tumblers, and 8 percent, of stemware. The remainder consisted of other table, kitchen, art, and novelty glassware.

For the period 1964-66, production of tumblers and stemware each rose 25 percent, while tableware and kitchenware rose 4 percent.

U.S. producers

Machine-made glassware.--Most of the U.S. production of machine-made household glassware was accounted for by eight firms operating 13 plants situated chiefly in Ohio, Pennsylvania, and West Virginia. These plants were much larger than those that produced hand-made glassware, and employed 1,000 or more workers in each plant. The plants used a continuous, automatic manufacturing process suited to household glass articles for which there was a large market.

Hand-made glassware.--U.S. production of hand-made household glassware was accounted for by about 35 relatively small firms, most of which employed fewer than 200 persons each. Most of these firms were situated in West Virginia, southwestern Pennsylvania, and eastern Ohio. More than half of these firms produced only blown glassware such as tumblers and stemware; about a fourth produced only pressed glassware, such as plates, saucers, and cups; and the remaining firms produced both pressed and blown glassware. Because of inherent differences in the production process, the producers of hand-made glassware manufactured household glassware in a much broader range of sizes, styles, shapes, and colors than did the producers of machine-made glassware.

U.S. exports

Machine-made glassware.--During the period 1962-66, about 6 to 7 percent of annual U.S. production (in terms of value) of household glassware was exported. Approximately 97 percent of these exports were machine-made.

Exports of machine-made glassware rose each year during the 5-year period (table 2) continuing the upward trend of recent years. The increase was 32 percent during 1962-66, in comparison with a 28 percent increase during the preceding 5-year period. The value of exports averaged \$15 million a year during 1962-66 as compared with an annual average of \$11 million in 1957-61.

During the period 1962-66 approximately 46 percent of the exports of machine-made glassware went to Canada (table 4). The bulk of this merchandise was equally divided between tumblers and stemware, kitchenware, and tableware. Only about 6 percent of the exports to Canada were art, ornamental, and novelty glassware.

Venezuela, Australia, and the Republic of South Africa each received about 5 percent of the household glassware exported in 1962-67. The remainder went to Portugal, the United Kingdom, Japan, and to numerous other countries throughout the world.

Hand-made glassware.--Exports of hand-made glassware were equal to about 1 percent of U.S. production of such household glassware. The value of annual exports fluctuated rather sharply, during the period 1962-66, ranging from \$402,000 in 1962 to \$845,000 in 1965 and averaging \$542,000 annually (table 3). The average for the preceding 5 years was \$342,000.

Hand-made table, kitchen, and cooking glassware was exported principally to Canada and Venezuela.

U.S. imports

During the period 1964-67, almost all of the imports consisted of hand-made articles. An estimated 3 to 5 percent of the value of imports during this period represented machine-made glassware, most of which cannot be separated out of the import statistics. Almost all of the imports of household glassware consisted of hand-made articles.

Imports of household glassware rose from 57 million pieces, valued at \$18 million, in 1964, to nearly 60 million pieces, valued at more than \$24 million in 1967 (table 5) and averaged about \$22 million a year during this time as compared with an estimated annual average of \$13 million during the 5 years, 1957-61. In 1964-67, about 68 percent of the value of imported glassware was for miscellaneous glass articles; 16 percent, lead crystal; 13 percent, bubble glass; and 2 percent, Venetian glassware.

Although imports from Italy declined somewhat in 1967, it was still the major source of imported household glassware in recent years (table 6). West Germany ranked second, followed by France, Japan, and Sweden. Numerous other countries, principally Mexico, Ireland, the United Kingdom, and Belgium, supplied the remainder.

Machine-made glassware.--Imports of machine-made household glassware which consisted of pressed and toughened glassware and some other glassware valued at less than \$1 each, entered in small quantities during the period 1964-67. They ranged from an estimated \$540,000 to about \$1.2 million a year and came principally from France, Italy, and West Germany.

Hand-made glassware.--Estimated imports of hand-made household glassware rose steadily to \$18 million in 1964 and then to more than \$23 million in 1967 (table 3), a 45 percent increase for the 4-year period, 1964-67..

For the purposes of this section of the summary, imports are separated into four categories 1/--full lead crystal; Venetian or Murano glassware; bubble glass; and miscellaneous household glassware. Small quantities of machine-made glassware imported are included in the miscellaneous household glassware group.

Full lead crystal.--Imports of lead crystal rose sharply from 1,369,000 articles, valued at \$2,337,000 in 1964 to 2,428,000 articles, valued at \$4,969,000, in 1967 (table 5). The increase in value was due partly to an increase in prices and partly to rising demand. (The quantity of articles imported rose about 77 percent during the 4-year period).

Approximately 57 percent of the quantity and 54 percent of the value of the lead crystal imported during 1964-67 represented articles valued over \$1 and not over \$3 each. Articles valued not over \$1 each accounted for 30 percent of the quantity and 7 percent of the value. Articles valued over \$3 each accounted for 13 percent of the quantity and 39 percent of the value, respectively.

The following tabulation indicates, in percent, the changes in the composition of imports of lead crystal during 1964-67:

Unit value	: 1964	: 1965	: 1966	: 1967	: Average 1964-67
Not over \$1:	:	:	:	:	:
Quantity-----	30	31	30	27	30
Value-----	9	8	7	6	7
Over \$1-not over \$3:	:	:	:	:	:
Quantity-----	60	57	55	57	57
Value-----	58	56	51	50	54
Over \$3:	:	:	:	:	:
Quantity-----	10	12	14	16	13
Value-----	34	36	42	44	39

The data indicate that imports valued over \$3 each, 2/ rose sharply during the time shown as imports valued over \$1 and not over \$3 declined.

West Germany, Ireland, France, and Belgium supplied about 77 percent of the quantity and 75 percent of the value of the imports during 1964-67 (table 7). The United Kingdom, Sweden, and numerous

1/ See appendix A for tariff description of these items.

2/ The average value, 1964-67, was about \$5.50 each.

other countries supplied the remainder. All of the major source nations increased their shipments of lead crystal to the United States during 1964-67.

Venetian or Murano glassware.--Imports of Venetian or Murano glassware rose from 545,000 pieces, valued at \$434,000, in 1964 to 668,000 pieces, valued at \$590,000, in 1966. In 1967 imports declined 25 percent in quantity and 14 percent in value from the 1966 level.

Most of the increase in imports was attributable to glassware objects valued over \$1 each. In 1964 these articles made up 36 percent of the quantity and 70 percent of the value of imported Venetian glassware. By 1967 they had risen to 52 percent of the quantity and 80 percent of the value.

During 1964-67, Italy accounted for about 86 percent of the value of imported Venetian glassware and steadily increased its share of the volume from 59 percent in 1964 to 71 percent in 1967. Japan was the other major source of imported Venetian glassware.

Bubble glass.--Imports of bubble glass, averaged about 10 million pieces, valued at \$3 million, during 1964-67 (table 8). Italy accounted for about 84 percent of the quantity and 90 percent of the value of these imports.

Miscellaneous household glassware.--Imports of miscellaneous household glassware rose from 48 million pieces, valued at \$13 million, in 1964 to 52 million pieces, valued at \$16 million, in 1966 (table 9). The number of pieces imported in 1967 dropped about 8 percent; the value remained virtually unchanged from the preceding year.

In terms of quantity, Japan was the largest supplier of miscellaneous glassware but, in terms of value, that country was either exceeded or equaled by West Germany and Italy.

Approximately 85 percent of the quantity of miscellaneous glassware imported during 1964-67 were articles valued at not over \$1 per piece not including smokers articles and perfume bottles (table 10). These articles accounted for about 55 percent of the value of miscellaneous glassware imports.

Japan dominated the U.S. market for these low-priced imports and steadily expanded its share during 1964-67, as the following tabulation indicates, (in percent of total imports):

Country	: 1964	: 1965	: 1966	: 1967	: Average 1964-67
Japan:	:	:	:	:	:
Quantity-----	: 20	: 21	: 25	: 28	: 24
Value-----	: 11	: 14	: 17	: 20	: 16
France:	:	:	:	:	:
Quantity-----	: 28	: 13	: 10	: 10	: 11
Value-----	: 19	: 9	: 7	: 6	: 7
Mexico:	:	:	:	:	:
Quantity-----	: 13	: 15	: 14	: 11	: 13
Value-----	: 12	: 13	: 13	: 11	: 12
	:	:	:	:	:

The share of imports supplied by the other major source nations, except Sweden, (whose share remained the same) declined in a manner similar to the pattern shown for France. Imports from France in 1964 were far in excess of the amounts normally shipped each year by that country.

Table 1.--Household glassware: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, 1962-67

(In thousands of dollars)								
Year	:	Production	:	Imports	:	Exports	:	Apparent consumption 4/
1962-----	:	<u>1/</u> 195,669	:	<u>2/</u> 11,338	:	13,182	:	198,825
1963-----	:	<u>1/</u> 216,226	:	16,462	:	14,222	:	218,466
1964-----	:	261,010	:	18,100	:	15,874	:	263,236
1965-----	:	253,646	:	20,565	:	16,934	:	257,277
1966-----	:	275,274	:	23,707	:	17,215	:	281,766
1967-----	:	<u>3/</u>	:	24,438	:	19,883	:	<u>3/</u>

1/ Production slightly understated (principally in machine-made glassware) due to incomplete coverage of the industry prior to 1964.

2/ Approximate.

3/ Not available.

4/ Apparent consumption is understated because the value shown for imports is understated relative to its wholesale value in the United States.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 2.--Machine-made household glassware: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, 1962-67

(In thousands of dollars)					
Year	Production	Imports ^{1/}	Exports	Apparent consumption	
1962-----	^{2/} 164,046	490	12,780	151,756	
1963-----	^{2/} 183,208	490	13,815	169,883	
1964-----	223,828	540	15,487	208,881	
1965-----	214,181	800	16,089	198,892	
1966-----	230,629	1,200	16,547	215,282	
1967-----	^{3/}	1,200	19,127	^{3/}	

^{1/} Estimated.

^{2/} Production understated due to incomplete coverage of the industry prior to 1964.

^{3/} Not available.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 3.--Hand-made household glassware: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, 1962-67

(In thousands of dollars)					
Year	Production	Imports ^{1/}	Exports	Apparent consumption ^{3/}	
1962-----	31,623	15,848	402	47,069	
1963-----	33,018	15,972	407	48,583	
1964-----	37,182	17,560	387	54,355	
1965-----	39,465	19,365	845	57,985	
1966-----	44,645	22,507	668	66,484	
1967-----	<u>2/</u>	23,238	756	<u>2/</u>	

^{1/} Partly estimated.

^{2/} Not available.

^{3/} Apparent consumption is understated because the value shown for imports is understated relative to its wholesale value in the United States.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 4.--Machine-made household glassware: U.S. exports of domestic merchandise, by principal markets, 1962-67

(In thousands of dollars)							
Market	1962	1963	1964	1965	1966	1967	
Canada-----	5,695	5,705	6,687	7,340	7,364	7,992	
Venezuela-----	1,138	1,224	1,284	999	849	947	
Australia-----	980	1,155	1,000	799	859	1,574	
Republic of							
South Africa--	342	454	512	747	506	734	
Other-----	4,625	5,277	6,004	6,204	6,969	7,880	
Total-----	12,780	13,815	15,487	16,089	16,547	19,127	

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 5.--Household glassware: U.S. imports for consumption, by type, 1964-67

Type of glassware	1964	1965	1966	1967
	Quantity (1,000 pieces)			
Full lead crystal-----	1,369	1,669	1,940	2,428
Venetian or Murano-----	545	621	668	500
Bubble-----	6,948	10,411	10,292	8,722
Miscellaneous 1/-----	47,780	48,627	52,047	48,089
Total-----	56,642	61,328	64,947	59,739
	Value (1,000 dollars)			
Full lead crystal-----	2,337	2,983	3,720	4,969
Venetian or Murano-----	434	527	590	505
Bubble-----	2,328	3,123	3,236	2,874
Miscellaneous 1/-----	13,001	13,932	16,161	16,090
Total-----	18,100	20,565	23,707	24,438

1/ Includes small quantities of machine-made glassware entered under the classification for pressed and toughened ware and glassware valued not over \$1 each.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 6.—Household glassware: Imports for consumption, by principal sources, 1964-67

Source	1964	1965	1966	1967
Quantity (1,000 pieces)				
Japan-----	9,933	11,307	12,969	13,344
Italy-----	8,879	12,454	13,687	12,102
France-----	13,333	7,458	7,264	6,668
Mexico-----	6,152	6,963	6,800	5,009
West Germany-----	4,230	5,373	5,850	5,571
Sweden-----	2,395	2,179	2,611	2,090
Ireland-----	322	372	401	510
United Kingdom-----	493	436	502	1,277
Belgium-----	596	681	713	601
Other-----	10,310	14,104	14,149	12,567
Total-----	56,643	61,327	64,946	59,739
Value (1,000 dollars)				
Japan-----	1,282	1,633	2,122	2,367
Italy-----	4,639	5,520	6,077	5,543
France-----	2,215	1,783	1,913	2,043
Mexico-----	995	1,119	1,280	1,062
West Germany-----	2,572	2,903	3,640	4,371
Sweden-----	1,359	1,309	1,824	1,815
Ireland-----	632	796	969	1,220
United Kingdom-----	628	634	825	1,037
Belgium-----	379	490	586	647
Other-----	3,399	4,378	4,471	4,333
Total-----	18,100	20,565	23,707	24,438

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 7.--Full lead crystal glassware: U.S. imports for consumption, by principal sources, 1964-67

Source	1964	1965	1966	1967
Quantity (1,000 pieces)				
West Germany-----	345	493	571	881
Ireland-----	275	309	345	447
France-----	179	203	225	319
United Kingdom-----	114	124	168	217
Belgium-----	228	275	313	296
Sweden-----	50	55	95	76
Other-----	179	210	223	192
Total-----	1,370	1,669	1,940	2,428
Value (1,000 dollars)				
West Germany-----	413	595	719	1,218
Ireland-----	611	769	944	1,192
France-----	432	557	647	966
United Kingdom-----	233	284	427	595
Belgium-----	274	366	441	452
Sweden-----	133	152	263	289
Other-----	241	260	279	313
Total-----	2,337	2,983	3,720	4,969

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 8.--Bubble glass: U.S. imports for consumption,
by principal sources, 1964-67

Source	1964	1965	1966	1967
Quantity (1,000 pieces)				
Italy-----	5,523	8,552	8,637	7,292
Japan-----	826	1,282	1,001	633
Mexico-----	325	314	289	312
Other-----	274	263	365	485
Total-----	6,948	10,411	10,292	8,722
Value (1,000 dollars)				
Italy-----	2,105	2,797	2,847	2,525
Japan-----	118	210	220	126
Mexico-----	60	64	83	96
Other-----	45	52	86	127
Total-----	2,328	3,123	3,236	2,874

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 9.--Miscellaneous household glassware: U.S. imports for consumption, by principal sources, 1964-67

Source	1964	1965	1966	1967
Quantity (1,000 pieces)				
West Germany-----	3,867	5,369	5,241	4,678
Italy-----	3,031	3,485	4,549	4,404
Japan-----	8,998	9,814	11,737	12,537
Sweden-----	2,344	2,124	2,514	2,012
France-----	13,123	7,215	7,037	6,341
Mexico-----	5,764	6,650	6,511	4,694
Other-----	10,653	13,970	14,458	13,423
Total-----	47,780	48,627	52,047	48,089
Value (1,000 dollars)				
West Germany-----	2,149	2,307	2,900	3,142
Italy-----	2,148	2,252	2,656	2,538
Japan-----	1,135	1,371	1,839	2,174
Sweden-----	1,225	1,286	1,559	2,012
France-----	6,777	1,223	1,279	1,073
Mexico-----	925	1,071	1,195	961
Other-----	3,641	4,422	4,733	4,677
Total-----	13,001	13,932	16,161	16,090

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 10.--Miscellaneous household glassware valued not over \$1 each ^{1/}: U.S. imports for consumption, by principal sources, 1964-67

Source	1964	1965	1966	1967
	Quantity (1,000 pieces)			
Japan-----	8,281	9,097	10,928	11,363
West Germany-----	3,133	4,639	4,275	3,659
Mexico-----	5,259	6,258	6,369	4,672
Italy-----	1,796	2,293	3,239	3,019
Sweden-----	2,115	1,845	2,081	1,578
France-----	11,545	5,423	4,278	4,044
Other-----	9,785	12,961	13,270	12,439
Total-----	41,914	42,516	44,440	40,774
	Value (1,000 dollars)			
Japan-----	850	1,072	1,446	1,659
West Germany-----	918	988	1,064	1,037
Mexico-----	881	993	1,159	924
Italy-----	681	723	982	862
Sweden-----	828	803	883	758
France-----	1,393	692	584	541
Other-----	1,974	2,455	2,523	2,570
Total-----	7,525	7,726	8,641	8,351

^{1/} Does not include smokers' articles or perfume bottles fitted with ground glass stoppers.

Source: Compiled from official statistics of the U.S. Department of Commerce.

CLOCK AND WATCH GLASSES, OTHER PROTECTIVE GLASSES,
AND GAUGE GLASSES

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<u>Commodity</u>	<u>TSUS</u> <u>item</u>
Clock and watch glasses and other protective glasses:	
Watch glasses-----	547.11, -.13
Other-----	547.15, -.16
Gauge glasses-----	547.21

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

U.S. trade position

Estimated U.S. consumption of the protective glasses covered by this summary was valued at more than \$20 million a year, 1962-66. U.S. producers supplied almost all of the quantities consumed and exported about 1 percent of U.S. production.

Description and uses

This summary covers glass and plastic watch crystals, glass covers used to protect and observe mechanical devices, tubular and nontubular gauge glasses, and noncorrective glass lenses not optically worked.

Related articles covered in other summaries in this volume are unworked optical glass (items 540.61 to 540.67), lenses and filters (items 545.61 and 545.62) and glass rods, tubes and tubing (items 540.41, 540.43, 548.01 and 548.03). Optically worked lenses and elements (items 708.01 to 708.45) are included in another volume.

The glass articles covered by this summary are made from strips of sheet or pressed glass which are cut, ground, pressed, or blown to the desired size and shape. These articles may be flat, cylindrical, prismatic, round, or rectangular, or have one or both surfaces curved. Plastic watch crystals are made by injection molding.

The products covered by this summary are used as watch crystals, and as glass covers for clocks, automotive dashboards, instrument dials, gauges, parking meters, gas meters, water meters, and electric meters. They are also used as noncorrective lenses for goggles and sunglasses provided they are not optically worked.

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CLOCK AND WATCH GLASSES, OTHER PROTECTIVE GLASSES,
AND GAUGE GLASSESU.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

TSUS item	Commodity	Rate prior to Jan. 1, 1968	U.S. concessions granted in 1964-67 trade conference (Kennedy Round)	
			First stage, effective Jan. 1, 1968	Final stage, effective Jan. 1, 1972
	Clock and watch glasses and other pro- tective glasses, in- cluding glass- es for non- corrective spectacles, all the fore- going, with one or both surfaces cur- ved but not optically worked (ex- cept blanks for correct- ive spectacle lenses):			
	Watch glasses:			
547.11	Round-----	15% ad val.	13% ad val.	7.5% ad val.
547.13	Other-----	48% ad val.	43% ad val.	24% ad val.
547.15	Other-----	25% ad val.	22% ad val.	12.5% ad val.
547.16	If Canadian articles and original motor-vehicle equipment.	Free	<u>1/</u>	<u>1/</u>
547.21	Gauge glasses, whether tub- ular or non- tubular.	20.5% ad val.	18% ad val.	10% ad val.

1/ Duty-free status not affected by trade conference.

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The tabulation above shows the column 1 rates of duty in effect prior to January 1, 1968; these rates had remained unchanged under the Tariff Schedules of the United States from August 31, 1963, through the end of 1967. Also shown are the first and final stages of the annual rate modifications resulting from concessions on items 547.11 to 547.15 and 547.21 granted by the United States in the sixth round of tariff negotiations concluded on June 30, 1967, under the General Agreement on Tariffs and Trade. These concessions, which amount to reductions of about 50 percent, are being put into effect in five annual stages (see pertinent sections of the TSUSA-1968 reproduced in appendix A for the staged rates).

The duty-free treatment of Canadian articles for original motor-vehicle-equipment use (item 547.16) was established pursuant to concessions in the United States-Canadian automotive agreement signed in January 1965. From August 31, 1963, through January 17, 1965 imports of other protective glasses had been dutiable at 25 percent ad valorem under item 547.15.

Comment

U.S. consumption of the commodities covered herein is estimated to have been valued at more than \$20 million a year during the period 1962-66. Consumption of watch and clock glasses, gauge glasses, and the various meter glasses rose slowly during this time, but consumption of sunglass lenses, which amounted to an estimated one-third of the value of total consumption, rose sharply.

Glass covers encountered strong competition from plastic articles designed for the same purpose, and substitution occurred in varying degrees in many applications.

In recent years, five firms manufactured watch crystals, three made gauge glasses, and a few large flat-glass firms accounted for most of the production of meter and instrument covers. There were also several small firms that purchased sheet glass and manufactured cover glasses for automotive dashboards. Sunglass and goggle lenses were made by many small firms and shops either for sale to the trade or for use in their own production of sunglasses and goggles.

U.S. exports of watch and clock glasses, cover glasses, gauge glasses, and other protective glasses are estimated to have been valued at about \$200,000 a year in 1962-66. Canada was the principal export market.

Annual U.S. imports of the commodities covered in this summary ranged in value from \$283,000 to \$372,000 in 1962-67 and averaged

CLOCK AND WATCH GLASSES, OTHER PROTECTIVE GLASSES,
AND GAUGE GLASSES

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Table 1.--Clock and watch glasses, other protective glasses, and
gauge glasses: U.S. imports for consumption, by principal
sources, 1962-67

(In thousands of dollars)							
Source	1962	1963	1964	1965	1966	1967	
United Kingdom-----	137	203	87	110	128	99	
Switzerland-----	39	44	91	68	69	60	
Japan-----	31	35	38	29	40	44	
France-----	21	39	29	23	40	41	
Netherlands-----	2	1	27	23	52	35	
Austria-----	22	18	21	28	22	7	
West Germany-----	2	2	8	7	3	2	
Other-----	30	26	26	18	17	23	
Total-----	283	368	327	306	372	311	
	:	:	:	:	:	:	

Source: Compiled from official statistics of the U.S. Department
of Commerce.

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AND GAUGE GLASSES

Table 2.--Watch glasses: U.S. imports for consumption, by
principal sources, 1962-67

(In thousands of dollars)						
Source	1962	1963	1964	1965	1966	1967
Switzerland-----	39	44	91	68	69	60
United Kingdom-----	46	117	49	51	85	54
Japan-----	31	35	38	29	40	44
Netherlands-----	2	1	27	23	52	35
France-----	1	14	17	15	26	27
Other-----	14	19	21	15	16	19
Total-----	132	231	243	201	289	239

Source: Compiled from official statistics of the U.S. Department
of Commerce

<u>Commodity</u>	<u>TSUS item</u>
Envelopes for incandescent electric lamps-----	547.31
Envelopes for other electrical devices-----	547.37

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968)

U.S. trade position

During 1962-66, U.S. consumption of glass envelopes for electric and electronic use was large--nearly \$300 million in 1966--and was supplied almost entirely by U.S. production. Imports amounted to less than 1 percent of U.S. consumption; exports, to about 7 percent of U.S. production.

Description and uses

The glass envelopes (including bulbs and tubes) covered by this summary are the outer glass components used in the manufacture of electric lamps, vacuum tubes, and other electrical devices.

Completed products made from glass envelopes are covered in other summaries. These include electric lamps of all types (items 686.30 to 687.30); electronic tubes (items 687.50 to 687.61); and X-ray tubes (item 709.61).

The basic functions of a glass envelope are to provide an enclosure for the operating parts of incandescent lamps and electronic devices; to provide a means of transmitting light generated within the apparatus; to act as a heat-resistant shield; and to contain a vacuum or an inert atmosphere. Manufacturing processes have not changed appreciably for many years. The changes that have occurred were made to improve the speed and quality of the existing processes.

The most common applications for glass envelopes are in television picture tubes, incandescent and fluorescent lamps, sealed-beam headlights, discharge lighting lamps, and receiving and transmitting electron tubes.

U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

TSUS item	Commodity	Rate prior to Jan. 1, 1968	U.S. concessions granted in 1964-67 trade confer- ence (Kennedy Round)	
			First stage, effective Jan. 1, 1968	Final stage, effective Jan. 1, 1972
	Glass envelopes (in- cluding bulbs and tubes), without fittings, designed for electric lamps, vacuum tubes, or other electrical devices:			
547.31	Bulbs for incandes- cent lamps.	10% ad val.	9% ad val.	5% ad val.
547.37	Other-----	25% ad val.	22% ad val.	12.5% ad val.

The tabulation above shows the column 1 rates of duty in effect prior to January 1, 1968; these rates had remained unchanged under the Tariff Schedules of the United States from August 31, 1963, through the end of 1967. Also shown are the first and final stages of the annual rate modifications resulting from concessions granted by the United States in the sixth round of tariff negotiations concluded on June 30, 1967, under the General Agreement on Tariffs and Trade. These concessions, which amount to reductions of 50 percent, are being put into effect in five annual stages (see pertinent sections of the TSUSA-1968 reproduced in appendix A for the staged rates).

U.S. consumption

The value of annual apparent consumption of electrical and electronic glass envelopes rose sharply during the period 1962-66 (table 1). It rose steadily from \$154 million in 1963 ^{1/} to \$202 million in 1965 and then abruptly increased 48 percent to \$299 million in 1966.

^{1/} Data for 1962 are not comparable with those for the following years.

Most of the increased consumption is attributed to an increased demand for color television sets that use a higher priced tube than do black-and-white sets. About two-thirds of the value of domestic consumption of glass envelopes during 1962-66 was for television tube blanks.

In terms of value, estimated consumption of envelopes for light bulbs, neon and fluorescent lights, and sealed-beam headlights rose from \$50 million in 1962 to \$57 million in 1966. Consumption of glass electron tube blanks is estimated to have amounted to several million dollars a year during 1962-66.

U.S. production and producers

U.S. production of glass envelopes was sufficient to meet domestic demand and to supply a small percentage of world requirements for these products. Approximately 93 percent of U.S. production (shipments) was consumed in the United States, the remainder was exported.

The value of production ranged from \$164 million in 1963 ^{1/} to \$313 million in 1966, most of which was for television tube blanks. The sharp increase in production during the period 1963-66 occurred in the output of color television tubes. Production of envelopes for light bulbs, neon and fluorescent lights, and sealed-beam headlights amounted to 25 to 30 percent of the value of production during this period. In terms of value, glass blanks for electron tubes were equal to about 3 to 4 percent of the output.

U.S. production of glass envelopes during 1962-66 was dominated by three large multiproduct firms. Two of the producers were large glass manufacturing firms, the other was a large electrical apparatus manufacturer that produced envelopes for use in its production of finished electrical products. One of the glass manufacturing companies made envelopes for all electrical applications, the second firm produced envelopes for electrical devices other than light bulbs.

U.S. exports and imports

U.S. exports (by value) of electrical and electronic glass envelopes during 1962-66 were equivalent to about 7 percent of the value of domestic production. From 1964 to 1966, the value of exports averaged \$15.6 million a year, and declined 11 percent (table 2). By value, approximately 50 percent of the exported merchandise was television and cathode ray tube blanks and 23 to 29 percent was light bulb envelopes. The remainder was miscellaneous glass envelopes.

^{1/} Data for 1962 are not comparable with those for the following years.

The principal foreign market for the commodities covered by this summary was Canada, which received from 30 to 43 percent, by value, of annual exports in 1962-66 (table 2). Brazil received about 14 percent a year while the value of annual shipments to Mexico increased from about 10 percent of the total in 1963 to 17 percent in 1966. The remainder went to Argentina, Australia, and many other countries.

The value of annual imports of glass envelopes ranged from \$107,000 to \$475,000 during the period, 1962-67 (table 3). Approximately 22 percent of the value of the imported articles was for light bulb envelopes; the remainder was for glass envelopes for numerous electrical uses. The Netherlands, West Germany, and Japan were the principal suppliers.

Table 1.--Glass envelopes for electrical and electronic apparatus:

U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, 1962-67

(In thousands of dollars)					
Year	Production ^{1/}	Imports	Exports	Apparent Consumption	
1962-----	^{2/} 162,661	119	^{3/} 11,515	151,265	
1963-----	^{2/} 163,834	475	^{3/} 10,444	153,865	
1964-----	190,240	231	^{3/} 16,429	174,042	
1965-----	217,297	107	15,379	202,025	
1966-----	313,304	253	14,599	298,958	
1967-----	^{4/}	340	12,603	^{4/}	

^{1/} Shipments. Includes glass tubing and cane for electron tubes and accessory materials.

^{2/} Not strictly comparable with data for later years because of changes in statistical reporting procedures.

^{3/} Partly estimated.

^{4/} Not available.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 2.--Glass envelopes for electrical and electronic apparatus:
U.S. exports of domestic merchandise, by principal markets,
1962-67

(In thousands of dollars)							
Market	1962	1963	1964	1965	1966	1967	
Canada-----	4,966	3,983	4,892	6,661	5,009	6,887	
Brazil-----	1,723	1,461	1,946	1,320	2,789	288	
Mexico-----	1,318	1,068	1,910	2,355	2,533	665	
Argentina-----	474	479	1,535	1,342	1,062	763	
Australia-----	1,419	951	1,847	1,142	756	641	
Other-----	1,615	2,502	4,299	2,559	2,450	3,359	
Total-----	11,515	10,444	16,429	15,379	14,599	12,603	

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 3.--Glass envelopes for electrical and electronic apparatus:
Imports for consumption, by principal sources, 1962-67

(In thousands of dollars)						
Source	: 1962	: 1963	: 1964	: 1965	: 1966	: 1967
Netherlands-----	71	237	63	46	140	132
West Germany-----	24	34	27	6	20	24
Japan-----	20	192	89	36	34	39
Others-----	4	12	52	19	59	145
Total-----	119	475	231	107	253	340

Source: Compiled from official statistics of the U.S. Department of Commerce.

<u>Commodity</u>	<u>TSUS item</u>
Glass electric insulators:	
With metal fittings-----	547.41
Without metal fittings-----	547.43

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

U.S. trade position

Consumption in the United States of glass insulators, with or without metal fittings, was valued at about \$3.1 million in 1966. Approximately two-thirds of this consumption was supplied by imports; about a fourth of domestic production was exported.

Description and uses

Glass electric insulators covered by this summary may be either plain or fitted with metal parts. Ceramic electric insulators, (items 535.11, 535.14, and 535.15) are covered in another volume as are electric insulators manufactured from other materials.

Glass electric insulators may measure from less than an inch to about a foot, in cross section and may be specially toughened by heat tempering to increase their resistance to shock and impact. The more important shapes of insulators without metal fittings are beads, knobs, cleats, and pin types. Suspension insulators are the only important type with metal fittings.

Glass insulators without metal fittings are generally used for low-voltage electric power distribution and for low-tension telephone, telegraph, and street-lighting systems. They are also used as component parts of all types of electrical and electronic devices. Glass insulators with metal fittings are used principally for high-voltage electric transmission and distribution systems.

U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

TSUS item	Commodity	Rate prior to Jan. 1, 1968	U.S. concessions granted in 1964-67 trade conference (Kennedy Round)	
			First stage, effective Jan. 1, 1968	Final stage, effective Jan. 1, 1972
	Glass electric in-			
	sulators with			
	or without			
	fittings:			
547.41	With metal			
	fittings-----	15% ad	13% ad	7.5% ad
		val.	val.	val.
547.43	Without metal			
	fittings-----	20% ad	18% ad	10% ad
		val.	val.	val.

The tabulation above shows the column 1 rates of duty in effect prior to January 1, 1968; these rates had remained unchanged under the Tariff Schedules of the United States from August 31, 1963, through the end of 1967. Also shown are the first and final stages of the annual rate modifications resulting from concessions granted by the United States in the sixth round of trade negotiations concluded on June 30, 1967, under the General Agreement on Tariffs and Trade. These concessions, which amount to reductions of 50 percent, are being put into effect in five annual stages (see pertinent sections of the TSUSA-1968 reproduced in appendix A for the staged rates).

U.S. consumption

The value of glass insulators, with or without metal fittings, consumed in the United States rose from about \$900,000 in 1962 to more than \$3 million in 1966 (table 1). The sharp rise in consumption was due to sudden and substantial imports of glass insulators with metal fittings (table 3).

The value of estimated consumption of glass insulators without metal fittings averaged about \$896,000 a year in 1962-66, as compared to an annual average of slightly over \$1 million for the preceding 5-year period.

Glass insulators with or without metal fittings competed with a wide variety of ceramic, rubber, plastic, and epoxy-fiberglass insulators designed to perform the same function. New types of wire were introduced that made glass insulators obsolete in certain applications. Glass insulators with metal fittings competed with similar ceramic insulators but probably did not compete with glass insulators without metal fittings.

U.S. production and producers

The value of estimated annual production of glass insulators, all of which were without metal fittings, averaged \$1.2 million during 1962-66, a level 13-percent below the corresponding level for the years 1957-61.

Several small multiproduct glass firms produced all-glass insulators in the United States. The output of insulators was only an insignificant portion of the total sales of any of these firms. No domestic firm produced the recently developed tempered glass insulator with metal fittings that was imported in large quantities in the latter part of the period 1962-67.

U.S. exports and imports

Although the 1962-67 level of exports of domestically produced glass insulators was somewhat lower (15 percent) than the 1957-61 level, annual exports during the latter period were relatively stable. The annual average during 1962-67 was \$330,000 (it was \$389,000 in 1957-61), ranging from \$295,000 in 1965 to \$356,000 in 1966 (table 2).

During 1962-67 Canada was the only country that consistently received large quantities of glass insulators produced in the United States (table 2). Mexico and France also received large shipments but the quantities received varied greatly from year to year. Glass insulators were exported to numerous other countries including the Republic of South Africa, Venezuela, Iran, and Guatemala.

Annual U.S. imports of glass insulators without metal fittings were negligible during 1962-67, their value ranging from \$440 in 1964 to \$1,951 in 1967 (table 3).

U.S. imports of glass insulators with metal fittings were non-existent prior to 1963. In 1963-67, they ranged from 333 insulators, valued at \$200, in 1963 to about 1.1 million, valued at \$2.1 million, in 1966 (table 3). France accounted for nearly all of the imports of glass insulators, particularly those with metal fittings.

Table 1.--Glass insulators: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, 1962-67

(In thousands of dollars)

Year	Production <u>1/</u>	Imports	Exports	Apparent consumption
1962-----	1,233	-	333	900
1963-----	1,196	<u>2/</u>	323	873
1964-----	1,293	121	349	1,065
1965-----	1,093	359	295	1,157
1966-----	1,319	2,123	356	3,086
1967-----	<u>3/</u>	957	327	<u>3/</u>

1/ Estimated.2/ Less than 1 thousand dollars.3/ Not available.

Source: Compiled from official statistics of the U.S. Department of Commerce.

GLASS ELECTRIC INSULATORS

Table 2.--Glass insulators without metal fittings: U.S. exports of domestic merchandise, by principal markets, 1962-67

Market	1962	1963	1964	1965	1966	1967
Quantity (1,000 pounds)						
Canada-----	398	336	598	159	544	547
Mexico-----	176	60	439	847	74	100
France-----	19	10	224	25	228	184
Other-----	595	706	390	240	697	482
Total-----	1,188	1,112	1,651	1,272	1,543	1,313
Value (1,000 dollars)						
Canada-----	115	81	102	51	122	83
Mexico-----	30	13	44	89	16	13
France-----	8	14	41	23	35	36
Other-----	180	215	162	132	182	195
Total-----	333	323	349	295	356	327

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 3.--Glass insulators: U.S. imports for consumption,
by principal sources, 1963-67

Source	1963	1964	1965	1966	1967
Quantity (pieces)					
Without metal fittings:					
France-----	-	-	-	-	540
Hong Kong-----	-	-	-	-	150,000
Other-----	-	2,800	-	800,018	-
Total-----	-	2,800	-	800,018	150,540
With metal fittings:					
France-----	-	72,742	206,342	1,052,523	683,749
Other-----	<u>1/</u> 333	743	2,350	22,205	2,000
Total-----	<u>1/</u> 333	73,485	208,692	1,074,728	685,749
Grand total-----	<u>1/</u> 333	76,285	208,692	1,874,746	836,289
Value					
Without metal fittings:					
France-----	-	-	-	-	\$913
Hong Kong-----	-	-	-	-	1,038
Other-----	-	\$440	-	\$1,589	-
Total-----	-	440	-	1,589	1,951
With metal fittings:					
France-----	-	116,178	\$358,545	2,117,514	952,364
Other-----	\$200	4,112	365	4,296	2,400
Total-----	200	120,290	358,899	2,121,810	954,764
Grand total-----	200	120,730	358,899	2,123,399	956,715

1/ Not separately classified prior to Aug. 31, 1963.

Source: Compiled from official statistics of the U.S. Department of Commerce.

<u>Commodity</u>	<u>TSUS item</u>
Glass ampoules-----	547.51

Note.—For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

U.S. trade position

The value of U.S. consumption of glass ampoules during 1962-66 is believed to have been about \$6 million to \$7 million a year, nearly all of which was supplied by domestic sources. About 10 percent of domestic production was exported.

Description and uses

Glass ampoules are hermetically sealed containers used principally for storing liquid drugs and serums which must be completely isolated from bacteria.

Ampoules are made from glass tubing; one end is closed off and the other is tapered to form a slender neck which is fused shut after the contents are added. The neck must be broken off before the contents can be used.

U.S. tariff treatment

The column 1 (or trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

TSUS item	Commodity	Rate prior to Jan. 1, 1968	U.S. concessions granted in 1964-67 trade confer- ence (Kennedy Round)	
			First stage, effective Jan. 1, 1968	Final stage, effective Jan. 1, 1972
547.51	Glass ampoules-----	25¢ per gross	22¢ per gross	12.5¢ per gross

The tabulation above shows the column 1 rate of duty in effect prior to January 1, 1968, which had remained unchanged under the Tariff Schedules of the United States from August 31, 1963, through the end of 1967. Also shown are the first and final stages of the annual rate modification resulting from a concession granted by the

United States in the sixth round of trade negotiations concluded on June 30, 1967, under the General Agreement on Tariffs and Trade. This concession, which amounts to a reduction of 50 percent, is being put into effect in five annual stages (see pertinent sections of the TSUSA-1968 reproduced in appendix A for the staged rates).

The average ad valorem equivalent of the specific rate of duty in effect at the end of 1967 was 11.9 percent.

U.S. consumption, producers, and production

During the period, 1962-66, annual consumption of glass ampoules is estimated to have amounted to about 300 million to 400 million units valued at \$6 million to \$7 million, virtually all of which were supplied by domestic producers. U.S. consumption is believed to be rising as a result of population growth, rising health standards, and the increasing use of mass-produced drugs.

During the period, 1962-66, glass ampoules were manufactured by more than a dozen firms situated principally in the northeastern part of the United States. The four largest producers were glass manufacturers making a great variety of glass products. Several of the others were manufacturers of laboratory glassware that purchased glass tubing for fabrication into ampoules. The rest were large drug manufacturing firms that bought glass tubing and made ampoules for packaging their own products. The ampoule production by the drug firms was captive inasmuch as it was consumed by the producer.

U.S. exports

Annual exports during the period 1962-66 are estimated to have amounted to about \$650,000. Most of the ampoules were exported to Western Europe and Canada.

U.S. imports

Annual imports of glass ampoules rose sharply in recent years (see accompanying table). During the period 1964-67 they increased from about 630,000 units, valued at \$15,797, in 1964 to 4.5 million units valued at \$65,721 in 1967. The increase in value was due to higher priced ampoules imported from Mexico.

West Germany normally supplied about three-fourth of the imports but in 1965-67 Mexico sent large quantities of ampoules to the United States.

Glass ampoules: U.S. imports for consumption, by principal sources,
1964-67

Source	1964	1965	1966	1967
Quantity (1,000 units)				
West Germany-----	518	1,707	1,325	2,618
Canada-----	-	-	713	-
United Kingdom-----	112	-	58	30
Mexico-----	-	201	301	1,857
Other-----	-	97	-	14
Total-----	630	2,005	2,397	4,519
Value				
West Germany-----	\$12,521	\$17,268	\$ 9,935	\$22,784
Canada-----	-	-	15,742	-
United Kingdom-----	3,276	-	1,377	720
Mexico-----	-	4,000	6,196	41,937
Other-----	-	1,153	-	280
Total-----	15,797	22,421	33,250	65,721

Source: Compiled from official statistics of the U.S. Department of Commerce.

ARTICLES NOT SPECIALLY PROVIDED FOR, OF
GLASS (EXCLUDING TUBING)

133

Commodity

TSUS
item

Articles not specially provided for, of glass-----548.05

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

U.S. trade position

The domestic market for the articles to which this summary relates was supplied principally by domestic producers during 1962-66. Annual U.S. imports are believed to have supplied about 5 percent, by value, of these articles consumed in the United States. Approximately 5 percent of annual domestic production was exported.

Description and uses

This summary covers a wide variety of glass articles not provided for elsewhere in the tariff schedules. It includes godet wheels used in the textile industry, glass door and furniture knobs and handles, birdcage feeding troughs, votive light cups for churches, floats for fishing nets, some types of ruled or etched glass, colored glass toilet partitions, base cups for furniture feet, and a variety of other glass articles.

U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

TSUS item	Commodity	Rate prior to Jan. 1, 1968	U.S. concessions granted in 1964-67 trade confer- ence (Kennedy Round)	
			First stage, effective Jan. 1, 1968	Final stage, effective Jan. 1, 1972
	Articles not specially provided for, of glass:			
548.05	Other (except tubes and tubing with ends processed).	25% ad val.	22% ad val.	12.5% ad val.

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ARTICLES NOT SPECIALLY PROVIDED FOR, OF
GLASS (EXCLUDING TUBING)

The tabulation above shows the column 1 rate of duty in effect prior to January 1, 1968, which had remained unchanged under the Tariff Schedules of the United States from August 31, 1963, through the end of 1967. Also shown are the first and final stages of the annual rate modification resulting from a concession granted by the United States in the sixth round of trade negotiations concluded on June 30, 1967, under the General Agreement on Tariffs and Trade. This concession, which amounts to a reduction of 50 percent, is being put into effect in five annual stages (see pertinent sections of the TSUSA-1968 reproduced in appendix A for the staged rates).

Comment

U.S. production and consumption of the glass products covered herein are estimated to have been valued at several million dollars a year during 1962-66. These articles were manufactured by a large number of firms situated throughout the United States but predominantly in the Northeast. In most cases, the production of any one of these articles accounted for only a small percentage of the total output of the firms producing them. Many of the articles produced were of a specialized nature for which demand was limited.

Exports probably amounted to more than 5 percent of domestic production and are estimated to have averaged about \$500,000 a year during 1962-67. Canada is believed to be the principal recipient of the exported merchandise.

The value of annual imports of the glass articles covered by this summary more than doubled during the period 1962-67 (see accompanying table). It rose from \$341,000 in 1962 to \$727,000 in 1967, although a reversal of this advance occurred in 1965 when the value declined about 6 percent from the level of the preceding year.

During 1962-67 the United Kingdom accounted for about 35 percent and Japan for about 26 percent of the value of imports of the glass articles covered herein. The remainder came principally from West Germany, France, Switzerland, and Canada.

ARTICLES NOT SPECIALLY PROVIDED FOR, OF
GLASS (EXCLUDING TUBING)

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Glass articles not specially provided for: U.S. imports for
consumption, by principal sources, 1962-67

(In thousands of dollars)

Source	: 1962	: 1963	: 1964	: 1965	: 1966	: 1967
United Kingdom-----	9	98	160	179	224	236
Japan-----	105	107	135	116	121	197
West Germany-----	59	46	30	36	32	107
France-----	1	26	44	31	64	56
Switzerland-----	9	13	3	6	9	35
Canada-----	75	84	4	11	28	33
Other-----	83	68	85	56	47	63
Total-----	341	442	461	435	525	727

Source: Compiled from official statistics of the U.S. Department
of Commerce.

A P P E N D I X A

Tariff Schedules of the United States Annotated (1968):
General headnotes and rules of interpretation, and
excerpts relating to the items included in this
volume.

NOTE: The shaded areas in this appendix cover
headnotes and TSUS items not included in the
summaries in this volume.

TARIFF SCHEDULES OF THE UNITED STATES ANNOTATED (1968)

GENERAL HEADNOTES AND RULES OF INTERPRETATION

Page 3

1. Tariff Treatment of Imported Articles. All articles imported into the customs territory of the United States from outside thereof are subject to duty or exempt therefrom as proscribed in general headnote 3.

2. Customs Territory of the United States. The term "customs territory of the United States", as used in the schedules, includes only the States, the District of Columbia, and Puerto Rico.

3. Rates of Duty. The rates of duty in the "Rates of Duty" columns numbered 1 and 2 of the schedules apply to articles imported into the customs territory of the United States as hereinafter provided in this headnote:

(a) Products of Insular Possessions.

(i) Except as provided in headnote 6 of schedule 7, part 2, subpart E, [and] except as provided in headnote 4 of schedule 7, part 7, subpart A, articles imported from insular possessions of the United States which are outside the customs territory of the United States are subject to the rates of duty set forth in column numbered 1 of the schedules, except that all such articles the growth or product of any such possession, or manufactured or produced in any such possession from materials the growth, product, or manufacture of any such possession or of the customs territory of the United States, or of both, which do not contain foreign materials to the value of more than 50 percent of their total value, coming to the customs territory of the United States directly from any such possession, and all articles previously imported into the customs territory of the United States with payment of all applicable duties and taxes imposed upon or by reason of importation which were shipped from the United States, without remission, refund, or drawback of such duties or taxes, directly to the possession from which they are being returned by direct shipment, are exempt from duty.

(ii) In determining whether an article produced or manufactured in any such insular possession contains foreign materials to the value of more than 50 percent, no material shall be considered foreign which, at the time such article is entered, may be imported into the customs territory from a foreign country, other than Cuba or the Philippine Republic, and entered free of duty.

(b) Products of Cuba. Products of Cuba imported into the customs territory of the United States, whether imported directly or indirectly, are subject to the rates of duty set forth in column numbered 1 of the schedules. Preferential rates of duty for such products apply only as shown in the said column 1. 1/

(c) Products of the Philippine Republic.

(i) Products of the Philippine Republic imported into the customs territory of the United States, whether imported directly or indirectly, are subject to the rates of duty which are set forth in column numbered 1 of the schedules or to fractional parts of the rates in the said column 1, as hereinafter prescribed in subdivisions (c)(ii) and (c)(iii) of this headnote.

(ii) Except as otherwise prescribed in the schedules, a Philippine article, as defined in subdivision (c)(iv) of this headnote, imported into the customs territory of the United States and entered on or before July 3, 1974, is subject to that rate which results

1/ By virtue of section 401 of the Tariff Classification Act of 1962, the application to products of Cuba of either a preferential or other reduced rate of duty in column 1 is suspended. See general headnote 3(c), *infra*. The provisions for preferential Cuban rates continue to be reflected in the schedules because, under section 401, the rates therefor in column 1 still form the bases for determining the rates of duty applicable to certain products, including "Philippine articles".

from the application of the following percentages to the most favorable rate of duty (i.e., including a preferential rate prescribed for any product of Cuba) set forth in column numbered 1 of the schedules:

(A) 20 percent, during calendar years

1963 through 1964,

(B) 40 percent, during calendar years

1965 through 1967,

(C) 60 percent, during calendar years

1968 through 1970,

(D) 80 percent, during calendar years

1971 through 1973,

(E) 100 percent, during the period from January 1, 1974, through July 3, 1974.

(iii) Except as otherwise prescribed in the schedules, products of the Philippine Republic, other than Philippine articles, are subject to the rates of duty (except any preferential rates prescribed for products of Cuba) set forth in column numbered 1 of the schedules.

(iv) The term "Philippine article", as used in the schedules, means an article which is the product of the Philippines, but does not include any article produced with the use of materials imported into the Philippines which are products of any foreign country (except materials produced within the customs territory of the United States) if the aggregate value of such imported materials when landed at the Philippine port of entry, exclusive of any landing cost and Philippine duty, was more than 20 percent of the appraised customs value of the article imported into the customs territory of the United States.

(d) Products of Canada.

(i) Products of Canada imported into the customs territory of the United States, whether imported directly or indirectly, are subject to the rates of duty set forth in column numbered 1 of the schedules. The rates of duty for a Canadian article, as defined in subdivision (d)(ii) of this headnote, apply only as shown in the said column numbered 1.

(ii) The term "Canadian article", as used in the schedules, means an article which is the product of Canada, but does not include any article produced with the use of materials imported into Canada which are products of any foreign country (except materials produced within the customs territory of the United States), if the aggregate value of such imported materials when landed at the Canadian port of entry (that is, the actual purchase price, or if not purchased, the export value, of such materials, plus, if not included therein, the cost of transporting such materials to Canada but exclusive of any landing cost and Canadian duty) was --

(A) with regard to any motor vehicle or automobile truck tractor entered on or before December 31, 1967, more than 60 percent of the appraised value of the article imported into the customs territory of the United States; and

(B) with regard to any other article (including any motor vehicle or automobile truck tractor entered after December 31, 1967), more than 50 percent of the appraised value of the article imported into the customs territory of the United States.

TARIFF SCHEDULES OF THE UNITED STATES ANNOTATED (1968)

General Headnotes and Rules of Interpretation

Page 4

(e) Products of Communist Countries. Notwithstanding any of the foregoing provisions of this headnote, the rates of duty shown in column numbered 2 shall apply to products, whether imported directly or indirectly, of the following countries and areas pursuant to section 401 of the Tariff Classification Act of 1962, to section 231 or 257(e)(2) of the Trade Expansion Act of 1962, or to action taken by the President thereunder:

Albania
Bulgaria
China (any part of which may be under Communist domination or control)
Cuba 1/
Czechoslovakia
Estonia
Germany (the Soviet zone and the Soviet sector of Berlin)
Hungary
Indochina (any part of Cambodia, Laos, or Vietnam which may be under Communist domination or control)
Korea (any part of which may be under Communist domination or control)
Kurile Islands
Latvia
Lithuania
Outer Mongolia
Rumania
Southern Sakhalin
Tanna Tuva
Tibet
Union of Soviet Socialist Republics and the area in East Prussia under the provisional administration of the Union of Soviet Socialist Republics.

(f) Products of All Other Countries. Products of all countries not previously mentioned in this headnote imported into the customs territory of the United States are subject to the rates of duty set forth in column numbered 1 of the schedules.

(g) Effective Date; Exceptions - Staged Rates of Duty. Except as specified below or as may be specified elsewhere, pursuant to section 501(a) of the Tariff Classification Act of 1962 (P.L. 87-456, approved May 24, 1962), the rates of duty in columns numbered 1 and 2 become effective with respect to articles entered on or after the 10th day following the date of the President's proclamation provided for in section 102 of the said Act. If, in column numbered 1, any rate of duty or part thereof is set forth in parenthesis, the effective date shall be governed as follows:

(i) If the rate in column numbered 1 has only one part (i.e., 8¢ (10¢) per lb.), the parenthetical rate (viz., 10¢ per lb.) shall be effective as to articles entered before July 1, 1964, and the other rate (viz., 8¢ per lb.) shall be effective as to articles entered on or after July 1, 1964.

(ii) If the rate in column numbered 1 has two or more parts (i.e., 5¢ per lb. + 5% ad val.) and has a parenthetical rate for either or both parts, each part of the rate shall be governed as if it were a one-part rate. For example, if a rate is expressed as "4¢ (4.5¢) per lb. + 8% (9%) ad val.", the rate applicable to articles entered before July 1, 1964, would be "4.5¢ per lb. + 9% ad val."; the rate applicable to articles entered on or after July 1, 1964, would be "4¢ per lb. + 8% ad val."

(iii) If the rate in column numbered 1 is marked with an asterisk (*), the foregoing provisions of (i) and (ii) shall apply except that "January 1, 1964" shall be substituted for "July 1, 1964", wherever this latter date appears.

1/ In Proclamation 3447, dated February 3, 1962, the President, acting under authority of section 620(a) of the Foreign Assistance Act of 1961 (75 Stat. 445), as amended, prohibited the importation into the United States of all goods of Cuban origin and all goods imported from or through Cuba, subject to such exceptions as the Secretary of the Treasury determines to be consistent with the effective operation of the embargo.

4. Modification or Amendment of Rates of Duty. Except as otherwise provided in the Appendix to the Tariff Schedules --

(a) a statutory rate of duty supersedes and terminates the existing rates of duty in both column numbered 1 and column numbered 2 unless otherwise specified in the amending statute;

(b) a rate of duty proclaimed pursuant to a concession granted in a trade agreement shall be reflected in column numbered 1 and, if higher than the then existing rate in column numbered 2, also in the latter column, and shall supersede but not terminate the then existing rate (or rates) in such column (or columns);

(c) a rate of duty proclaimed pursuant to section 336 of the Tariff Act of 1930 shall be reflected in both column numbered 1 and column numbered 2 and shall supersede but not terminate the then existing rates in such columns; and

(d) whenever a proclaimed rate is terminated or suspended, the rate shall revert, unless otherwise provided, to the next intervening proclaimed rate previously superseded but not terminated or, if none, to the statutory rate.

5. Intangibles. For the purposes of headnote 1 --

(a) corpses, together with their coffins and accompanying flowers,

(b) currency (metal or paper) in current circulation in any country and imported for monetary purposes,

(c) electricity,

(d) securities and similar evidences of value, and

(e) vessels which are not "yachts or pleasure boats" within the purview of subpart D, part 6, of schedule 6,

are not articles subject to the provisions of these schedules.

6. Containers or Holders for Imported Merchandise.

For the purposes of the tariff schedules, containers or holders are subject to tariff treatment as follows:

(a) Imported Empty: Containers or holders if imported empty are subject to tariff treatment as imported articles and as such are subject to duty unless they are within the purview of a provision which specifically exempts them from duty.

(b) Not Imported Empty: Containers or holders if imported containing or holding articles are subject to tariff treatment as follows:

(i) The usual or ordinary types of shipping or transportation containers or holders, if not designed for, or capable of, reuse, and containers of usual types ordinarily sold at retail with their contents, are not subject to treatment as imported articles. Their cost, however, is, under section 402 or section 402a of the tariff act, a part of the value of their contents and if their contents are subject to an ad valorem rate of duty such containers or holders are, in effect, dutiable at the same rate as their contents, except that their cost is deductible from dutiable value upon submission of satisfactory proof that they are products of the United States which are being returned without having been advanced in value or improved in condition by any means while abroad.

(ii) The usual or ordinary types of shipping or transportation containers or holders, if designed for, or capable of, reuse, are subject to treatment as imported articles separate and distinct from their contents. Such holders or containers are not part of the dutiable value of their contents and are separately subject to duty upon each and every importation into the customs territory of the United States unless within the scope of a provision specifically exempting them from duty.

(iii) In the absence of context which requires otherwise, all other containers or holders are subject to the same treatment as specified in (ii) above for usual or ordinary types of shipping or transportation containers or holders designed for, or capable of, reuse.

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7. Commingling of Articles. (a) Whenever articles subject to different rates of duty are so packed together or mingled that the quantity or value of each class of articles cannot be readily ascertained by customs officers (without physical segregation of the shipment or the contents of any entire package thereof), by one or more of the following means:

(i) sampling,
(ii) verification of packing lists or other documents filed at the time of entry, or
(iii) evidence showing performance of commercial settlement tests generally accepted in the trade and filed in such time and manner as may be prescribed by regulations of the Secretary of the Treasury,
the commingled articles shall be subject to the highest rate of duty applicable to any part thereof unless the consignee or his agent segregates the articles pursuant to subdivision (b) hereof.

(b) Every segregation of articles made pursuant to this headnote shall be accomplished by the consignee or his agent at the risk and expense of the consignee within 30 days (unless the Secretary authorizes in writing a longer time) after the date of personal delivery or mailing, by such employee as the Secretary of the Treasury shall designate, of written notice to the consignee that the articles are commingled and that the quantity or value of each class of articles cannot be readily ascertained by customs officers. Every such segregation shall be accomplished under customs supervision, and the compensation and expenses of the supervising customs officers shall be reimbursed to the Government by the consignee under such regulations as the Secretary of the Treasury may prescribe.

(c) The foregoing provisions of this headnote do not apply with respect to any part of a shipment if the consignee or his agent furnishes, in such time and manner as may be prescribed by regulations of the Secretary of the Treasury, satisfactory proof --

(i) that such part (A) is commercially negligible,
(B) is not capable of segregation without excessive cost, and (C) will not be segregated prior to its use in a manufacturing process or otherwise, and

(ii) that the commingling was not intended to avoid the payment of lawful duties.
Any article with respect to which such proof is furnished shall be considered for all customs purposes as a part of the article, subject to the next lower rate of duty, with which it is commingled.

(d) The foregoing provisions of this headnote do not apply with respect to any shipment if the consignee or his agent shall furnish, in such time and manner as may be prescribed by regulations of the Secretary of the Treasury, satisfactory proof --

(i) that the value of the commingled articles is less than the aggregate value would be if the shipment were segregated;

(ii) that the shipment is not capable of segregation without excessive cost and will not be segregated prior to its use in a manufacturing process or otherwise; and

(iii) that the commingling was not intended to avoid the payment of lawful duties.

Any merchandise with respect to which such proof is furnished shall be considered for all customs purposes to be dutiable at the rate applicable to the material present in greater quantity than any other material.

(e) The provisions of this headnote shall apply only in cases where the schedules do not expressly provide a particular tariff treatment for commingled articles.

8. Abbreviations. In the schedules the following symbols and abbreviations are used with the meanings respectively indicated below:

\$	-	dollars
c	-	cents
%	-	percent
+	-	plus
ad val.	-	ad valorem
bu.	-	bushel
cu.	-	cubic
doz.	-	dozen
ft.	-	feet
gal.	-	gallon
in.	-	inches
lb.	-	pounds
oz.	-	ounces
sq.	-	square
wt.	-	weight
yd.	-	yard
pcs.	-	pieces
prs.	-	pairs
lin.	-	linear
I.R.C.	-	Internal Revenue Code

9. Definitions. For the purposes of the schedules, unless the context otherwise requires --

(a) the term "entered" means entered, or withdrawn from warehouse, for consumption in the customs territory of the United States;

(b) the term "entered for consumption" does not include withdrawals from warehouse for consumption;

(c) the term "withdrawn for consumption" means withdrawn from warehouse for consumption and does not include articles entered for consumption;

(d) the term "rate of duty" includes a free rate of duty; rates of duty proclaimed by the President shall be referred to as "proclaimed" rates of duty; rates of duty enacted by the Congress shall be referred to as "statutory" rates of duty; and the rates of duty in column numbered 2 at the time the schedules become effective shall be referred to as "original statutory" rates of duty;

(e) the term "ton" means 2,240 pounds, and the term "short ton" means 2,000 pounds;

(f) the terms "of", "wholly of", "almost wholly of", "in part of" and "containing", when used between the description of an article and a material (e.g., "furniture of wood", "woven fabrics, wholly of cotton", etc.), have the following meanings:

(i) "of" means that the article is wholly or in chief value of the named material;

(ii) "wholly of" means that the article is, except for negligible or insignificant quantities of some other material or materials, composed completely of the named material;

(iii) "almost wholly of" means that the essential character of the article is imparted by the named material, notwithstanding the fact that significant quantities of some other material or materials may be present; and

(iv) "in part of" or "containing" mean that the article contains a significant quantity of the named material.

With regard to the application of the quantitative concepts specified in subparagraphs (ii) and (iv) above, it is intended that the de minimis rule apply.

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10. General Interpretative Rules. For the purposes of these schedules --

(a) the general, schedule, part, and subpart headnotes, and the provisions describing the classes of imported articles and specifying the rates of duty or other import restrictions to be imposed thereon are subject to the rules of interpretation set forth herein and to such other rules of statutory interpretation, not inconsistent therewith, as have been or may be developed under administrative or judicial rulings;

(b) the titles of the various schedules, parts, and subparts and the footnotes therein are intended for convenience in reference only and have no legal or interpretative significance;

(c) an imported article which is described in two or more provisions of the schedules is classifiable in the provision which most specifically describes it; but, in applying this rule of interpretation, the following considerations shall govern:

(i) a superior heading cannot be enlarged by inferior headings indented under it but can be limited thereby;

(ii) comparisons are to be made only between provisions of coordinate or equal status, i.e., between the primary or main superior headings of the schedules or between coordinate inferior headings which are subordinate to the same superior heading;

(d) if two or more tariff descriptions are equally applicable to an article, such article shall be subject to duty under the description for which the original statutory rate is highest, and, should the highest original statutory rate be applicable to two or more of such descriptions, the article shall be subject to duty under that one of such descriptions which first appears in the schedules;

(e) in the absence of special language or context which otherwise requires --

(i) a tariff classification controlled by use (other than actual use) is to be determined in accordance with the use in the United States at, or immediately prior to, the date of importation, of articles of that class or kind to which the imported articles belong, and the controlling use is the chief use, i.e., the use which exceeds all other uses (if any) combined;

(ii) a tariff classification controlled by the actual use to which an imported article is put in the United States is satisfied only if such use is intended at the time of importation, the article is so used, and proof thereof is furnished within 3 years after the date the article is entered;

(f) an article is in chief value of a material if such material exceeds in value each other single component material of the article;

(g) a headnote provision which enumerates articles not included in a schedule, part, or subpart is not necessarily exhaustive, and the absence of a particular article from such headnote provision shall not be given weight in determining the relative specificity of competing provisions which describe such article;

(h) unless the context requires otherwise, a tariff description for an article covers such article, whether assembled or not assembled, and whether finished or not finished;

(i) a provision for "parts" of an article covers a product solely or chiefly used as a part of such article, but does not prevail over a specific provision for such part.

11. Issuance of Rules and Regulations. The Secretary of the Treasury is hereby authorized to issue rules and regulations governing the admission of articles under the provisions of the schedules. The allowance of an importer's claim for classification, under any of the provisions of the schedules which provide for total or partial relief from duty or other import restrictions on the basis of facts which are not determinable from an examination of the article itself in its condition as imported, is dependent upon his complying with any rules or regulations which may be issued pursuant to this headnote.

12. The Secretary of the Treasury is authorized to prescribe methods of analyzing, testing, sampling, weighing, gauging, measuring, or other methods of ascertainment whenever he finds that such methods are necessary to determine the physical, chemical, or other properties or characteristics of articles for purposes of any law administered by the Customs Service.

General statistical headnotes:

1. Statistical Requirements for Imported Articles. Persons making customs entry or withdrawal of articles imported into the customs territory of the United States shall complete the entry or withdrawal forms, as provided herein and in regulations issued pursuant to law, to provide for statistical purposes information as follows:

(a) the number of the Customs district and of the port where the articles are being entered for consumption or warehouse, as shown in Statistical Annex A of these schedules;

(b) the name of the carrier or the means of transportation by which the articles were transported to the first port of unloading in the United States;

(c) the foreign port of lading;

(d) the United States port of unloading;

(e) the date of importation;

(f) the country of origin of the articles expressed in terms of the designation therefor in Statistical Annex B of these schedules;

(g) a description of the articles in sufficient detail to permit the classification thereof under the proper statistical reporting number in these schedules;

(h) the statistical reporting number under which the articles are classifiable;

(i) gross weight in pounds for the articles covered by each reporting number when imported in vessels or aircraft;

(k) the net quantity in the units specified herein for the classification involved;

(l) the U.S. dollar value in accordance with the definition in Section 402 or 402a of the Tariff Act of 1930, as amended, for all merchandise including that free of duty or dutiable at specific rates; and

(m) such other information with respect to the imported articles as is provided for elsewhere in these schedules.

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2. Statistical Annotations. (a) The statistical annotations to the Tariff Schedules of the United States consist of --

- (i) the 2-digit statistical suffixes,
- (ii) the indicated units of quantity,
- (iii) the statistical headnotes and annexes, and
- (iv) the italicized article descriptions.

(b) The legal text of the Tariff Schedules of the United States consists of the remaining text as more specifically identified in headnote 10(a) of the general headnotes and rules of interpretation.

(c) The statistical annotations are subordinate to the provisions of the legal text and cannot change their scope.

3. Statistical Reporting Number. (a) General Rule: Except as provided in paragraph (b) of this headnote, and in the absence of specific instructions to the contrary elsewhere, the statistical reporting number for an article consists of the 7-digit number formed by combining the 5-digit item number with the appropriate 2-digit statistical suffix. Thus, the statistical reporting number for live monkeys dutiable under item 100.95 is "100.9520".

(b) Wherever in the tariff schedules an article is classifiable under a provision which derives its rate of duty from a different provision, the statistical reporting number is, in the absence of specific instructions to the contrary elsewhere, the 7-digit number for the basic provision followed by the item number of the provision from which the rate is derived. Thus, the statistical reporting number of mixed apple and grape juices, not containing over 1.0 percent of ethyl alcohol by volume, is "165.6500-165.40".

4. Abbreviations. (a) The following symbols and abbreviations are used with the meanings respectively indicated below:

s. ton	-	short ton
C.	-	one hundred
Cwt.	-	100 lbs.
mg.	-	milligram
M.	-	1,000
bd. ft.	-	board feet
M. bd. ft.	-	1,000 board feet
ml.	-	milliliter
cord	-	128 cubic feet
square	-	amount to cover 100 square feet of surface
sq. ft.	-	superficial foot
oz.	-	ounces avoirdupois
fl. oz.	-	fluid ounce
oz. troy	-	troy ounce
pf. gal.	-	proof gallon

(b) An "X" appearing in the column for units of quantity means that no quantity (other than gross weight) is to be reported.

(c) Whenever two separate units of quantity are shown for the same article, the "v" following one of such units means that the value of the article is to be reported with that quantity.

APPENDIX A
TARIFF SCHEDULES OF THE UNITED STATES ANNOTATED (1968)

HISTORICAL NOTES

Notes p. 1
General
Headnotes

Amendments and Modifications

PROVISIONS

Gen Hdnte--Language "Except as provided in headnote 6 of
3(a)(1) schedule 7, part 2, subpart E," added; language
"except that all articles" deleted and language
"except that all such articles" inserted in
lieu thereof. Pub. L. 89-805, Secs. 1(a), (c),
Nov. 10, 1966, 80 Stat. 1521, 1522, effective
date Jan. 1, 1967.
Language "Except as provided in headnote 4 of
schedule 7, part 7, subpart A," added. Pub. L.
89-806, Secs. 2(b), (c), Nov. 10, 1966, 80 Stat.
1523, effective date March 11, 1967.

PROVISIONS

Gen Hdnte--Headnotes 3(d), (e), and (f) redesignated as
3(d), (e), headnotes 3(e), (f), and (g), respectively,
(f) and (g) and new headnote 3(d) added. Pub. L. 89-283,
Secs. 401(a), 403, Oct. 21, 1965, 79 Stat.
1021, 1022; entered into force Oct. 22, 1965,
by Pres. Proc. 3682, Oct. 21, 1965, 3 CFR,
1965 Supp., p. 68.

Gen Hdnte--Language "and containers of usual types ordi-
narily sold at retail with their contents,"
6(b)(1) added. Pub. L. 89-241, Secs. 2(a), 4,
Oct. 7, 1965, 79 Stat. 933, 934, effective
date Dec. 7, 1965.

SCHEDULE 5.- NONMETALLIC MINERALS AND PRODUCTS

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SCHEDULE 5. - NONMETALLIC MINERALS AND PRODUCTS

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Part 1 - Nonmetallic Minerals and Products, Except Ceramic Products and Glass and Glass Products

- A. Hydraulic Cement; Concrete; Concrete Products
- B. Lime, Gypsum, and Plaster Products
- C. Stone and Stone Products
- D. Mica and Mica Products
- E. Graphite and Related Products
- F. Asbestos and Asbestos Products
- G. Abrasives and Abrasive Articles
- H. Gems, Gemstones, and Articles Thereof; Industrial Diamonds
- I. Miscellaneous Nonmetallic Minerals and Products
- K. Nonmetallic Minerals and Products Not Specially Provided For

Part 2 - Ceramic Products

- A. Refractory and Heat-Insulating Articles
- B. Ceramic Construction Articles
- C. Table, Kitchen, Household, Art and Ornamental Pottery
- D. Industrial Ceramics
- E. Ceramic Articles Not Specially Provided For

Part 3 - Glass and Glass Products

- A. Glass in the Mass; Glass in Balls, Tubes, Rods, and Certain Other Forms; Foam Glass; Optical Glass; and Glass Fibers and Products Thereof
- B. Flat Glass and Products Thereof
- C. Glassware and Other Glass Products
- D. Glass Articles Not Specially Provided For

APPENDIX A

A-11

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SCHEDULE 5. - NONMETALLIC MINERALS AND PRODUCTS

Part 3. - Glass and Glass Products

5 - 3 - A

540.11 - 540.37

Item	Stat. Suffix	Articles	Units of Quantity	Rates of Duty	
				1	2
PART 3. - GLASS AND GLASS PRODUCTS					
<u>Part 3 headnote:</u>					
1. For the purposes of the tariff schedules, fused quartz and fused silica shall be regarded as glass.					
Subpart A. - Glass in the Mass; Glass in Balls, Tubes, Rods, and Certain Other Forms; Foam Glass; Optical Glass; and Glass Fibers and Products Thereof					
<u>Subpart A headnotes:</u>					
1. This subpart does not cover -- (i) articles (other than globules or balls) described in subpart C of this part; (ii) glass or synthetic optical crystals in any form optically worked (see part 2A of schedule 7); (iii) glass eyes (see parts 2B and 13A of schedule 7); (iv) toy marbles (see part 5E of schedule 7); (v) glass filaments, glass fibers, and articles thereof, specifically included as textiles in the provisions for "man-made fibers", and articles thereof (see headnote 2 of part 1E of schedule 3); or (vi) reinforced or laminated plastics, or articles thereof (see part 12A of schedule 7).					
2. For the purposes of the tariff schedules, the term "not optically worked" means that the glass or the synthetic optical crystals have not been subjected to any grinding or polishing incident to surface shaping for producing optical properties.					
Glass, in the mass; glass, crushed, powdered, or flaked (frostings); and waste or scrap glass; all the foregoing except glass provided for in items 540.21 and 540.27:					
Glass in the mass:					
540.11	00	Containing over 95 percent silica by weight.....	X.....	13% ad val.	30% ad val.
540.13	00	Other.....	X.....	18.5% ad val.	50% ad val.
540.14	00	Waste or scrap glass.....	X.....	3.5% ad val.	10% ad val.
540.15	00	Other.....	X.....	13% ad val.	30% ad val.
Enamels, colors, glazes, and fluxes, all the foregoing of glass, frit, or calcine:					
540.21	00	Ground or pulverized.....	Lb.....	11% ad val.	30% ad val.
540.27	00	Other.....	Lb.....	34% ad val.	40% ad val.
Solid glass globules and balls, spherical or approximately spherical in shape, colored or not colored, for whatever use intended:					
540.33	00	Not over 6 millimeters in diameter.....	Lb.....	31% ad val.	60% ad val.
540.37	00	Over 6 millimeters in diameter.....	Lb.....	22% ad val.	55% ad val.

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SCHEDULE 5. - NONMETALLIC MINERALS AND PRODUCTS

Part 3. - Glass and Glass Products

5 - 3 - A, B

540.41 - 540.72

Item	Stat. Suffix	Articles	Units of Quantity	Rates of Duty	
				1	2
540.41	00	Glass rods, tubes, and tubing, all the foregoing not processed:			
540.43	00	Containing over 95 percent silica by weight.....	Lb.....	12.5% ad val.	40% ad val.
		Other.....	Lb.....	29% ad val.	65% ad val.
540.47	00	Bricks, blocks, tiles, slabs, squares, and other articles, all the foregoing, of pressed or molded glass, chiefly used in building.....	X.....	21.5% ad val.	60% ad val.
540.51	00	Small glass cubes, rectangles, fragments, or chip-pings, all the foregoing, whether or not attached to a backing, chiefly used for making mosaics and for other decorative purposes.....	X.....	15% ad val.	50% ad val.
540.53	00	Pease glass in any form.....	X.....	27% ad val.	60% ad val.
540.61	00	Optical glass in any form, including blanks for spectacle lenses and for other optical elements; non-optical-glass blanks for corrective spectacle lenses; synthetic optical crystals in the form of ingots, segments of ingots, sheets, or blanks for optical elements; all the foregoing not optically worked; polarizing material, in plates or sheets, not cut to shape or mounted for use as polarizing optical elements:			
		Synthetic optical crystals in the form of ingots.....	Lb.....	9% ad val.	25% ad val.
		Lens blanks:			
540.63	00	Spectacle lens blanks.....	Doz.pr..	18% ad val.	40% ad val.
540.65	00	Other lens blanks.....	No.....	36% ad val.	40% ad val.
540.67	00	Other optical glass and synthetic optical crystals; polarizing material.....	Lb.....	45% ad val.	50% ad val.
540.71	00	Glass fibers in bulk; glass fibers in the form of mats, batts, blankets, felts, pads, casings and boards, all the foregoing, of a density not over 25 pounds per cubic foot, whether or not coated, impregnated, or bonded with glue, plastics, or other substances, or lined, backed, or supported with paper, paperboard, fabrics or similar material, or with metal mesh or foil; glass-fiber filters, with or without their frameworks or supports; and articles not specially provided for, of glass fibers.....	X.....	19.5% ad val.	50% ad val.
540.72	00	1. Canadian article and original motor-vehicle equipment (see headnote 2, part 6B, schedule 6).....	X.....	Free	
Subpart B. - Flat Glass and Products Thereof					
Subpart B headnotes:					
1. This subpart covers flat glass and certain articles made therefrom. This subpart does not cover --					
(i) articles described in subpart A or C of this part;					
(ii) glass optically worked (see part 2A of schedule 7);					
(iii) certain painted, colored, or stained glass windows imported for the use of religious institutions (see part 4 of schedule 8);					
2. For the purposes of this subpart --					
(a) the term "cast or rolled glass" refers to glass that, as originally produced, has surfaces one or both of which, by a rolling process, have been made rough, figured, fluted, or ribbed, or have been otherwise impressed;					
(b) the term "ordinary glass" refers to glass other than "colored or special glass", as defined in headnote 2(c), infra.					

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SCHEDULE 5. - NONMETALLIC MINERALS AND PRODUCTS

Part 3. - Glass and Glass Products

5 - 3 - C

545.11 - 545.67

Item	Stat. Suf- fix	Articles	Units of Quantity	Rates of Duty	
				1	2
Subpart C. - Glassware and Other Glass Products					
Subpart C headnotes:					
1. This subpart does not cover certain articles with a light-reflecting surface provided for in Item 790.50 of part 13A of schedule 7.					
2. The provisions in this subpart for laboratory glassware (Items 547.53 and 547.55) include laboratory apparatus or instruments which are essentially glassware whether or not furnished with supports, frames, or mounts of other materials.					
Containers (except ampoules) chiefly used for the packing, transporting, or marketing of merchandise, and containers chiefly used for home canning and preserving, all the foregoing, of glass, with or without their closures and whether or not coated with plastics materials:					
Ordinarily used for perfume or other toilet preparations, or if fitted with or designed for use with ground glass stoppers:					
545.11	00	Produced by automatic machine.....	Gross...	9% ad val.	25% ad val.
545.17	00	Otherwise produced.....	Gross...	28.5% ad val.	75% ad val.
Other:					
545.21	00	Holding not over 1/4 pint.....	Gross...	20¢ per gross	50¢ per gross
545.25	00	Holding over 1/4 pint but not over 1 pint....	Lb.....v Gross	0.65¢ per lb.	1-1/2¢ per lb.
545.27	00	Holding over 1 pint.....	Lb.....v Gross	0.35¢ per lb.	1¢ per lb.
Glass inners designed for vacuum flasks or for other vacuum vessels:					
545.31	00	Having a capacity of not over 1 pint.....	No.....	7¢ each + 36% ad val.	15¢ each + 45% ad val.
545.34	00	Having a capacity of over 1 but not over 2 pints.....	No.....	13¢ each + 36% ad val.	30¢ each + 45% ad val.
545.35	00	Having a capacity of over 2 but not over 4 pints.....	No.....	18.9¢ each + 36% ad val.	37.5¢ each + 45% ad val.
545.37	00	Having a capacity of over 4 pints.....	No.....	29¢ each + 36% ad val.	45¢ each + 45% ad val.
Illuminating articles for use in the household or elsewhere in connection with artificial illumination (except candle illumination) in such manner as to pass, reflect, refract, disperse, color, or otherwise affect the light for practical or ornamental purposes; articles which reflect or color artificial light directed on them for use as, or in connection with, signs or signals; and parts of any of the foregoing articles; any of the foregoing, of glass, and not optically worked:					
545.53	00	Globes and shades.....	X.....	25% ad val.	70% ad val.
545.55	00	Lamp bases.....	No.....	21.5% ad val.	60% ad val.
545.57	00	Prisms and other glass articles of a type used in chandeliers and wall brackets, and articles made therefrom.....	X.....	21.5% ad val.	60% ad val.
545.61	00	Lenses and filters, and parts thereof, for lighting and signal purposes.....	No.....	23.5% ad val.	60% ad val.
545.62	00	If Canadian article and original motor-vehicle equipment (see headnote 2, part 6B, schedule 6).....	X.....	Free	
545.63	00	Reflecting lenses, buttons, and other reflecting articles, used as, or in connection with, signs or signals.....	X.....	21.5% ad val.	60% ad val.
545.64	00	If Canadian article and original motor-vehicle equipment (see headnote 2, part 6B, schedule 6).....	X.....	Free	
545.65	00	Chimneys.....	Doz.....	27% ad val.	60% ad val.
545.67	00	Other.....	X.....	21.5% ad val.	60% ad val.

TARIFF SCHEDULES OF THE UNITED STATES ANNOTATED (1968)

SCHEDULE 5. - NONMETALLIC MINERALS AND PRODUCTS

Part 3. - Glass and Glass Products

5 - 3 - C
545.81 - 547.37

Item	Stat. Suf- fix	Articles	Units of Quantity	Rates of Duty	
				1	2
545.81	00	Christmas ornaments of glass:			
		Beads.....	X.....	10.5% ad val.	35% ad val.
545.85	00	Other:			
		Valued not over \$7.50 per gross.....	Gross...	36% ad val.	60% ad val.
545.87	00	Valued over \$7.50 per gross.....	Gross...	22.5% ad val.	60% ad val.
		Articles chiefly used in the household or elsewhere for preparing, serving, or storing food or beverages, or food or beverage ingredients; smokers' articles, household articles, and art and ornamental articles, all the foregoing not specially provided for:			
		Glassware made of glass containing by weight over 24 percent lead monoxide:			
546.11	00	Valued not over \$1 each.....	No.....	36% ad val.	60% ad val.
546.13	00	Valued over \$1 but not over \$3 each.....	No.....	25% ad val.	60% ad val.
546.17	00	Valued over \$3 each.....	No.....	18.5% ad val.	60% ad val.
		Glassware, other than the foregoing, decorated with metal flecking, glass pictorial scenes, or glass thread- or ribbon-like effects, any of the foregoing embedded or introduced into the body of the glassware prior to its solidification; millefiori glassware:			
		Valued not over \$1 each:			
546.21	00	Smokers' articles.....	No.....	21.5% ad val.	60% ad val.
546.23	00	Other.....	No.....	36% ad val.	60% ad val.
546.25	00	Valued over \$1 each.....	No.....	22.5% ad val.	60% ad val.
546.35	00	Glassware, other than the foregoing, colored prior to solidification, and characterized by random distribution of numerous bubbles, seeds, or stones, throughout the mass of the glass.....	No.....	24% ad val.	60% ad val.
546.38	00	Glassware, other than the foregoing, pressed and toughened (specially tempered), chiefly used for preparing, serving, or storing food or beverages, or food or beverage ingredients.....	No.....	22.5% ad val.	50% ad val.
		Other glassware:			
		Smokers' articles:			
546.40	00	Valued not over \$1 each.....	No.....	23.5% ad val.	60% ad val.
546.42	00	Valued over \$1 but not over \$3 each.....	No.....	32% ad val.	60% ad val.
		Valued over \$3 each:			
546.43	00	Cut or engraved.....	No.....	22.5% ad val.	60% ad val.
546.44	00	Other.....	No.....	28% ad val.	60% ad val.
		Perfume bottles fitted with ground glass stoppers:			
546.46	00	Valued not over \$1 each.....	No.....	29% ad val.	60% ad val.
546.48	00	Valued over \$1 but not over \$3 each.....	No.....	31% ad val.	60% ad val.
		Valued over \$3 each:			
546.49	00	Cut or engraved.....	No.....	21% ad val.	60% ad val.
546.50	00	Other.....	No.....	27% ad val.	60% ad val.
		Other:			
546.52	00	Valued not over \$0.30 each.....	No.....	50% ad val.	60% ad val.
546.54	00	Valued over \$0.30 but not over \$1 each..	No.....	46% ad val.	60% ad val.
546.56	00	Valued over \$1 but not over \$3 each.....	No.....	34% ad val.	60% ad val.
		Valued over \$3 each:			
546.58	00	Cut or engraved.....	No.....	21% ad val.	60% ad val.
546.59	00	Other.....	No.....	27% ad val.	60% ad val.
		Clock and watch glasses and other protective glasses, including glasses for noncorrective spectacles, all the foregoing, with one or both surfaces curved but not optically worked (except blanks for corrective spectacle lenses):			
		Watch glasses:			
547.11	00	Round.....	Doz.....	13% ad val.	60% ad val.
547.13	00	Other.....	Doz.....	43% ad val.	60% ad val.
547.15	00	Other.....	X.....	22% ad val.	60% ad val.
547.16	00	If Canadian article and original motor- vehicle equipment (see headnote 2, part 6B, schedule 6).....	X.....	Free	
547.21	00	Gauge glasses, whether tubular or nontubular.....	X.....	18% ad val.	60% ad val.
		Glass envelopes (including bulbs and tubes), without fittings, designed for electric lamps, vacuum tubes or other electrical devices:			
547.31	00	Bulbs for incandescent lamps.....	No.....	9% ad val.	20% ad val.
547.37	00	Other.....	No.....	22% ad val.	55% ad val.

TARIFF SCHEDULES OF THE UNITED STATES ANNOTATED (1968)

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SCHEDULE 5. - NONMETALLIC MINERALS AND PRODUCTS

Part 3. - Glass and Glass Products

5 - 3 - C, D
547.41 - 548.05

Item	Stat. Suf- fix	Articles	Units of Quantity	Rates of Duty	
				1	2
547.41	00	Glass electric insulators with or without fittings:			
547.43	00	With metal fittings.....	No.....	13% ad val.	35% ad val.
		Without metal fittings.....	No.....	18% ad val.	50% ad val.
547.51	00	Glass ampoules.....	Gross...	22¢ per gross	50¢ per gross
		Pharmaceutical, hygienic, and laboratory glassware, whether or not graduated or calibrated:			
547.53	00	Containing over 95 percent silica by weight.....	X.....	18% ad val.	50% ad val.
547.55	00	Other.....	X.....	38% ad val.	85% ad val.
Subpart D. - Glass Articles Not Specially Provided For					
Articles not specially provided for, of glass:					
		Tubes and tubing with ends processed:			
548.01	00	Containing over 95 percent silica by weight.....	X.....	12.5% ad val.	40% ad val.
548.03	00	Other.....	X.....	29% ad val.	60% ad val.
548.05	00	Other.....	X.....	22% ad val.	55% ad val.

TARIFF SCHEDULES OF THE UNITED STATES ANNOTATED (1968)

STAGED RATES AND HISTORICAL NOTES

Notes p. 1
Schedule 5,
Part 3

Staged Rates

Modifications of column 1 rates of duty by Pres. Procl. 3748 of 1934, amended by Procl. 3821 of 1934, and by Procl. 3822 of 1934, as modified by Pres. Procl. 3948, of 1934, and by Procl. 3949 of 1934.

Tariff Item	Prior Rate	Rate of Duty Effective 1-1-35		Rate of Duty Effective 1-1-36		Remarks
		1934	1935	1934	1935	
541.21	100% ad val.	20% ad val.	20% ad val.	17	17	17

17 = 100% ad val. and staged rates, if any.

Modifications of column 1 rates of duty by Pres. Proc. 3822 (Kennedy Round), Dec. 16, 1967, 32 F.R. 19002:

TSUS item	Prior rate	Rate of duty, effective with respect to articles entered on and after January 1 --				
		1968	1969	1970	1971	1972
540.11	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
540.13	21% ad val.	18.5% ad val.	16.5% ad val.	14.5% ad val.	12.5% ad val.	10.5% ad val.
540.14	4% ad val.	3.5% ad val.	3% ad val.	2.5% ad val.	2% ad val.	2% ad val.
540.15	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
540.21	12.5% ad val.	11% ad val.	10% ad val.	8.5% ad val.	7% ad val.	6% ad val.
540.33	35% ad val.	31% ad val.	28% ad val.	24% ad val.	21% ad val.	17.5% ad val.
540.37	25% ad val.	22% ad val.	20% ad val.	17% ad val.	15% ad val.	12.5% ad val.
540.41	14% ad val.	12.5% ad val.	11% ad val.	9.5% ad val.	8% ad val.	7% ad val.
540.43	32.5% ad val.	29% ad val.	26% ad val.	22.5% ad val.	19% ad val.	16% ad val.
540.51	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
540.53	21% ad val.	18.5% ad val.	16.5% ad val.	14.5% ad val.	12.5% ad val.	10.5% ad val.
540.55	4% ad val.	3.5% ad val.	3% ad val.	2.5% ad val.	2% ad val.	2% ad val.
540.57	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
540.59	12.5% ad val.	11% ad val.	10% ad val.	8.5% ad val.	7% ad val.	6% ad val.
540.61	10.5% ad val.	9% ad val.	8% ad val.	7% ad val.	6% ad val.	5% ad val.
540.63	20% ad val.	18% ad val.	16% ad val.	14% ad val.	12% ad val.	10% ad val.
540.65	40% ad val.	36% ad val.	32% ad val.	28% ad val.	24% ad val.	20% ad val.
540.67	50% ad val.	45% ad val.	40% ad val.	35% ad val.	30% ad val.	25% ad val.
540.71	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
540.73	21% ad val.	18.5% ad val.	16.5% ad val.	14.5% ad val.	12.5% ad val.	10.5% ad val.
540.75	4% ad val.	3.5% ad val.	3% ad val.	2.5% ad val.	2% ad val.	2% ad val.
540.77	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
540.79	12.5% ad val.	11% ad val.	10% ad val.	8.5% ad val.	7% ad val.	6% ad val.
540.81	35% ad val.	31% ad val.	28% ad val.	24% ad val.	21% ad val.	17.5% ad val.
540.83	25% ad val.	22% ad val.	20% ad val.	17% ad val.	15% ad val.	12.5% ad val.
540.85	14% ad val.	12.5% ad val.	11% ad val.	9.5% ad val.	8% ad val.	7% ad val.
540.87	32.5% ad val.	29% ad val.	26% ad val.	22.5% ad val.	19% ad val.	16% ad val.
540.89	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
540.91	21% ad val.	18.5% ad val.	16.5% ad val.	14.5% ad val.	12.5% ad val.	10.5% ad val.
540.93	4% ad val.	3.5% ad val.	3% ad val.	2.5% ad val.	2% ad val.	2% ad val.
540.95	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
540.97	12.5% ad val.	11% ad val.	10% ad val.	8.5% ad val.	7% ad val.	6% ad val.
541.01	35% ad val.	31% ad val.	28% ad val.	24% ad val.	21% ad val.	17.5% ad val.
541.03	25% ad val.	22% ad val.	20% ad val.	17% ad val.	15% ad val.	12.5% ad val.
541.05	14% ad val.	12.5% ad val.	11% ad val.	9.5% ad val.	8% ad val.	7% ad val.
541.07	32.5% ad val.	29% ad val.	26% ad val.	22.5% ad val.	19% ad val.	16% ad val.
541.09	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
541.11	21% ad val.	18.5% ad val.	16.5% ad val.	14.5% ad val.	12.5% ad val.	10.5% ad val.
541.13	4% ad val.	3.5% ad val.	3% ad val.	2.5% ad val.	2% ad val.	2% ad val.
541.15	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
541.17	12.5% ad val.	11% ad val.	10% ad val.	8.5% ad val.	7% ad val.	6% ad val.
541.19	35% ad val.	31% ad val.	28% ad val.	24% ad val.	21% ad val.	17.5% ad val.
541.21	25% ad val.	22% ad val.	20% ad val.	17% ad val.	15% ad val.	12.5% ad val.
541.23	14% ad val.	12.5% ad val.	11% ad val.	9.5% ad val.	8% ad val.	7% ad val.
541.25	32.5% ad val.	29% ad val.	26% ad val.	22.5% ad val.	19% ad val.	16% ad val.
541.27	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
541.29	21% ad val.	18.5% ad val.	16.5% ad val.	14.5% ad val.	12.5% ad val.	10.5% ad val.
541.31	4% ad val.	3.5% ad val.	3% ad val.	2.5% ad val.	2% ad val.	2% ad val.
541.33	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
541.35	12.5% ad val.	11% ad val.	10% ad val.	8.5% ad val.	7% ad val.	6% ad val.
541.37	35% ad val.	31% ad val.	28% ad val.	24% ad val.	21% ad val.	17.5% ad val.
541.39	25% ad val.	22% ad val.	20% ad val.	17% ad val.	15% ad val.	12.5% ad val.
541.41	14% ad val.	12.5% ad val.	11% ad val.	9.5% ad val.	8% ad val.	7% ad val.
541.43	32.5% ad val.	29% ad val.	26% ad val.	22.5% ad val.	19% ad val.	16% ad val.
541.45	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
541.47	21% ad val.	18.5% ad val.	16.5% ad val.	14.5% ad val.	12.5% ad val.	10.5% ad val.
541.49	4% ad val.	3.5% ad val.	3% ad val.	2.5% ad val.	2% ad val.	2% ad val.
541.51	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
541.53	12.5% ad val.	11% ad val.	10% ad val.	8.5% ad val.	7% ad val.	6% ad val.
541.55	35% ad val.	31% ad val.	28% ad val.	24% ad val.	21% ad val.	17.5% ad val.
541.57	25% ad val.	22% ad val.	20% ad val.	17% ad val.	15% ad val.	12.5% ad val.
541.59	14% ad val.	12.5% ad val.	11% ad val.	9.5% ad val.	8% ad val.	7% ad val.
541.61	32.5% ad val.	29% ad val.	26% ad val.	22.5% ad val.	19% ad val.	16% ad val.
541.63	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
541.65	21% ad val.	18.5% ad val.	16.5% ad val.	14.5% ad val.	12.5% ad val.	10.5% ad val.
541.67	4% ad val.	3.5% ad val.	3% ad val.	2.5% ad val.	2% ad val.	2% ad val.
541.69	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
541.71	12.5% ad val.	11% ad val.	10% ad val.	8.5% ad val.	7% ad val.	6% ad val.
541.73	35% ad val.	31% ad val.	28% ad val.	24% ad val.	21% ad val.	17.5% ad val.
541.75	25% ad val.	22% ad val.	20% ad val.	17% ad val.	15% ad val.	12.5% ad val.
541.77	14% ad val.	12.5% ad val.	11% ad val.	9.5% ad val.	8% ad val.	7% ad val.
541.79	32.5% ad val.	29% ad val.	26% ad val.	22.5% ad val.	19% ad val.	16% ad val.
541.81	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
541.83	21% ad val.	18.5% ad val.	16.5% ad val.	14.5% ad val.	12.5% ad val.	10.5% ad val.
541.85	4% ad val.	3.5% ad val.	3% ad val.	2.5% ad val.	2% ad val.	2% ad val.
541.87	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
541.89	12.5% ad val.	11% ad val.	10% ad val.	8.5% ad val.	7% ad val.	6% ad val.
541.91	35% ad val.	31% ad val.	28% ad val.	24% ad val.	21% ad val.	17.5% ad val.
541.93	25% ad val.	22% ad val.	20% ad val.	17% ad val.	15% ad val.	12.5% ad val.
541.95	14% ad val.	12.5% ad val.	11% ad val.	9.5% ad val.	8% ad val.	7% ad val.
541.97	32.5% ad val.	29% ad val.	26% ad val.	22.5% ad val.	19% ad val.	16% ad val.
542.01	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
542.03	21% ad val.	18.5% ad val.	16.5% ad val.	14.5% ad val.	12.5% ad val.	10.5% ad val.
542.05	4% ad val.	3.5% ad val.	3% ad val.	2.5% ad val.	2% ad val.	2% ad val.
542.07	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
542.09	12.5% ad val.	11% ad val.	10% ad val.	8.5% ad val.	7% ad val.	6% ad val.
542.11	35% ad val.	31% ad val.	28% ad val.	24% ad val.	21% ad val.	17.5% ad val.
542.13	25% ad val.	22% ad val.	20% ad val.	17% ad val.	15% ad val.	12.5% ad val.
542.15	14% ad val.	12.5% ad val.	11% ad val.	9.5% ad val.	8% ad val.	7% ad val.
542.17	32.5% ad val.	29% ad val.	26% ad val.	22.5% ad val.	19% ad val.	16% ad val.
542.19	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
542.21	21% ad val.	18.5% ad val.	16.5% ad val.	14.5% ad val.	12.5% ad val.	10.5% ad val.
542.23	4% ad val.	3.5% ad val.	3% ad val.	2.5% ad val.	2% ad val.	2% ad val.
542.25	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
542.27	12.5% ad val.	11% ad val.	10% ad val.	8.5% ad val.	7% ad val.	6% ad val.
542.29	35% ad val.	31% ad val.	28% ad val.	24% ad val.	21% ad val.	17.5% ad val.
542.31	25% ad val.	22% ad val.	20% ad val.	17% ad val.	15% ad val.	12.5% ad val.
542.33	14% ad val.	12.5% ad val.	11% ad val.	9.5% ad val.	8% ad val.	7% ad val.
542.35	32.5% ad val.	29% ad val.	26% ad val.	22.5% ad val.	19% ad val.	16% ad val.
542.37	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
542.39	21% ad val.	18.5% ad val.	16.5% ad val.	14.5% ad val.	12.5% ad val.	10.5% ad val.
542.41	4% ad val.	3.5% ad val.	3% ad val.	2.5% ad val.	2% ad val.	2% ad val.
542.43	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
542.45	12.5% ad val.	11% ad val.	10% ad val.	8.5% ad val.	7% ad val.	6% ad val.
542.47	35% ad val.	31% ad val.	28% ad val.	24% ad val.	21% ad val.	17.5% ad val.
542.49	25% ad val.	22% ad val.	20% ad val.	17% ad val.	15% ad val.	12.5% ad val.
542.51	14% ad val.	12.5% ad val.	11% ad val.	9.5% ad val.	8% ad val.	7% ad val.
542.53	32.5% ad val.	29% ad val.	26% ad val.	22.5% ad val.	19% ad val.	16% ad val.
542.55	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
542.57	21% ad val.	18.5% ad val.	16.5% ad val.	14.5% ad val.	12.5% ad val.	10.5% ad val.
542.59	4% ad val.	3.5% ad val.	3% ad val.	2.5% ad val.	2% ad val.	2% ad val.
542.61	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
542.63	12.5% ad val.	11% ad val.	10% ad val.	8.5% ad val.	7% ad val.	6% ad val.
542.65	35% ad val.	31% ad val.	28% ad val.	24% ad val.	21% ad val.	17.5% ad val.
542.67	25% ad val.	22% ad val.	20% ad val.	17% ad val.	15% ad val.	12.5% ad val.
542.69	14% ad val.	12.5% ad val.	11% ad val.	9.5% ad val.	8% ad val.	7% ad val.
542.71	32.5% ad val.	29% ad val.	26% ad val.	22.5% ad val.	19% ad val.	16% ad val.
542.73	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
542.75	21% ad val.	18.5% ad val.	16.5% ad val.	14.5% ad val.	12.5% ad val.	10.5% ad val.
542.77	4% ad val.	3.5% ad val.	3% ad val.	2.5% ad val.	2% ad val.	2% ad val.
542.79	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
542.81	12.5% ad val.	11% ad val.	10% ad val.	8.5% ad val.	7% ad val.	6% ad val.
542.83	35% ad val.	31% ad val.	28% ad val.	24% ad val.	21% ad val.	17.5% ad val.
542.85	25% ad val.	22% ad val.	20% ad val.	17% ad val.	15% ad val.	12.5% ad val.
542.87	14% ad val.	12.5% ad val.	11% ad val.	9.5% ad val.	8% ad val.	7% ad val.
542.89	32.5% ad val.	29% ad val.	26% ad val.	22.5% ad val.	19% ad val.	16% ad val.
542.91	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
542.93	21% ad val.	18.5% ad val.	16.5% ad val.	14.5% ad val.	12.5% ad val.	10.5% ad val.
542.95	4% ad val.	3.5% ad val.	3% ad val.	2.5% ad val.	2% ad val.	2% ad val.
542.97	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
543.01	12.5% ad val.	11% ad val.	10% ad val.	8.5% ad val.	7% ad val.	6% ad val.
543.03	35% ad val.	31% ad val.	28% ad val.	24% ad val.	21% ad val.	17.5% ad val.
543.05	25% ad val.	22% ad val.	20% ad val.	17% ad val.	15% ad val.	12.5% ad val.
543.07	14% ad val.	12.5% ad val.	11% ad val.	9.5% ad val.	8% ad val.	7% ad val.
543.09	32.5% ad val.	29% ad val.	26% ad val.	22.5% ad val.	19% ad val.	16% ad val.
543.11	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
543.13	21% ad val.	18.5% ad val.	16.5% ad val.	14.5% ad val.	12.5% ad val.	10.5% ad val.
543.15	4% ad val.	3.5% ad val.	3% ad val.	2.5% ad val.	2% ad val.	2% ad val.
543.17	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
543.19	12.5% ad val.	11% ad val.	10% ad val.	8.5% ad val.	7% ad val.	6% ad val.
543.21	35% ad val.	31% ad val.	28% ad val.	24% ad val.	21% ad val.	17.5% ad val.
543.23	25% ad val.	22% ad val.	20% ad val.	17% ad val.	15% ad val.	12.5% ad val.
543.25	14% ad val.	12.5% ad val.	11% ad val.	9.5% ad val.	8% ad val.	7% ad val.
543.27	32.5% ad val.	29% ad val.	26% ad val.	22.5% ad val.	19% ad val.	16% ad val.
543.29	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
543.31	21% ad val.	18.5% ad val.	16.5% ad val.	14.5% ad val.	12.5% ad val.	10.5% ad val.
543.33	4% ad val.	3.5% ad val.	3% ad val.	2.5% ad val.	2% ad val.	2% ad val.
543.35	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
543.37	12.5% ad val.	11% ad val.	10% ad val.	8.5% ad val.	7% ad val.	6% ad val.
543.39	35% ad val.	31% ad val.	28% ad val.	24% ad val.	21% ad val.	17.5% ad val.
543.41	25% ad val.	22% ad val.	20% ad val.	17% ad val.	15% ad val.	12.5% ad val.
543.43	14% ad val.	12.5% ad val.	11% ad val.	9.5% ad val.	8% ad val.	7% ad val.
543.45	32.5% ad val.	29% ad val.	26% ad val.	22.5% ad val.	19% ad val.	16% ad val.
543.47	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
543.49	21% ad val.	18.5% ad val.	16.5% ad val.	14.5% ad val.	12.5% ad val.	10.5% ad val.
543.51	4% ad val.	3.5% ad val.	3% ad val.	2.5% ad val.	2% ad val.	2% ad val.
543.53	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
543.55	12.5% ad val.	11% ad val.	10% ad val.	8.5% ad val.	7% ad val.	6% ad val.
543.57	35% ad val.	31% ad val.	28% ad val.	24% ad val.	21% ad val.	17.5% ad val.
543.59	25% ad val.	22% ad val.	20% ad val.	17% ad		

APPENDIX A

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TARIFF SCHEDULES OF THE UNITED STATES ANNOTATED (1968)

Notes p. 2
Schedule 5,
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STAGED RATES AND HISTORICAL NOTES

Staged Rates

Modifications of column 1 rates of duty by Pres. Proc. 3822 (Kennedy Round), Dec. 16, 1967, 32 F.R. 19002 (con.):

TSUS item	Prior rate	Rate of duty, effective with respect to articles entered on and after January 1 --				
		1968	1969	1970	1971	1972
545.25	3/4¢ per lb.	0.65¢ per lb.	0.6¢ per lb.	0.5¢ per lb.	0.45¢ per lb.	0.37¢ per lb.
545.27	0.4¢ per lb.	0.35¢ per lb.	0.3¢ per lb.	0.25¢ per lb.	0.24¢ per lb.	0.2¢ per lb.
545.31	8¢ each + 40% ad val.	7¢ each + 36% ad val.	6¢ each + 32% ad val.	5¢ each + 28% ad val.	4¢ each + 24% ad val.	4¢ each + 20% ad val.
545.34	15¢ each + 40% ad val.	13¢ each + 36% ad val.	12¢ each + 32% ad val.	10¢ each + 28% ad val.	9¢ each + 24% ad val.	7¢ each + 20% ad val.
545.35	21¢ each + 40% ad val.	18.9¢ each + 36% ad val.	16.8¢ each + 32% ad val.	14.7¢ each + 28% ad val.	12.6¢ each + 24% ad val.	10.5¢ each + 20% ad val.
545.37	33¢ each + 40% ad val.	29¢ each + 36% ad val.	26¢ each + 32% ad val.	23¢ each + 28% ad val.	19¢ each + 24% ad val.	16.5¢ each + 20% ad val.
545.53	28% ad val.	25% ad val.	22% ad val.	19.5% ad val.	16.5% ad val.	14% ad val.
545.55	24% ad val.	21.5% ad val.	19% ad val.	16.5% ad val.	14% ad val.	12% ad val.
545.57	24% ad val.	21.5% ad val.	19% ad val.	16.5% ad val.	14% ad val.	12% ad val.
545.61	26.5% ad val.	23.5% ad val.	21% ad val.	18.5% ad val.	15.5% ad val.	13% ad val.
545.63	24% ad val.	21.5% ad val.	19% ad val.	16.5% ad val.	14% ad val.	12% ad val.
545.65	30% ad val.	27% ad val.	24% ad val.	21% ad val.	18% ad val.	15% ad val.
545.67	24% ad val.	21.5% ad val.	19% ad val.	16.5% ad val.	14% ad val.	12% ad val.
545.81	12% ad val.	10.5% ad val.	9.5% ad val.	8% ad val.	7% ad val.	6% ad val.
545.85	40% ad val.	36% ad val.	32% ad val.	28% ad val.	24% ad val.	20% ad val.
545.87	25.5% ad val.	22.5% ad val.	20% ad val.	17.5% ad val.	15% ad val.	12.5% ad val.
546.11	40% ad val.	36% ad val.	32% ad val.	28% ad val.	24% ad val.	20% ad val.
546.13	28% ad val.	25% ad val.	22% ad val.	19.5% ad val.	16.5% ad val.	14% ad val.
546.17	21% ad val.	18.5% ad val.	16.5% ad val.	14.5% ad val.	12.5% ad val.	10.5% ad val.
546.21	24% ad val.	21.5% ad val.	19% ad val.	16.5% ad val.	14% ad val.	12% ad val.
546.23	40% ad val.	36% ad val.	32% ad val.	28% ad val.	24% ad val.	20% ad val.
546.25	25.5% ad val.	22.5% ad val.	20% ad val.	17.5% ad val.	15% ad val.	12.5% ad val.
546.35	24% ad val.	21.5% ad val.	19% ad val.	16.5% ad val.	14% ad val.	12% ad val.
546.38	25.5% ad val.	22.5% ad val.	20% ad val.	17.5% ad val.	15% ad val.	12.5% ad val.
546.40	24% ad val.	21.5% ad val.	19% ad val.	16.5% ad val.	14% ad val.	12% ad val.
546.42	35% ad val.	32% ad val.	30% ad val.	27% ad val.	25% ad val.	22.5% ad val.
546.44	30% ad val.	28% ad val.	27% ad val.	25% ad val.	24% ad val.	22.5% ad val.
546.46	32% ad val.	29% ad val.	26% ad val.	23% ad val.	20% ad val.	17.5% ad val.
546.48	35% ad val.	31% ad val.	28% ad val.	24% ad val.	21% ad val.	17.5% ad val.
546.49	22.5% ad val.	21% ad val.	20% ad val.	19% ad val.	18% ad val.	17.5% ad val.
546.50	30% ad val.	27% ad val.	25% ad val.	22% ad val.	20% ad val.	17.5% ad val.
546.54	50% ad val.	46% ad val.	42% ad val.	38% ad val.	34% ad val.	30% ad val.
546.56	35% ad val.	34% ad val.	33% ad val.	32% ad val.	31% ad val.	30% ad val.
546.58	22.5% ad val.	21% ad val.	19% ad val.	18% ad val.	16% ad val.	15% ad val.
546.59	30% ad val.	27% ad val.	24% ad val.	21% ad val.	18% ad val.	15% ad val.
547.11	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
547.13	48% ad val.	43% ad val.	38% ad val.	33.5% ad val.	28.5% ad val.	24% ad val.
547.15	25% ad val.	22% ad val.	20% ad val.	17% ad val.	15% ad val.	12.5% ad val.
547.21	20.5% ad val.	18% ad val.	16% ad val.	14% ad val.	12% ad val.	10% ad val.
547.31	10% ad val.	9% ad val.	8% ad val.	7% ad val.	6% ad val.	5% ad val.
547.37	25% ad val.	22% ad val.	20% ad val.	17% ad val.	15% ad val.	12.5% ad val.
547.41	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
547.43	20% ad val.	18% ad val.	16% ad val.	14% ad val.	12% ad val.	10% ad val.
547.51	25¢ per gross	22¢ per gross	20¢ per gross	17¢ per gross	15¢ per gross	12.5¢ per gross
547.53	20% ad val.	18% ad val.	16% ad val.	14% ad val.	12% ad val.	10% ad val.
547.55	42.5% ad val.	38% ad val.	34% ad val.	29.5% ad val.	25% ad val.	21% ad val.
548.01	14% ad val.	12.5% ad val.	11% ad val.	9.5% ad val.	8% ad val.	7% ad val.
548.03	32.5% ad val.	29% ad val.	26% ad val.	22.5% ad val.	19% ad val.	16% ad val.
548.05	25% ad val.	22% ad val.	20% ad val.	17% ad val.	15% ad val.	12.5% ad val.

TARIFF SCHEDULES OF THE UNITED STATES ANNOTATED (1968)

STAGED RATES AND HISTORICAL NOTES

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Other Amendments and Modifications

PROVISION	PROVISION
540.72--Item 540.72 added. Pub. L. 89-283, Secs. 401(a), 405(d), Oct. 31, 1965, 79 Stat. 1021, 1025; entered into force Dec. 20, 1965, by Pres. Proc. 3682, Oct. 21, 1965, 3 CFR, 1965 Supp., p. 68; effective with respect to articles entered on and after Jan. 18, 1965.	544.31--Article description modified by deleting "544.17" and inserting "544.18" in lieu thereof. Pres. Proc. (Kennedy Round), 32 F.R., effective date Jan. 1, 1968.
542.11--Column 1 rate of duty for the enumerated items and	544.32--Items 544.32, 544.42, 544.52, and 544.55 added.
542.13 column 1 rates of duty for items 542.48 and 542.98	544.42 Pub. L. 89-283, Secs. 401(a), 405(d),
542.21 temporarily increased until Jan. 11, 1967 by former	544.44 Oct. 21, 1965, 79 Stat. 1021, 1025; entered into
542.23 items 923.11, 923.13, 923.21, 923.23, 923.25,	544.55 force Dec. 20, 1965, by Pres. Proc. 3682,
542.25 923.42, 923.44, 923.46, 923.48, 923.49, 923.53,	Dec. 21, 1965, 3 CFR, 1965 Supp., p. 68; effective
542.37 923.67, 923.92, 923.94, 923.96, 923.98, and 923.99,	with respect to articles entered on and after
542.42 and by items 923.37 and 923.77; Pres. Proc. 3763,	Jan. 18, 1965.
542.44 Jan. 11, 1967, 32 F.R. 561, and Pres. Proc. 5816,	
542.46 Oct. 11, 1967, 32 F.R. 189.	545.62--Items 545.62 and 545.64 added. Pub. L. 89-283,
542.48	545.64 Secs. 401(a), 405(d), Oct. 21, 1965, 79 Stat.
542.57	1021, 1025; entered into force Dec. 20, 1965, by
542.67	Pres. Proc. 3682, Oct. 21, 1965, 3 CFR, 1965
542.77	Supp., p. 68; effective with respect to articles
542.93	entered on and after Jan. 18, 1965.
542.94	
542.96	546.40--Items 546.41 (column 1 rate--24% ad val.; column 2
542.98	546.41 rate--60% ad val.), 546.45 (column 1 rate--32%
	546.42 ad val.; column 2 rate--60% ad val.), 546.51
	546.43 (column 1 rate--50% ad val.; column 2 rate--60%
	546.44 ad val.), 546.53 (column 1 rate--35% ad val.;
	546.45 column 2 rate--60% ad val.), 546.55 (column 1
	546.46 rate--22.5% ad val.; column 2 rate--60% ad val.),
	546.48 and 546.57 (column 1 rate--30% ad val.; column 2
	546.49 rate--60% ad val.) and headings immediately pre-
	546.50 ceding items 546.41 and 546.55 deleted and items
	546.51 546.40, 546.42, 546.43, 546.44, 546.46, 546.48,
	546.52 546.49, 546.50, 546.52, 546.54, 546.56, 546.58,
	546.53 and 546.59 and headings immediately preceding
	546.54 items 546.40, 546.43, 546.46, 546.49, 546.52, and
	546.55 546.58 added in lieu thereof. Pres. Proc.
	546.56 (Kennedy Round), 32 F.R.
	546.57 effective date Jan. 1, 1968.
	546.58
	546.59
543.75--Article descriptions for items 543.75 and 543.77	
542.72 amended by deleting "30" and inserting "60" in lieu	547.16--Item 547.16 added. Pub. L. 89-283, Secs. 401(a),
thereof. Pub. L. 89-283, Secs. 401(a), 405(d), Oct. 31, 1965,	405(d), Oct. 21, 1965, 79 Stat. 1021, 1025; entered
79 Stat. 931, 933; effective date Dec. 7, 1965.	into force Dec. 20, 1965, by
543.11--Column 1 rate of duty of 0.54 per sq. ft. reduced to	Pres. Proc. 3682, Oct. 21, 1965, 3 CFR, 1965
54 per sq. ft. on Jan. 1, 1963. General headings	Supp., p. 68; effective with respect to articles
318).	entered on and after Jan. 18, 1965.
544.18--Item 544.18 added. Pub. L. 89-283, Secs. 401(a), 405(d),	
Oct. 31, 1965, 79 Stat. 1021, 1025; entered into force	
Dec. 20, 1965, by Pres. Proc. 3682, Oct. 21, 1965,	
3 CFR, 1965 Supp., p. 68; effective with respect to	
articles entered on and after Jan. 18, 1965.	
544.16--Items 544.17 (column 1 rate--15% ad val.; column 2 rate--	
544.17 50% ad val.) and 544.18 (Canada--Free) deleted and	
544.18 new items 544.16, 544.17, 544.18, and 544.20 and	
544.20 heading immediately preceding item 544.16 added in	
lieu thereof. Pres. Proc. (Kennedy Round),	
32 F.R., effective date	
Jan. 1, 1968.	

Statistical Notes

PROVISION	Effective date	PROVISION	Effective date
540.72--See Other Amendments and Modifications		541.20--	
50--Disc. (transferred from 540.710ppt).....	Dec. 20, 1965	50--Disc. (transferred from 541.21) to	
541.21--See Other Amendments and Modifications		541.21--Disc. (transferred from 541.21) to	Jan. 1, 1968
for rate of duty changes covering items		542.31--	
542.11-542.28 & 542.12 items		60--Disc. (transferred to 542.3170).....	Jan. 1, 1968
923.11-923.201		70--Disc. (transferred from 542.3180 & 60)....	do
		80--Disc. (transferred to 542.3170).....	do
541.31--		542.32--	
00--Unit of quantity changed from "Lb." to		60--Disc. (transferred to 542.3170).....	Jan. 1, 1968
"Lb. & Sq. ft.".....	Jan. 1, 1964	70--Disc. (transferred from 542.3180 & 60)....	do
		80--Disc. (transferred to 542.3170).....	do

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Schedule 5,
Part 3

STAGED RATES AND HISTORICAL NOTES

Statistical Notes--(con.)

[illegible]

A P P E N D I X B

Value of U.S. imports for consumption, by TSUS items included in the individual summaries of this volume, total and from the 3 principal suppliers, 1967.

Value of U.S. imports for consumption, by TSUS items included in the individual summaries of this volume, total and from the 3 principal suppliers, 1967

(In thousands of dollars. The dollar value of imports shown is defined generally as the market value in the foreign country and therefore excludes U.S. import duties, freight, and transportation insurance)

Summary title: and page; TSUS item	All countries		First supplier		Second supplier		Third supplier	
	Amount in 1967	Per- cent change from 1966	Country	Value	Country	Value	Country	Value
Fused silica and fused quartz and articles thereof (p. 3)								
540.11	602	-15.9	W. Germany	554	Japan	23	France	11
540.41	3,264	+6.2	W. Germany	1,278	France	1,014	Japan	551
547.53	515	+17.1	U.K.	256	W. Germany	235	Japan	22
548.01	14	+40.5	France	11	Japan	2	W. Germany	1
Glass in the mass and waste glass (p. 11)								
540.13	55	-11.1	France	42	Italy	7	U.K.	3
540.14	63	-31.9	U.K.	49	Japan	8	Netherlands	3
Glass frostings and powder (p. 17)								
540.15	74	+10.5	Japan	40	Canada	9	W. Germany	8
Ceramic enamels, colors, glazes, and fluxes (p. 21)								
540.21	73	-12.4	U.K.	32	Canada	21	W. Germany	9
540.27	11	+5.6	Mexico	10	U.K.	1	-	-
Solid glass spheres (p. 25)								
540.33	69	-5.9	W. Germany	49	Canada	14	Czecho.	5
540.37	27	+73.7	W. Germany	16	Japan	11	-	-
Glass rods, tubes, tubing and laboratory glassware (p. 29)								
540.43	83	+2.6	W. Germany	45	Austria	16	U.K.	16
547.55	956	+21.0	W. Germany	465	Japan	176	U.K.	111
548.03	94	+55.7	U.K.	69	W. Germany	21	Canada	2
Optical glass, not optically worked (p. 33)								
540.61	11	+3,584.7	W. Germany	11	U.K.	1/	-	-
540.63	81	+125.4	France	79	W. Germany	1	Japan	1/
540.65	552	+28.0	W. Germany	427	Japan	95	Austria	27
540.67	517	+22.9	W. Germany	459	U.K.	31	Japan	11
Glass containers (p. 39)								
545.11	656	+6.3	France	359	Switzerland	85	Italy	49
545.17	780	+2.7	France	697	W. Germany	32	Japan	18
545.21	541	+10.3	Japan	451	Australia	26	Taiwan	10
545.25	138	-30.8	Japan	98	France	20	Canada	15
545.27	244	-15.4	France	110	Canada	64	Mexico	24
Glass inners designed for vacuum vessels (p. 49)								
545.31	1	+5	W. Germany	1	-	-	-	-
545.34	17	+1,252.7	W. Germany	17	-	-	-	-
545.35	1	-76.1	Japan	1/	W. Germany	1/	Italy	1/
545.37	2	+164.5	Japan	2	-	-	-	-

See footnote at end of table.

May 1968
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Value of U.S. imports for consumption, by TSUS items included in the individual summaries of this volume, total and from the 3 principal suppliers, 1967--Continued

(In thousands of dollars. The dollar value of imports shown is defined generally as the market value in the foreign country and therefore excludes U.S. import duties, freight, and transportation insurance)

Summary title: and page; TSUS item	All countries		First supplier		Second supplier		Third supplier	
	Amount in 1967	Per- cent change from 1966	Country	Value	Country	Value	Country	Value
Illuminating glassware (p. 55)								
545.53	1,737	-20.3	W. Germany	409	France	238	Sweden	227
545.55	788	-23.1	Italy	277	France	272	W. Germany	194
545.65	192	-20.4	Mexico	159	Brazil	24	W. Germany	3
545.67	1,133	-18.9	Hong Kong	343	Japan	223	Italy	196
Prisms and other glass articles used in chandeliers (p. 63)								
545.57	3,676	+3.4	W. Germany	1,596	Czecho.	691	Japan	604
Glass lenses, filters, and reflecting articles (p. 67)								
545.61	238	+28.5	W. Germany	159	Japan	28	Italy	22
545.62	3	-30.6	Canada	3	U.K.	1/	-	-
545.63	82	-4.1	W. Germany	44	Japan	19	Sweden	10
545.64	-	-	-	-	-	-	-	-
Glass Christmas ornaments (p. 75)								
545.81	233	+19.0	Japan	228	Hong Kong	4	Taiwan	1
545.85	1,853	+15.3	Japan	1,050	Poland	564	Czecho.	116
545.87	2,070	+10.9	W. Germany	1,501	Austria	205	Italy	165
Household glassware (p. 83)								
546.11	299	+16.3	W. Germany	173	Belgium	61	France	33
546.13	2,480	+29.6	Ireland	758	W. Germany	649	U.K.	321
546.17	2,190	+41.4	France	637	Ireland	434	W. Germany	396
546.21	63	-28.2	Italy	35	Japan	14	Czecho.	5
546.23	38	-14.9	Italy	29	Japan	7	Rumania	1
546.25	404	-11.8	Italy	371	Rumania	10	Czecho.	10
546.35	2,874	-11.2	Italy	2,563	Japan	126	Mexico	96
546.38	232	-25.9	France	169	Japan	33	W. Germany	12
546.41	514	+16.3	Italy	244	Japan	173	W. Germany	37
546.45	72	-33.7	Japan	43	France	13	Italy	11
546.51	8,352	-3.4	Japan	1,659	W. Germany	1,037	Mexico	924
546.53	4,084	+3	W. Germany	1,147	Italy	1,070	Sweden	590
546.55	1,721	+26.1	W. Germany	771	Poland	365	Czecho.	133
546.57	1,116	-8.5	Italy	309	U.K.	169	W. Germany	136
Clock and watch glasses, other protective glasses, and gauge glasses (p. 107)								
547.11	183	-26.1	Switzerland	53	U.K.	48	Netherlands	34
547.13	12	-39.2	France	8	Netherlands	2	U.K.	1
547.15	43	+96.2	Japan	14	W. Germany	12	Switzerland	6
547.16	1	-	Canada	1	-	-	-	-
547.21	72	-13.2	U.K.	45	France	14	Austria	7

See footnote at end of table.

Value of U.S. imports for consumption, by TSUS items included in the individual summaries of this volume, total and from the 3 principal suppliers, 1967--Continued

(In thousands of dollars. The dollar value of imports shown is defined generally as the market value in the foreign country and therefore excludes U.S. import duties, freight, and transportation insurance)

Summary title: and page; TSUS item	All countries		First supplier		Second supplier		Third supplier	
	Amount in 1967	Per- cent change from 1966	Country	Value	Country	Value	Country	Value
Glass envelopes for electrical devices (p. 113)								
547.31	77	+41.1	Japan	31	Italy	26	Taiwan	6
547.37	262	+32.3	Netherlands	132	Belgium	74	W. Germany	20
Glass electric insulators (p. 121)								
547.41	955	-55.0	France	953	Japan	2	-	-
547.43	2	+22.8	Hong Kong	1	France	1	-	-
Glass ampoules (p. 129)								
547.51	66	+97.7	Mexico	42	W. Germany	23	U.K.	1
Articles not specially provided for of glass (excluding tubing) (p. 133)								
548.05	727	+38.5	U.K.	236	Japan	197	W. Germany	107

1/ Less than \$500.

Source: Compiled from official statistics of the U.S. Department of Commerce.

