

**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 5**

**Flat Glass and Products; and Other Glass Products  
Used Primarily in Construction**

**TC Publication 365  
Washington, D. C.  
1971**

## SUMMARIES OF TRADE AND TARIFF INFORMATION BY SCHEDULES

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  - Schedule 3 - Textile Fibers and Textile Products  
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Primarily in Construction

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INFORMATION



U.S. TARIFF COMMISSION

OFFICE OF THE SECRETARY  
WASHINGTON, D.C. 20436  
PHONE: NA. 8-3947

For Release  
April 26, 1971

TARIFF COMMISSION RELEASES VOLUME OF TARIFF SUMMARIES  
ON FLAT GLASS, TEMPERED GLASS, LAMINATED GLASS,  
GLASS MIRRORS, AND OTHER GLASS PRODUCTS

Information on imports, exports, and production became available today on flat glass, tempered glass, laminated glass, glass mirrors, and other glass products as the Tariff Commission released another volume in its new series of Summaries of Trade and Tariff Information. This volume is the fifth of five to be published on Nonmetallic Minerals and Products covered by Schedule 5 of the Tariff Schedules of the United States.

The Summaries of Trade and Tariff Information are designed to meet the needs of wide and varied interests that include the Congress, the courts, Government agencies, importers, domestic producers, research organizations, and many others. The summaries contain descriptions, in terms of the tariff schedules, of the thousands of products imported into the United States, methods of production, world supplies, and importance in trade and in the U.S. economy. The summaries also include substantive analytical material with regard to the basic factors affecting trends in consumption, production, and trade, and those bearing on the competitive position and economic health of the domestic industries.

The Tariff Commission's current edition of volumes issued in the new series of tariff summaries is too limited for general distribution. As a service to the public, however, the 42 field offices of the Department of Commerce, and selected public and university libraries in the larger cities will be supplied with copies for commercial and professional consultation.



## 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 (TSUS), 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 5

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This volume, identified as volume 5:5, 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 15 summaries covering some of the glass and glass products classifiable under subpart A and all of the glass and glass products classifiable under subpart B, of part 3 of schedule 5. The glass and glass products classifiable under subpart A not covered herein are glass in the mass; waste and scrap glass; crushed, powdered, or flaked glass; glass in balls, tubes, or rods; enamels, colors, glazes, and fluxes; and optical glass, not optically worked, in any form. These products are covered in summaries in T.C. publication 257, Pressed and Blown Glassware.

The principal commodities covered in this volume are nontextile glass fibers, rolled glass, pressed and blown glass (sheet glass), plate and float glass, tempered glass, laminated glass, and glass mirrors. The complete list of glass and glass products covered herein is included in appendix A to this volume.

Annual U.S. consumption of all of the glass and glass products covered by this volume is unknown. Apparent U.S. consumption of unprocessed sheet, plate, float, and rolled glass was valued at more than \$450 million in 1968. Much of this glass is further processed into products such as tempered glass, laminated glass, multiple-glazed insulating units, and mirrors whose value is considerably higher than that of the unprocessed glass. In 1968, apparent U.S. consumption of laminated glass was valued at more than \$435 million, that of multiple-glazed insulating units, more than \$125 million, and that of glass mirrors, more than \$150 million. Apparent U.S. consumption of nontextile glass fibers, another important glass product covered herein, was valued at well over \$300 million in 1968.

The United States was a net importer of glass and glass products in 1964-68. Average annual exports of domestic merchandise were valued at an estimated \$45 million whereas the value of imports averaged \$70 million a year during the period. Both exports and imports, however, were small relative to domestic consumption.

The principal foreign markets for domestically produced glass and glass products were Canada and countries in Central and South America. Lesser quantities were also exported to Europe. Approximately half the exported merchandise was unprocessed rolled, sheet, plate, and float glass.

In terms of value, approximately 82 percent of the annual imports of the glass and glass products covered by this volume consisted of unprocessed rolled, sheet, plate, and float glass. Rolled glass accounted for about 9 percent, sheet glass, 47 percent, and plate and float glass, about 26 percent of annual imports. Belgium, Japan, and West Germany were the principal suppliers; other major suppliers were the United Kingdom, Italy, France, and the Republic of China.

During the 1964-67 trade conference, the United States granted tariff concessions on 24 of the 57 tariff items covered by this volume. Tariff concessions were not granted on items 542.11 to 542.98 and 544.16 because the rates of duty had been temporarily increased by Presidential Proclamation No. 3455 pursuant to escape-clause procedure. Other items were excluded under the provisions of the Automotive Products Trade Act of 1965, one item (541.01) was already duty-free, and one item (544.11) had been reduced by 12 percent on January 1, 1964.

Concessions amounting to 50 percent were granted on 22 items, 47 percent on 1 item, and 37 percent on another item. Based on imports in 1969, full concessions were granted on items valued at \$43 million, and partial concessions on items valued at \$9 million. Imports of the items on which concessions were not granted were valued at \$57 million in 1969.

<u>Commodity</u>	<u>TSUS</u> <u>item</u>
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Glass bricks, blocks, and tiles--- 540.47

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1970).

#### U.S. trade position

The glass bricks, blocks, and tiles consumed in the United States in 1964-68 were virtually all supplied by domestic producers. Imports made up an insignificant portion of domestic consumption during this time, while a large share of U.S. production was exported.

#### Description and uses

This summary covers pressed or molded glass bricks, blocks, tiles, slabs, squares, and other articles chiefly used as building materials.

Glass blocks, the principal commercial product of this group of commodities, are hollow and are made by hermetically sealing together two molded halves of glass. The glass blocks may be opaque, transparent, or translucent, clear, colored, or enameled, and may possess acoustical and thermal insulation properties. Glass blocks vary in size from 4- to 12-inch squares and average approximately 4 inches in thickness.

Glass bricks are solid glass rectangular shapes used occasionally in construction in place of glass blocks. Glass tiles are used as glass cobblestones in sidewalks to serve as skylights for storerooms below the sidewalks. Colored glass bricks and tiles are also

## GLASS BRICKS, BLOCKS, AND TILES

manufactured with religious images cast within them for use in churches in place of stained glass.

Glass slabs, squares, and other articles are used for building purposes, but the quantities produced, if any, are negligible.

U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1970) are as follows:

TSUS item	Commodity	Rate prior to Jan. 1, 1968	U.S. concessions granted in 1964-67 trade conference (Kennedy Round)	
			Third stage, effective Jan. 1, 1970	Final stage, effective Jan. 1, 1972
540.47	Bricks, blocks, tiles, slabs, squares, and other articles, all the foregoing, of pressed or molded glass, chiefly used in building.	24% ad val.	16.5% ad val.	12% ad val.

The rate in effect prior to January 1, 1968, had remained unchanged from August 31, 1963 (the effective date of the TSUS), through 1967. The third and final stages show two of the five 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 amounts to a reduction of 50 percent (see pertinent sections of the TSUSA-1970 reproduced in appendix A for the stages rates).

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Comment

No official statistics are available on U.S. production, consumption, or exports of the commodities covered by this summary but all three are believed to have declined significantly in 1964-68. Domestic consumption of glass blocks is estimated to have amounted to only a few million dollars a year during this time and that of brick and tile to less than \$100,000 a year. Approximately one-fourth of U.S. production in the 5-year period was exported, principally to Canada and Europe.

Annual U.S. imports in 1964-68 ranged from \$13,073 in 1965 to \$28,248 in 1968 and came principally from Italy and France during 1964-67 and from West Germany in 1968 (see trade table). Imports in 1969 amounted to \$46,162, principally from West Germany.

## GLASS BRICKS, BLOCKS, AND TILES

Glass bricks, blocks, slabs, squares, and the like used in building:  
U.S. imports for consumption, by principal sources, 1964-69

Source	1964	1965	1966	1967	1968	1969
West Germany---	\$2,118	\$1,563	\$1,335	\$300	\$25,504	\$34,483
Italy-----	7,561	7,217	8,866	6,188	2,744	9,141
Japan-----	739	638	1,033	-	-	982
France-----	13,216	776	2,599	5,458	-	-
Mexico-----	287	2,024	1,086	1,360	-	-
All other----- <sup>1/</sup>	1,994	855	523	-	-	1,556
Total-----	25,915	13,073	15,442	13,306	28,248	46,162

<sup>1/</sup> Includes imports valued at \$1,254 from the United Kingdom.

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

<u>Commodity</u>	<u>TSUS item</u>
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Glass mosaic tiles-----	540.51
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Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1970).

#### U.S. trade position

Glass mosaic tiles are not manufactured in the United States; domestic consumption is supplied entirely by imports.

#### Description and uses

This summary covers a wide variety of small glass items--collectively termed "glass mosaic tiles"--such as cubes, rectangles, fragments, or chippings used chiefly for decorative purposes.

Glass mosaic tiles are small pieces of glass, generally roughly cube shaped, that are made from pot-casted "patties" of colored glass. These patties are cut up into tesserae (or tile) whose average size is about one-half inch on a side. Individual tiles of various colors are often mounted on foot-square panels made of paper, cloth, or fiber glass.

Glass mosaic tiles are used almost exclusively for decorative purposes. For centuries they have been utilized in depicting religious images and scenes in churches. In recent years they have gained acceptance as a decorating medium for the walls of office buildings, hotels, and apartment houses, particularly for entrances and lobbies.

U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1970) are as follows:

TSUS item	Commodity	Rate prior to Jan. 1, 1968	U.S. concessions granted in 1964-67 trade conference (Kennedy Round)	
			Third stage, effective Jan. 1, 1970	Final stage, effective Jan. 1, 1972
540.51	Small glass cubes, rectangles, frag- ments, or chip- pings, all the foregoing, whether or not attached to a backing, chiefly used for making mosaics and for other decorative purposes.	17% ad val.	11.5% ad val.	8.5% ad val.

The rate in effect prior to January 1, 1968, had remained unchanged from August 31, 1963 (the effective date of the TSUS), through 1967. The third and final stages show two of the five 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 amounts to a total reduction of 50 percent (see pertinent sections of the TSUSA-1970 reproduced in appendix A for the staged rates).

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Comment

During 1964-68, glass mosaic tiles for U.S. consumption were virtually all imported. Imports declined steadily during this time from \$512,000 in 1964 to \$227,000 in 1967, but increased slightly in 1968 to \$241,000 (see accompanying table). Italy, the principal supplier, accounted for about seven-eighths, and Mexico, the second most important supplier, for about one-tenth of total imports in 1964-68. Countries that intermittently supplied these commodities include West Germany, Japan, and France.

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## GLASS MOSAIC TILES

Glass mosaic tiles: U.S. imports for consumption, by  
principal sources, 1964-69

(In thousands of dollars)

Source	: 1964	: 1965	: 1966	: 1967	: 1968	: 1969
Italy-----	452	337	256	193	199	211
Mexico-----	52	48	28	18	27	15
Other-----	8	5	10	16	15	3
Total-----	512	390	294	227	241	229

1/ Includes imports valued at 12 thousand dollars from France.

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

<u>Commodity</u>	<u>TSUS</u> <u>item</u>
Foam glass-----	540.55

Note.--For the statutory description see the Tariff Schedules of the United States Annotated (TSUSA-1970).

#### U.S. trade position

The United States was by far a net exporter of foam glass during 1964-68. Exports are estimated to have been valued at more than \$1 million a year whereas annual imports amounted to only a few thousand dollars during this period.

#### Description and uses

Foam glass is a rigid lightweight cellular glass material used primarily for thermal insulation. It is used for roofing and pipe insulation and for various other purposes in the Arctic regions. It is also particularly well suited for cold storage insulation as in deep freezers, since it is waterproof and thus does not tend to crack as do most other insulation materials when thawing and refreezing occurs.

Foam glass is also used as an abrasive in block form for cleaning grills in restaurants, for paint scraping, and for refinishing furniture.

#### U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1970) are as follows:

## FOAM GLASS

TSUS item	Commodity	Rate prior to Jan. 1, 1968	U.S. concessions granted in 1964-67 trade conference (Kennedy Round)	
			Third stage, effective Jan. 1, 1970	Final stage, effective Jan. 1, 1972
540.55	Foam glass in any form.	30% ad val.	21% ad val.	15% ad val.

The rate in effect prior to January 1, 1968, had remained unchanged from August 31, 1963 (the effective date of the TSUS), through 1967. The third and final stages show two of the five 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 amounts to a total reduction of 50 percent (see pertinent sections of the TSUSA-1970, reproduced in appendix A, for the staged rates).

Comment

Annual U.S. consumption of foam glass is estimated to have been valued at several million dollars in 1964-68. The continuing demand for household deep freezer units, as well as building construction and space exploration, is believed to have caused consumption to increase during this period.

Foam glass was produced by one firm in the United States at two plants, one in Pennsylvania and the other in Missouri.

U.S. exports, which amounted to an estimated million dollars a year, were shipped primarily to European countries. Because of the bulkiness of foam glass and the expense of shipping it long distances, exports have not accounted for a large portion of U.S. production.

Annual U.S. imports of foam glass in 1964-69 amounted to a few thousand dollars and came principally from the United Kingdom (see accompanying table).

## FOAM GLASS

Foam glass: U.S. imports for consumption,  
by sources, 1964-69

Source	: 1964	: 1965	: 1966	: 1967	: 1968	: 1969
Netherlands----	\$267	\$1,101	-	-	-	\$12,516
United Kingdom--	2,074	2,567	-	\$4,395	\$3,245	-
West Germany---	1,270	<u>1/</u> 32,443	<u>1/</u> \$53,908	-	-	-
Italy-----	2,433	4,300	5,185	-	-	-
Canada-----	-	-	1,500	-	-	-
France-----	267	-	-	-	-	-
Total-----	6,311	40,411	60,593	4,395	3,245	12,516

1/ Believed to be a misclassification.

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

<u>Commodity</u>	<u>TSUS</u> <u>item</u>
Glass fibers-----	540.71, -.72

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1970).

U.S. trade position

The United States was the world's largest producer and consumer of glass fibers during 1964-68. Exports of glass fibers during this time exceeded imports but both were small relative to U.S. consumption.

Description and uses

This summary covers nontextile glass fibers <sup>1/</sup> in bulk and in such forms as mats, felts, or pads of a density not over 25 pounds per cubic foot, whether or not treated with other substances such as glue or plastics. The glass fibers covered herein may also be lined, covered, or supported by various materials including metals. Glass fiber filters <sup>1/</sup> and their frameworks or supports are also included in this summary, as are glass fiber articles <sup>1/</sup> not specially provided for in the TSUS.

Textile glass fibers--yarns, cordage, woven fabrics, and articles made therefrom--are covered in another volume, as are reinforced or laminated plastics containing glass fibers.

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<sup>1/</sup> For the purposes of this summary, the term "glass fiber(s)" refers to nontextile grades of glass fiber, having a density not over 25 pounds per cubic foot.

Glass fibers are manufactured by two distinct processes. In the rotary process tiny globules of molten glass are dropped on a high speed rotary spinner whose centrifugal force draws the molten glass into strands which are then deposited on a conveyor belt where they are massed. The massed fibers are then treated with various substances, principally resins, to form mats, pads, blankets, or other forms of bulk fiber glass. In the continuous filament process used to make textile glass fibers, the molten glass is pressed at tremendous speed through extremely small orifices to produce a thin glass filament. The thread of glass is cooled and wound on a spool for final weaving into textiles.

The predominant uses for nontextile glass fibers are as insulation and as a filtering medium. Insulation applications include thermal and acoustical insulation utilized in residential, commercial, and industrial construction, pipe and electrical insulation, and insulation for household, commercial, and industrial appliances and equipment ranging from deep freezers and refrigerators to steam boilers. Nontextile glass fibers are also used as a reinforcing material in plastics. Glass-fiber filters are used in air-conditioning and ventilating apparatus.



U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1970) are as follows:

TSUS item	Commodity	Rate prior to Jan. 1, 1968	U.S. concessions granted in 1964-67 trade conference (Kennedy Round)	
			Third stage, effective Jan. 1, 1970	Final stage, effective Jan. 1, 1972
540.71	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.	22% ad val.	15% ad val.	11% ad val.
540.72	If Canadian article and original motor-vehicle equipment.	Free	<u>1/</u>	<u>1/</u>

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

The rate in effect for item 540.71 prior to January 1, 1968, had remained unchanged from August 31, 1963 (the effective date of the TSUS), through 1967. The third and final stages show two of the five 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 amounts to a total reduction of 50 percent (see pertinent sections of the TSUSA-1970, reproduced in appendix A, for the staged rates).

The duty-free treatment of Canadian articles which are original motor-vehicle equipment (item 540.72) became effective for articles entered on and after January 18, 1965, under the

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provisions of the Automotive Products Trade Act of 1965 (Public Law 89-283). From August 31, 1963 through January 17, 1965, imports of this type of glass had been dutiable at 22 percent ad valorem under item 540.71. This item was not negotiated in the Kennedy Round of tariff negotiations.

#### U.S. consumption

Apparent U.S. consumption of the glass fibers covered herein during 1964-68 is estimated to have exceeded \$300 million a year. Most of these fibers consisted of glass fibers for insulation, apparent consumption of which ranged from \$247 million in 1965 to \$307 million in 1968 (table 1).

Glass fibers encountered competition from such traditional insulation materials as foam glass, foam plastic, foam vinyl, asbestos, and mineral wool, as well as metal and wood.

#### U.S. producers

In 1967, 11 firms produced non-textile glass fibers in 30 plants situated predominantly in the north-central United States. Six of these firms were large concerns that produced a variety of other products. The largest firm, jointly formed by two large glass-producing concerns, probably accounted for nearly 60 percent of the total domestic output of glass fibers. The next largest producer of glass fibers was a large building-supply concern and the third largest producer was a division of a large glassmaking firm.

Except for the largest producer (which produced glass fibers only) the output of glass fibers of all the producers of some size represented only a small part of the value of their production of all products.

#### U.S. production

During 1964-68, the United States was the world's largest producer of glass fibers, the output of which was sufficient to supply more than 99 percent of the U.S. market and a small percentage of world requirements for such fibers. U.S. production of glass fibers for insulation averaged more than 1 billion pounds a year, 1964-68. No official statistics are available on U.S. production of filters and "other" articles of glass fiber during this period.

U.S. shipments of glass fibers for insulation rose from 938 million pounds, valued at \$226 million, in 1964 to more than 1 billion pounds, valued at \$312 million, in 1968 (table 1). Approximately three-fifths of this material was glass fibers for building insulation. The value of shipments of glass fibers for building insulation was 75 percent higher while that for industrial and equipment insulators was 19 percent higher in 1968 than in 1964.

#### U.S. exports

U.S. exports of the glass-fiber commodities covered herein are not separately reported and are estimated to have exceeded \$12 million a year in 1964-68.

In 1965-68, exports of glass fibers for insulation purposes were valued at an average \$4 million a year, which was equivalent to about

2 percent of annual U.S. shipments of such glass fibers during this period (table 1). Most of this material went to Canada, West Germany, Italy, and Sweden with the rest going to numerous countries throughout the world (table 2). Exports of fiber glass articles, which averaged \$13.4 million a year during 1965-68, followed a similar international distributional pattern (table 3).

#### U.S. imports

Annual U.S. imports of fiber glass in 1964-68 were negligible in relation to U.S. consumption. Annual imports ranged in value from \$158,532 in 1964 to \$530,305 in 1966 and came principally from Mexico and Canada (table 4). In 1969, imports, principally from Canada and Switzerland, amounted to \$691,964.

Table 1.--Glass fibers for insulation: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, 1964-68

(In thousands of dollars)				
Year	Production <u>1/</u>	Imports	Exports	Apparent consumption
1964-----	226,493	159	<u>2/</u>	<u>2/</u>
1965-----	250,488	195	3,814	246,869
1966-----	282,124	530	3,617	279,037
1967-----	279,279	415	4,443	275,251
1968-----	311,921	442	5,447	306,916
1969-----	<u>2/</u>	692	7,369	<u>2/</u>

1/ Shipments.

2/ Not available.

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

Table 2.--Glass fibers for insulation: U.S. exports of domestic merchandise, by principal markets, 1965-69

(In thousands of dollars)					
Markets	1965	1966	1967	1968	1969
Canada-----	596	761	761	812	1,014
West Germany-----	359	392	500	653	1,167
Sweden-----	178	171	208	383	458
United Kingdom-----	109	89	178	373	320
Iran-----	71	182	143	326	211
Italy-----	52	225	267	324	234
Netherlands-----	89	199	183	234	300
Venezuela-----	457	185	81	33	53
Other <sup>1/</sup> -----	1,903	1,413	2,014	2,309	3,612
Total-----	3,814	3,617	4,443	5,447	7,369

<sup>1/</sup> Includes numerous countries, none of which received significant quantities on a year-to-year basis.

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

Table 3.--Articles of glass fibers: <sup>1/</sup> U.S. exports of domestic merchandise, by principal markets, 1965-69

(In thousands of dollars)						
Markets	1965	1966	1967	1968	1969	
Canada-----	2,318	2,241	2,144	2,076	2,153	
Belgium-----	2,801	2,997	1,326	2,068	797	
United Kingdom-----	880	850	933	1,160	781	
Australia-----	933	599	700	638	754	
West Germany-----	542	354	354	598	703	
Republic of South Africa-----	354	429	481	557	855	
Sweden-----	604	558	489	395	274	
France-----	358	385	441	388	393	
Venezuela-----	579	445	180	312	259	
Pakistan-----	1,643	1,017	1,073	231	532	
Other-----	2,596	3,351	5,043	5,133	5,199	
Total-----	13,608	13,226	13,164	13,556	12,700	

<sup>1/</sup> Includes some articles classifiable elsewhere in the TSUS.

<sup>2/</sup> Includes exports to Japan valued at 1,553 thousand dollars.

<sup>3/</sup> Includes exports to Japan valued at 1,379 thousand dollars.

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

Table 4.--Glass fibers for insulation: U.S. imports for consumption,  
by principal sources, 1964-69

(In thousands of dollars)

Source	: 1964	: 1965	: 1966	: 1967	: 1968	: 1969
Mexico-----	40	77	150	179	96	11
Canada-----	78	71	115	160	195	316
United Kingdom-----	4	7	25	32	39	61
West Germany-----	18	28	10	11	10	33
Other-----	19	12	1/230	33	102	2/ 271
Total-----	159	195	530	415	442	692

1/ Includes imports valued at 151 thousand dollars from Norway.

2/ Includes imports valued at 108 thousand dollars from Switzerland.

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



<u>Commodity</u>	<u>TSUS item</u>
Ribbon glass-----	541.01

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1970).

#### U.S. trade position

Annual U.S. consumption of ribbon glass in 1964-68, approximately 25 percent of which was imported, was valued at several million dollars. Exports were negligible during this period.

#### Description and uses

This summary covers ribbon glass, a very thin flat glass weighing not over 4 ounces per square foot. Other kinds of flat glass--such as plate, float, and sheet, and products thereof--are covered in other summaries in this volume.

Ribbon glass is a thin, narrow strip or ribbon of glass continuously drawn from miniature sheet-glass tanks. This type of glass is usually of a special composition suited to its particular end use and is quite expensive compared with most unprocessed flat glass. It is used principally as microcover glass in connection with microscopic examinations and in the manufacture of components for the electronics industry.

#### U.S. tariff treatment

The column 1 (trade-agreement) rate of duty applicable to imports (see general headnote 3 in the TSUSA-1970) is as follows:

## RIBBON GLASS

TSUS item	Commodity	Rate prior to Jan. 1, 1968	U.S. concessions granted in 1964-67 trade conference (Kennedy Round)	
			Third stage, effective Jan. 1, 1970	Final stage, effective Jan. 1, 1972
541.01	Ribbon glass, or flat: glass, in rec- tangles or other- wise, not ground and not otherwise processed, weighing: not over 4 oz. per sq. ft.	Free	<u>1/</u>	<u>1/</u>

1/ Rate not affected by trade conference.

Ribbon glass was provided for as a new item, 541.01, free of duty, under the TSUS, effective August 31, 1964.

#### Comment

There was only one known U.S. producer of ribbon glass in 1964-68 and the ribbon glass produced--valued at several million dollars a year--was less than 1 percent of that producers sales of all products. U.S. production and consumption are estimated to have increased during this period.

Annual imports of ribbon glass in 1964-68 averaged 110,000 pounds, valued at \$343,000, and came principally from West Germany, the United Kingdom, and Japan (see accompanying table). Imports in 1969 amounted to \$462,000; West Germany supplied 90 percent of the total. Exports were negligible during this period.

Ribbon glass: U.S. imports for consumption, by  
principal sources, 1964-69

Source	: 1964	: 1965	: 1966	: 1967	: 1968	: 1969
	:	:	:	:	:	:
	Quantity (1,000 pounds)					
West Germany-----	31	48	56	36	63	128
United Kingdom-----	36	36	44	40	41	7
Japan-----	18	15	16	14	10	4
Other-----	-	-	-	5	5	-
Total-----	85	99	116	95	119	139
	Value (1,000 dollars)					
West Germany-----	168	197	178	122	210	417
United Kingdom-----	119	117	140	134	144	25
Japan-----	73	60	69	67	46	20
Other-----	-	-	-	1/	2	-
Total-----	360	374	387	323	402	462
	:	:	:	:	:	:

1/ Less than \$500.

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



<u>Commodity</u>	<u>TSUS item</u>
Cast or rolled glass---	541.11, -.21, -.31
Polished wire glass-----	543.11

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1970).

#### U.S. trade position

In 1964-68, imports amounted to about 32 percent of apparent U.S. consumption of these commodities. Imports were about 18 times as great as exports, which amounted to about 2 percent of U.S. production.

#### Description and uses

This summary covers rolled and cast glass in rectangles, one or both sides of which have a rough surface texture sufficient to preclude its being seen through (see headnote 2a, subpart B, pt. 3 of schedule 5 reproduced in appendix A). Such rough-surfaced glass is generally termed "rolled glass" but may also be designated "cast glass." Also covered in this summary is "wire glass," a term applied to flat glass containing an embedded wire netting.

For tariff purposes, flat glass is separated into two categories: ordinary glass and colored or special glass. <sup>1/</sup>

Ordinary and special or colored rolled glass and ordinary polished wire glass are covered in this summary. Ordinary and special

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<sup>1/</sup> For the tariff definitions of ordinary and colored or special glass, see the summary in this volume on plate and float glass.

or colored drawn or blown sheet glass, with or without wire netting (542.11 to 542.98); ordinary polished glass without wire netting (543.21 to 543.31); and colored or special polished glass, with or without wire netting (543.61 to 543.69) are covered in other summaries in this volume.

Rolled (cast) glass is produced by passing rollers over flat glass before the glass has solidified or by passing the molten glass between rollers. The surface thus produced may have a definite pattern or may have simply an irregular rough texture. Patterns range from arabesque to geometric; the most common are those which have a mottled, ribbed, hammered or fabric design. The purpose of the various patterns is to diffuse light and to reduce glare in varying degrees. Sand blasting and acid etching are sometimes employed in addition to rolling in order to reduce glare. Sand-blasted and acid-etched glass are considered processed glass for tariff purposes (see summary on processed flat glass (items 544.14 to 544.20) in this volume).

Wire glass is made by introducing wire netting into the glass while it is still molten. After being rolled, the wire glass is ready for use as rolled wire glass. Some of the rolled wire glass, however, is ground and polished on both sides to form clear transparent wire glass. The wire netting may be twisted chicken wire or wire welded into diamond-shaped or square patterns.

Rolled glass may be clear (except for the rough surface), colored, or opaque whereas the polished glass containing the wire netting is clear and transparent.

Rolled glass is used for decorative as well as utilitarian purposes where transparency is unnecessary or objectionable but where light is needed, as in skylights, factory windows, office partitions, lavatories, and corridors. It is also used for lighting fixtures, jalousies, bath and shower enclosures, and sliding doors for closets and partitions. Rolled wire glass is usually used as a safety glass where there is danger of fire, explosion, or similar hazards, as in terminals, power plants, factories, and subways. Polished wire glass has similar uses except that it is employed where there is a need for transparency.

#### U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1970) are as follows:

TSUS item	Commodity	Rate prior to Jan. 1, 1968	U.S. concessions granted in 1964-67 trade conference (Kennedy Round)	
			Third stage, effective Jan. 1, 1970	Final stage, effective Jan. 1, 1972
	Glass (whether or not containing wire netting), in rectangles, not ground, not polished, and not otherwise processed, weighing over 4 oz. per sq. ft.:			
	Cast or rolled glass:			
541.11	Ordinary glass-----	0.625¢ per lb.	0.43¢ per lb.	0.3¢ per lb.
	Colored or special glass:			
541.21	Opaque and measuring over 15/64 inch in thickness.	1.2¢ per lb.	0.8¢ per lb.	0.6¢ per lb.
541.31	Opaque and measuring not over 15/64 inch in thickness, or not opaque and of any thickness.	0.625¢ per lb. + 2.5% ad val.	0.43¢ per lb. + 1.5% ad val.	0.3¢ per lb. + 1% ad val.
	Glass (including plate glass and float glass), whether or not containing wire netting, in rectangles, ground or polished on one or both surfaces in whole or in part but not further processed:			
	Ordinary glass:			
543.11	Containing wire netting-----	6¢ per sq. ft.	4.5¢ per sq. ft.	3.8¢ per sq. ft.

The rates in effect prior to January 1, 1968, except for that on item 543.11, had remained unchanged from August 31, 1963 (the effective date of the TSUS), through 1967. The rate on item 543.11 was reduced from 6.8 cents to 6 cents on January 1, 1964. The third and final stages show two of the five 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 amount to total reductions of about 37 percent on item 543.11 and reductions of about 50 percent on the other items (see pertinent sections of the TSUSA-1970, reproduced in appendix A, for the staged rates).

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The average ad valorem equivalent of the 1968 specific rates of duty based on imports in 1968 were 8.9 percent for item 541.11, 9.5 percent for item 541.21, 6.5 percent for item 541.31, and 7.1 percent for item 543.11.

#### U.S. consumption

Apparent annual U.S. consumption of rolled glass and polished wire glass in 1964-68 ranged from 202 million pounds to 248 million pounds and averaged about 226 million pounds (table 1). Fluctuation in annual U.S. consumption closely followed changes in new building construction during this period. Approximately 90 percent of the quantities consumed consisted of rolled glass; the remainder, of polished wire glass.

Rolled glass and polished wire glass encountered competition principally from plastics and other types of flat glass.

#### U.S. production and producers

Annual U.S. production of rolled glass and polished wire glass rose to 176 million pounds in 1964, then declined to 143 million pounds in 1967 (table 1). The downward trend was reversed in 1968 when production rose to 161 million pounds. Most of the quantities produced in the United States consisted of rolled glass with or without embedded wire netting.

Virtually all the U.S. production of rolled glass and polished wire glass was accounted for by eight firms including one that commenced operations in 1967. Three firms which accounted for most of

the domestic production produced nearly all of the basic types of rolled glass. Three of the eight firms produced only colored rolled glass, and the two remaining firms--large manufacturers of flat glass--produced small quantities of rough rolled glass. Wire glass was produced by three of the eight firms.

#### U.S. exports

U.S. exports of rolled glass rose from 2.2 million pounds valued at \$387,000 in 1964 to 6.0 million pounds valued at \$1.1 million in 1968 (table 2). The annual average during 1964-68 was 4.3 million pounds valued at \$839,000.

Most of the exports of rolled glass and rolled wire glass went to Canada, Australia, and the Netherlands.

Exports of polished wire glass were not separately reported in 1964-69. They are believed to be negligible.

#### U.S. imports

Annual U.S. imports of rolled glass and polished wire glass in 1964-68 averaged 69 million pounds, valued at \$5.6 million.

Annual imports of ordinary clear rolled glass (including rolled wire glass) in 1964-68 averaged 53 million pounds, valued at \$3.3 million (see data on annual imports in table 3), which was equivalent to 81 percent of the quantity and 59 percent of the value of total imports.

Imports of polished wire glass, although only 5 percent of the quantity of total imports, were equivalent to 25 percent of the value.

The remainder of the imports consisted of colored and special rolled glass (including rolled wire glass).

Imported rolled glass is generally comparable to domestically produced rolled glass but is usually offered in a greater variety of patterns and a greater number of thicknesses. Imported polished wire glass is generally comparable to the polished wire glass produced in the United States.

The main sources of imported rolled glass and polished wire glass in 1964-68 were Japan, Belgium, the United Kingdom, and West Germany (tables 3, 4, and 5).

Table 1.--Rolled glass and polished wire glass.--U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, 1964-68

Year	Production	Imports	Exports	Apparent consumption	Ratio (percent) of imports to consumption
	<u>1,000</u> <u>pounds</u>	<u>1,000</u> <u>pounds</u>	<u>1,000</u> <u>pounds</u>	<u>1,000</u> <u>pounds</u>	
1964--	176,048	74,108	2,206	247,950	29.9
1965--	169,685	63,443	4,620	228,508	27.8
1966--	160,394	71,459	4,518	227,335	31.4
1967--	143,113	62,676	4,178	201,611	31.1
1968--	160,573	71,170	6,001	225,742	31.5
1969--	<u>1/</u>	54,276	7,670	<u>1/</u>	<u>1/</u>
<u>1/</u> Not available.					

Source: Compiled from official statistics of the U.S. Department of Commerce and from data submitted to the Tariff Commission.

Table 2.--Rolled glass and polished wire glass: U.S. exports <sup>1/</sup> of domestic merchandise, by principal markets, 1964-69

Market	1964	1965	1966	1967	1968	1969
Quantity (1,000 pounds)						
Canada-----	1,546	2,530	2,299	2,219	1,526	2,013
Netherlands-----	-	443	762	646	1,647	1,420
Australia-----	36	740	459	671	830	1,281
Mexico-----	8	72	91	38	99	809
Japan-----	19	2/	107	99	468	434
Belgium-----	69	385	267	94	245	291
United Kingdom-----	25	52	91	82	151	158
All other-----	503	398	442	329	1,035	1,264
Total-----	2,206	4,620	4,518	4,178	6,001	7,670
Value (1,000 dollars)						
Canada-----	250	421	383	377	224	305
Netherlands-----	-	77	138	119	257	250
Australia-----	7	219	129	193	144	223
Mexico-----	2	16	19	15	19	146
Japan-----	3	2/	22	29	91	91
Belgium-----	12	69	45	16	43	57
United Kingdom-----	4	14	23	15	32	37
All other-----	109	119	111	102	325	337
Total-----	387	935	870	866	1,135	1,446

<sup>1/</sup> Does not include colored rolled or cast glass.

<sup>2/</sup> Included in other.

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

Table 3.--Ordinary cast or rolled glass: U.S. imports for consumption, by principal sources, 1964-69

Source	1964	1965	1966	1967	1968	1969
Quantity (1,000 pounds)						
Japan-----	15,515	13,705	15,733	12,618	14,720	9,782
Belgium-----	25,242	18,609	16,362	14,162	12,906	7,858
United Kingdom---	3,940	1,182	2,368	3,269	3,777	3,217
Poland-----	5,704	8,202	16,535	11,909	11,133	7,336
Republic of						
China-----	1,520	1,129	1,435	1,002	6,606	4,718
West Germany-----	2,161	1,955	1,515	1,403	1,946	2,598
Italy-----	54	508	561	324	826	329
All other-----	6,234	2,686	1,423	2,295	1,514	709
Total-----	60,370	47,976	55,932	46,982	53,428	36,547
Value (1,000 dollars)						
Japan-----	872	799	1,033	945	1,098	822
Belgium-----	1,984	1,371	1,112	980	920	644
United Kingdom---	408	126	273	330	426	401
Poland-----	299	362	524	403	359	236
Republic of						
China-----	70	51	71	55	307	232
West Germany-----	157	135	106	98	155	196
Italy-----	5	24	23	13	48	25
All other-----	159	70	58	66	57	30
Total-----	3,954	2,938	3,200	2,890	3,370	2,586

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

Table 4.--Colored or special cast or rolled glass: U.S. imports  
for consumption, by principal sources, 1964-69

Source	: 1964	: 1965	: 1966	: 1967	: 1968	: 1969
	:	:	:	:	:	:
	Quantity (1,000 pounds)					
West Germany-----	4,177	5,650	5,663	4,014	4,280	4,506
Belgium-----	2,734	2,750	2,886	3,029	3,288	3,357
United Kingdom-----	125	157	274	185	184	192
All other-----	50	58	136	258	82	134
Total-----	7,086	8,615	8,959	7,486	7,834	8,189
	:	:	:	:	:	:
	Value (1,000 dollars)					
West Germany-----	432	564	594	434	520	545
Belgium-----	299	298	306	354	396	422
United Kingdom-----	23	20	33	27	22	25
All other-----	6	8	16	35	9	20
Total-----	760	890	949	850	947	1,012
	:	:	:	:	:	:

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

## ROLLED GLASS AND POLISHED WIRE GLASS

Table 5.--Ordinary rectangular polished wire glass: U.S. imports for consumption, by principal sources, 1964-69

Source	: 1964	: 1965	: 1966	: 1967	: 1968	: 1969
	:	:	:	:	:	:
	Quantity (1,000 pounds) <sup>1/</sup>					
Japan-----	4,036	4,676	4,312	6,048	6,284	5,712
United Kingdom-----	2,200	1,804	1,844	1,684	3,004	3,304
Netherlands-----	392	276	312	268	244	404
West Germany-----	12	20	48	164	148	64
Belgium-----	8	76	48	24	100	28
All other-----	4	-	4	20	128	28
Total-----	6,652	6,852	6,568	8,208	9,908	9,540
	:	:	:	:	:	:
	Value (1,000 dollars)					
Japan-----	686	826	788	1,216	1,314	1,358
United Kingdom-----	435	364	296	249	539	688
Netherlands-----	61	48	47	37	35	38
West Germany-----	4	3	5	31	30	14
Belgium-----	<u>2/</u>	6	5	1	8	4
All other-----	-	-	2	4	6	5
Total-----	1,186	1,247	1,143	1,538	1,932	2,107
	:	:	:	:	:	:

<sup>1/</sup> Converted to pounds from square feet using factors developed by the U.S. Tariff Commission.

<sup>2/</sup> Less than \$500. Included in totals.

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



DRAWN OR BLOWN FLAT GLASS  
(SHEET GLASS)

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<u>Commodity</u>	<u>TSUS</u> <u>item</u>
Sheet glass-----	542.11, -.13, -.21, -.23, -.25, -.31, -.33, -.35, -.37, -.42, -.44, -.46 -.48, -.57, -.67, -.71, -.73, -.75, -.77, -.92, -.94, -.96, -.98

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1970).

U.S. trade

Annual apparent U.S. consumption of sheet glass in 1964-68, averaged 1,887 million pounds. Imports supplied about 24 percent of this consumption; exports were negligible relative to U.S. production.

Description and uses

This summary covers drawn and blown flat glass (whether or not containing wire netting), in rectangles, colorless or colored, weighing over 4 ounces per square foot and not ground, polished, or otherwise processed. The term "sheet glass" is used herein to designate the type of flat glass covered by this summary.

Other types of flat glass--plate and float glass, ribbon glass, rolled glass, polished wire glass, processed flat glass, tempered glass, and laminated glass--are covered in other summaries in this volume.

Sheet glass is a flat, transparent glass with a fire-polished surface that is produced by various glass drawing processes. Although glass-drawing methods vary somewhat, they are essentially the same in that a continuous sheet of glass is drawn from a tank (or furnace) containing molten glass. Width and thickness of the sheet of glass

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DRAWN OR BLOWN FLAT GLASS  
(SHEET GLASS)

controlled mechanically. After passing through annealing lehrs that remove internal stresses, the glass is cut to size, packaged, and shipped to wholesale and retail outlets or directly to large fabricators of products utilizing sheet glass. Some of the sheet glass is further processed by the producers into finished or semifinished products.

For tariff purposes sheet glass is separated into two categories: ordinary glass and colored or special glass. <sup>1/</sup>

The great variety of uses for sheet glass call for many thicknesses and sizes. Thicknesses range from 0.002 inch to 0.5 inch or more, while sizes (surface area) range from less than a square inch to many square feet. For the purposes of this summary, sheet glass is divided into three thickness (weight) categories:

- (1) Glass weighing over 4 ounces but not over 16 ounces per square foot, hereinafter referred to as thin sheet glass. It is used for picture glass, microscope-slide glass, photographic dry plates, and small mirrors. It is also used to a limited extent in small-size and/or low-quality storm windows.
- (2) Glass weighing over 16 ounces but not over 28 ounces per square foot, hereinafter referred to as window glass. It is used chiefly for glazing windows, doors, and storm sash in residential construction. Window glass for such uses is subdivided chiefly into single strength glass weighing 18 or 19 ounces per square foot and double strength glass weighing 24 or 26 ounces per square foot; the two weights in each strength (e.g., 18 or 19 ounce glass) are used interchangeably. Window glass is also used in making

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<sup>1/</sup> For the tariff definitions of ordinary glass and colored or special glass, see the summary, in this volume, on plate and float glass.

DRAWN OR BLOWN FLAT GLASS  
(SHEET GLASS)

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non-automotive laminated glass (safety glass consisting of sheet glass with a plastic inter-layer), pinball machine covers, and double-glazed insulating glass.

- (3) Glass weighing over 28 ounces per square foot, herein-after referred to as heavy sheet glass. It is used to glaze large openings such as glass patio doors and the glass panels frequently found adjacent to them. Heavy sheet glass is often tempered (specially toughened) and, in that form, is used extensively in the side and rear windows of many automobiles.

U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1970) are as follows: 1/

TSUS item	Commodity	Rate prior to Jan. 1, 1968 <u>1/</u>	Ad valorem equivalent of the 1969 rate of duty <u>2/</u>
	Glass (whether or not containing wire: netting) in rectangles, not ground, not polished, and not otherwise processed: Other (than cast or rolled glass), including blown or drawn glass, but excluding pressed or molded: glass: Ordinary glass: Weighing over 4 oz. but not over 12 oz. per sq. ft.:		<u>Percent</u>
542.11	Measuring not over 40 united inches.	0.7¢ per lb.	2.6
542.13	Measuring over 40 united inches.	0.9¢ per lb.	8.4
	Weighing over 12 oz. but not over 16 oz. per sq. ft.:		
542.21	Measuring not over 40 united inches.	1.0¢ per lb.	10.5

See footnotes at end of table.

1/ No concessions were granted in the 1964-67 trade conference (Kennedy Round) on the items covered in this summary.

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TSUS item	Commodity	Rate prior to Jan. 1, 1968 <u>1/</u>	Ad valorem equivalent of the 1969 rate of duty <u>2/</u>
	Glass (whether or not containing wire: netting), etc.--Con.		
	Other (than cast or rolled), including blown or drawn glass, etc.--Con.		
	Ordinary glass--Con.		
	Weighing over 12 oz., etc.-- Con.		<u>Percent</u>
542.23	Measuring over 40 but not over 60 united inches.	1.1¢ per lb.	14.9
542.25	Measuring over 60 united inches.	1.2¢ per lb.	14.5
	Weighing over 16 oz. but not over 28 oz. per sq. ft.:		
542.31	Measuring not over 40 united inches.	0.7¢ per lb. <u>3/</u>	18.6
542.33	Measuring over 40 but not over 60 united inches.	0.9¢ per lb. <u>3/</u>	25.5
542.35	Measuring over 60 but not over 100 united inches.	1.1¢ per lb. <u>3/</u>	21.1
542.37	Measuring over 100 united inches.	1.4¢ per lb.	18.3
	Weighing over 28 oz. per sq. ft.:		
542.42	Not over 2-2/3 sq. ft. in area.	0.7¢ per lb.	11.9
542.44	Over 2-2/3 but not over 7 sq. ft. in area.	0.9¢ per lb.	13.7
542.46	Over 7 but not over 15 sq. ft. in area.	1.1¢ per lb.	14.4
542.48	Over 15 sq. ft. in area.	1.4¢ per lb.	16.9
	Colored or special glass:		
542.57	Weighing over 4 oz. but not over 12 oz. per sq. ft.	1.7¢ per lb.	4.9
542.67	Weighing over 12 oz. but not over 16 oz. per sq. ft.	6.0¢ per lb.	20.4

See footnotes at end of table.

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DRAWN OR BLOWN FLAT GLASS  
(SHEET GLASS)

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TSUS item	Commodity	Rate prior to Jan. 1, 1968 <u>1/</u>	Ad valorem equivalent of the 1969 rate of duty <u>2/</u>
	Glass (whether or not containing wire: netting), etc.--Con.		
	Other (than cast or rolled), including blown or drawn glass, etc.--Con.		
	Colored or special glass:--Con.		
	Weighing over 16 oz. but not over 28 oz. per sq. ft.:		<u>Percent</u>
542.71	Measuring not over 40 united inches.	0.7¢ per lb. + 2.5% ad val. <u>3/</u>	4.2
542.73	Measuring over 40 but not over 60 united inches.	0.9¢ per lb. + 2.5% ad val. <u>3/</u>	6.7
542.75	Measuring over 60 but not over 90 united inches.	1.1¢ per lb. + 2.5% ad val. <u>3/</u>	8.4
542.77	Measuring over 90 united inches.	1.4¢ per lb. + 2.5% ad val.	8.7
	Weighing over 28 oz. per sq. ft.:		
542.92	Not over 2-2/3 sq. ft. in area.	0.7¢ per lb. + 2.5% ad val.	9.5
542.94	Over 2-2/3 but not over 7 sq. ft. in area.	0.9¢ per lb. + 2.5% ad val.	10.7
542.96	Over 7 but not over 15 sq. ft. in area.	1.1¢ per lb. + 2.5% ad val.	13.8

See footnotes at end of table.

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DRAWN OR BLOWN FLAT GLASS  
(SHEET GLASS)

TSUS item	Commodity	Rate prior to Jan. 1, 1968 <sup>1/</sup>	Ad valorem equivalent of the 1969 rate of duty <sup>2/</sup>
	Glass (whether or not containing wire netting), etc.--Con.		
	Other (than cast or rolled), including blown or drawn glass, etc.--Con.		
	Colored or special glass:--Con.		
	Weighing over 28 oz. per sq. ft.:--Con.		<u>Percent</u>
542.98	Over 15 sq. ft. in area-----	1.4¢ per lb. + 2.5% ad val.	13.7

<sup>1/</sup> Rate increased effective June 17, 1962 by Presidential Proclamation No. 3455 pursuant to escape-clause procedure. See part 2 of appendix to Tariff Schedules reproduced in appendix A of this volume. The increased rates, except for items 542.31-.35 and 542.71-.75 were terminated effective January 11, 1967 by Presidential Proclamation No. 3762.

<sup>2/</sup> Equivalents based on 1969 imports from MFN nations.

<sup>3/</sup> The increased rates of duty on items 542.31 to 542.35 and 542.71 to 542.75 were scheduled to terminate on December 31, 1969 by Presidential Proclamation No. 3816 but were continued, by Presidential Proclamation No. 3967 dated February 27, 1970, until January 31, 1972. Thereafter, the increased rates will be reduced to the trade-agreement rates in three equal, annual steps.

#### U.S. producers

In 1968, six firms operating 13 establishments accounted for virtually all of the U.S. production of sheet glass. Sheet glass was the sole product of nine of these establishments and the main product of the others. Four of the six firms conducted multiproduct operations; the other two firms produced sheet glass only. Three of the

six firms accounted for nearly 90 percent (based on weight) of the U.S. producers' shipments of sheet glass.

Four of the 13 establishments producing sheet glass in June 1968 were in West Virginia, two in Oklahoma, and one each in California, Pennsylvania, Ohio, Illinois, Tennessee, Louisiana, and Arkansas.

#### U.S. consumption

Changes in annual U.S. consumption of sheet glass have generally followed closely changes in activities in the industries from which the demand for sheet glass is derived. New building construction has been the principal consuming industry (accounting for some 60 percent of consumption); the automobile industry has been a smaller, but significant, user of sheet glass, principally heavy sheet glass.

The apparent annual U.S. consumption of sheet glass declined steadily from 1964 through 1967, decreasing from 2,003 million pounds to 1,698 million pounds (table 1). In the latter year consumption, which was about 15 percent lower than in 1964, was at the lowest annual level since 1961. The decline in consumption was attributable primarily to a downturn in residential construction and automobile production during most of those years. In 1968 U.S. consumption of sheet glass increased nearly to the 1964 level reflecting large increases that occurred concurrently in both residential construction and automobile production. U.S. consumption increased again in 1969 to slightly more than 2,000 million pounds.

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Annual apparent U.S. consumption in 1964-68 of thin sheet glass averaged approximately 63 million pounds, that of window glass, approximately 1,152 million pounds, and that of heavy sheet glass, approximately 678 million pounds. Annual apparent consumption of all three types of sheet glass declined during this time.

In recent years direct competition between the various types of flat glass has occurred in several uses. Plate, float, and sheet glass have all been used in automobile side and rear windows, mirrors, and table and desk covers. The selection of one type of flat glass over another is based both on quality and price; price is the pre-dominant factor in many instances, particularly where small surface areas are involved. Most of the competition of plate and float glass with sheet glass, however, has affected heavy sheet glass not window glass. Although 1/8 inch plate and float glass are comparable in weight to double strength window glass, the substitution of such plate or float glass for double strength window glass has been negligible.

U.S. shipments

Annual U.S. shipments of sheet glass including exports in 1964-68 declined from 1,530 million pounds in 1964 to 1,353 million pounds in 1968 (tables 1 and 2). The annual average for this period of 1,409 million pounds was about 1 percent lower than the corresponding average for the preceding 5 years. Less than 1 percent of annual U.S. shipments were exported during 1964-68.



Thin glass accounted for about 2 percent, window glass, about 63 percent, and heavy glass, about 35 percent of annual U.S. shipments of sheet glass.

The share of the U.S. sheet glass market supplied by U.S. producers' shipments declined from 76.2 percent in 1964 to 68.2 percent in 1968.

#### U.S. exports

Annual U.S. exports of sheet glass (mostly window glass) increased slightly during 1964-68 but still represented less than 1 percent of U.S. shipments. Exports rose from 4.2 million pounds, valued at \$1 million, in 1964 to 10.7 million pounds, valued at \$3 million, in 1967, then declined to 6.7 million pounds, valued at \$2 million, in 1968 (table 2). They declined again in 1969 to 3.9 million pounds, valued at \$1.2 million. Canada, Mexico, Australia, and Venezuela were the principal recipients of the exported sheet glass.

#### U.S. imports

Annual U.S. imports of sheet glass in 1964-68 averaged 491 million pounds, valued at \$32 million, (see annual figures in table 3), compared with 431 million pounds, valued at \$29 million, in the preceding 5 years. Window glass constituted about 51 percent, heavy sheet glass, about 38 percent, and thin glass, about 11 percent of the quantity of sheet glass imported each year.

The share of the U.S. market for sheet glass supplied by imports rose from 23.8 percent in 1964 to 31.8 percent in 1968. The share of June 1970

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the U.S. market for window glass supplied by imports rose from 21.1 percent in 1964 to 30.7 percent in 1969, while that of heavy sheet glass rose from 23.6 percent in 1964 to 33.0 percent in 1968. Corresponding data for 1969 are not available.

The principal suppliers of imported sheet glass were Belgium, West Germany, Japan, the Republic of China (Taiwan), Italy, and the United Kingdom (table 3). These nations collectively supplied 72 percent of the quantity and 85 percent of the value of sheet glass imports in 1968. These same countries were the principal suppliers of window glass.

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Table 1.--Sheet glass: Shipments by U.S. producers, 1/ U.S. imports for consumption, and apparent consumption, by thickness (weight per square foot), and by kinds, 1964-69

Item	U.S. shipments	U.S. imports	Apparent consumption	Ratio of imports to consumption
	<u>1,000</u> <u>pounds</u>	<u>1,000</u> <u>pounds</u>	<u>1,000</u> <u>pounds</u>	<u>Percent</u>
<u>1964</u>				
Sheet glass weighing per:				
sq. ft.--				
Not over 16 oz.-----	30,102	52,033	82,135	63.3
Over 16 but not over				
28 oz.-----	917,356	245,943	1,163,299	21.1
Over 28 oz.-----	578,782	178,934	757,716	23.6
Clear sheet glass,				
total-----	1,482,276	473,699	1,955,975	24.2
Colored sheet glass,				
total-----	43,964	3,212	47,176	6.8
All sheet glass,				
total-----	1,526,240	476,910	2,003,150	23.8
<u>1965</u>				
Sheet glass weighing per:				
sq. ft.--				
Not over 16 oz.-----	23,954	58,640	82,594	71.0
Over 16 but not over				
28 oz.-----	910,145	213,738	1,123,883	19.0
Over 28 oz.-----	593,804	152,944	746,748	20.5
Clear sheet glass,				
total-----	1,465,553	421,910	1,887,463	22.4
Colored sheet glass,				
total-----	62,350	3,413	65,763	5.2
All sheet glass,				
total-----	1,527,903	425,323	1,953,226	21.8

See footnotes at end of table.

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Table 1.--Sheet glass: Shipments by U.S. producers, 1/ U.S. imports for consumption, and apparent consumption, by thickness (weight per square foot), and by kinds, 1964-69--Continued

Item	U.S. shipments	U.S. imports	Apparent consumption	Ratio of imports to consumption
	<u>1,000</u> <u>pounds</u>	<u>1,000</u> <u>pounds</u>	<u>1,000</u> <u>pounds</u>	<u>Percent</u>
<u>1966</u>				
Sheet glass weighing per:				
sq. ft.--				
Not over 16 oz.-----	24,824	48,059	72,883	65.9
Over 16 but not over				
28 oz.-----	861,744	241,274	1,103,018	21.9
Over 28 oz.-----	487,896	173,220	661,116	26.2
Clear sheet glass,				
total-----	1,304,690	457,385	1,762,074	26.0
Colored sheet glass,				
total-----	69,774	5,169	74,943	6.9
All sheet glass,				
total-----	1,374,464	462,553	1,837,017	25.2
<u>1967</u>				
Sheet glass weighing per:				
sq. ft.--				
Not over 16 oz.-----	18,966	20,114	39,080	51.5
Over 16 but not over				
28 oz.-----	835,735	269,053	1,104,788	26.8
Over 28 oz.-----	382,858	171,728	554,586	31.0
Clear sheet glass,				
total-----	1,181,821	446,407	1,628,228	27.4
Colored sheet glass,				
total-----	55,738	14,488	70,226	20.6
All sheet glass,				
total-----	1,237,559	460,894	1,698,453	27.1

See footnotes at end of table.

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Table 1.--Sheet glass: Shipments by U.S. producers, 1/ U.S. imports for consumption, and apparent consumption, by thickness (weight per square foot), and by kinds, 1964-69--Continued

Item	U.S. shipments	U.S. imports	Apparent consumption	Ratio of imports to consumption
	<u>1,000</u> <u>pounds</u>	<u>1,000</u> <u>pounds</u>	<u>1,000</u> <u>pounds</u>	<u>Percent</u>
<u>1968</u>				
Sheet glass weighing per:				
sq. ft.--				
Not over 16 oz.-----	18,618	18,639	37,257	50.0
Over 16 but not over				
28 oz.-----	878,422	389,364	1,267,786	30.7
Over 28 oz.-----	449,094	220,711	669,805	33.0
Clear sheet glass,				
total-----	1,265,862	599,798	1,865,660	32.1
Colored sheet glass,				
total-----	80,272	28,916	109,188	26.5
All sheet glass,				
total-----	1,346,134	628,714	1,974,848	31.8
<u>1969</u>				
Sheet glass weighing per:				
sq. ft.--				
Not over 16 oz.-----	<u>2/</u>	16,442	<u>2/</u>	<u>2/</u>
Over 16 but not over				
28 oz.-----	<u>2/</u>	306,372	<u>2/</u>	<u>2/</u>
Over 28 oz.-----	<u>2/</u>	200,492	<u>2/</u>	<u>2/</u>
Clear sheet glass,				
total-----	<u>2/</u>	494,870	<u>2/</u>	<u>2/</u>
Colored sheet glass,				
total-----	<u>2/</u>	28,436	<u>2/</u>	<u>2/</u>
All sheet glass,				
total-----	<u>2/</u>	523,306	<u>2/</u>	<u>2/</u>

1/ Excludes exports. Exports have been deducted from U.S. shipments of clear glass weighing over 16 ounces, but not over 28 ounces per square foot.

2/ Not available.

Source: Compiled from official statistics of the U.S. Department of Commerce and from information submitted to the U.S. Tariff Commission by the producers.

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Table 2.--Sheet glass: <sup>1/</sup> U.S. exports of domestic  
merchandise, by principal markets, 1964-69

Market	: 1964	: 1965	: 1966	: 1967	: 1968	: 1969
	:	:	:	:	:	:
	Quantity (1,000 pounds)					
Canada-----	1,429	1,883	6,577	7,940	4,536	1,490
Mexico-----	351	304	544	755	441	322
Australia-----	387	228	406	346	420	559
Venezuela-----	375	655	559	418	372	246
Panama-----	103	156	119	60	45	75
Guatemala-----	133	104	113	58	70	98
All other-----	1,398	895	634	1,140	765	1,104
Total-----	4,176	4,225	8,952	10,717	6,658	3,894
	:	:	:	:	:	:
	Value (1,000 dollars)					
Canada-----	413	814	1,759	2,210	1,162	375
Mexico-----	97	95	161	196	140	91
Australia-----	135	82	142	112	119	206
Venezuela-----	107	194	144	101	84	71
Panama-----	28	45	41	19	15	16
Guatemala-----	32	30	35	19	21	33
All other-----	441	330	253	334	284	409
Total-----	1,253	1,590	2,535	2,991	1,825	1,201
	:	:	:	:	:	:

<sup>1/</sup> Official statistics reported in square feet have been converted to pounds at the ratio of 1 sq. ft.=1.16 pounds.

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

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Table 3.--Sheet glass: U.S. imports for consumption,  
by principal sources, 1964-69

Source	1964	1965	1966	1967	1968	1969
Quantity (1,000 pounds)						
Belgium-----	147,236	122,304	142,924	134,605	170,581	127,246
Italy-----	16,982	22,508	33,560	26,052	56,915	45,668
West Germany-----	45,887	45,361	52,779	52,845	72,593	70,921
Japan-----	78,011	62,648	50,237	50,801	56,800	45,365
United Kingdom---	25,521	30,437	38,225	36,530	48,972	41,685
China (Taiwan)---	7,558	9,520	13,830	31,930	41,698	29,625
France-----	30,941	22,493	20,833	17,131	20,692	14,167
Finland-----	16,650	12,647	14,486	9,618	15,585	18,953
Israel-----	9,300	9,689	15,494	13,183	17,046	11,884
All other-----	66,516	49,275	39,740	43,717	81,605	77,369
Total-----	444,602	386,882	422,108	416,412	582,487	482,883
Communist countries-----	32,308	38,441	40,445	44,482	46,227	40,423
Grand total--	476,910	425,323	462,553	460,894	628,714	523,306
Value (1,000 dollars)						
Belgium-----	9,539	7,195	8,473	9,475	12,706	10,511
Italy-----	1,077	1,233	1,716	1,765	7,708	3,523
West Germany-----	3,493	3,344	4,041	4,791	6,400	6,498
Japan-----	5,386	4,112	3,589	4,313	4,844	4,072
United Kingdom---	1,670	1,925	2,283	2,491	3,599	3,029
China (Taiwan)---	434	594	851	1,810	2,301	1,814
France-----	2,290	1,727	1,874	1,818	2,018	1,452
Finland-----	862	695	831	626	1,024	1,332
Israel-----	535	519	744	638	889	649
All other-----	3,770	2,698	2,110	2,258	986	4,880
Total-----	29,056	24,042	26,512	29,985	42,475	37,760
Communist countries-----	1,271	1,446	1,662	1,824	1,869	1,718
Grand total--	30,327	25,488	28,174	31,809	44,344	39,478

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





<u>Commodity</u>	<u>TSUS</u> <u>item</u>
Plate and float glass-----	543.21, -.23, -.27, -.31, -.61, -.63, -.67, -.69

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1970).

## U.S. trade position

In 1964-68, apparent U.S. consumption averaged 1,932 million pounds a year. Imports supplied about 6 percent of this consumption; exports were equivalent to about 5 percent of U.S. production.

### Description and uses

This summary covers flat glass, principally plate and float glass, in rectangles, which has been ground or polished on one or both sides but not further processed. Included herein is colored or special polished wire glass.

Other kinds of flat glass--ribbon glass, item 541.01; glass  
jalousies, item 544.11; rolled glass, items 541.11 to 541.31; ordinary  
polished wire glass, item 543.11; and sheet glass, items 542.11 to  
542.98--are covered in other summaries in this volume. Certain glass  
and glass products manufactured from flat glass such as processed flat  
glass (items 544.14 to 544.20), toughened or tempered glass (items  
544.31 to 544.32), laminated glass (items 544.41 and 544.42), glass  
mirrors (items 544.51 to 544.55), multiple-glazed units (item 544.61),  
and painted, colored, or stained glass windows (item 544.64) are also  
covered in summaries in this volume. Painted, colored, or stained

glass windows for certain purposes (item 850.30) are covered in a summary in schedule 8, volume 1.

For tariff purposes, the flat glass covered herein is separated into two categories: ordinary glass and colored or special glass.

Colored or special glass <sup>1/</sup> is defined as glass whose light transmittance is retarded to varying degrees by coloring agents or opacifiers within the glass and not by surface irregularities of the glass or by wire netting that may be in the glass. Such glass may vary from opaque glass to glass with a transmittance of about 80 percent of normally incident light of certain wave lengths.

Ordinary glass is defined as flat glass other than special or colored glass and is usually clear or nearly clear glass whose coloring or opacifying content is so low that light transmittance is virtually unhindered.

Plate glass and float glass are types of flat glass that have plane and parallel surfaces and show no distortion when objects are viewed through them. The two types of glass are virtually indistinguishable, differing principally in method of manufacture and cost of production. They are used interchangeably in most applications although float glass is not produced as yet in all the thicknesses in which plate glass is made.

Plate glass is manufactured principally by using the rolled glass process that turns out a continuous ribbon of flat glass of the desired

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<sup>1/</sup> See subpart B, headnote 2(c) in appendix A.

thickness and width. The sheet of glass, after passing through an annealing lehr to remove internal stresses, is cut to standard sizes before being subjected to grinding and polishing operations. In the finishing process, the surfaces of the plate glass are ground by machine to a very smooth flat surface, which is then polished by buffing. The plate glass may be ground or polished on one side at a time or on both sides simultaneously. In the process of grinding and polishing, the plate glass acquires perfectly plane and parallel surfaces.

Float glass is a relatively new type of flat glass <sup>1/</sup> (available commercially since 1959) which has virtually parallel surfaces similar to those of plate glass. The parallel surfaces of float glass, however, are achieved by floating the molten glass over molten metal rather than by grinding and polishing as is done with plate glass. Float glass is less costly to produce than plate glass principally because the float process does not require grinding and polishing operations.

The most important use for plate and float glass is in automobile glazing. Such glass used in automotive vehicles must be further processed by tempering (toughening), or laminating (see separate summaries in this volume), and it is frequently bent, curved, or shaped. It is also used extensively for glazing store fronts, office buildings, and residences, and in the manufacture of mirrors and multiple-glazed insulating units.

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<sup>1/</sup> The float-glass process is patented, and U.S. producers of float glass are licensed by the British firm that invented the process.

U.S Tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1970) are as follows:

TSUS item	Commodity	U.S. concessions granted in		
		Rate prior to Jan. 1, 1968	1964-67 trade conference (Kennedy Round) Third stage, effective Jan. 1, 1970	Final stage, effective Jan. 1, 1972
	Glass (including plate glass and float glass) :			
	whether or not containing wire netting, in:			
	rectangles, ground or polished on one or :			
	both surfaces in whole or in part, but not:			
	further processed:			
	Ordinary glass:			
	Not containing wire netting:			
	Measuring not over 15/32 inch in			
	thickness:			
543.21	Not over 2-2/3 sq. ft. in area-----	3.5¢ per	2.4¢ per sq.	1.7¢ per sq.
		sq. ft.	ft.	ft.
543.23	Over 2-2/3 but not over 7 sq. ft.	5¢ per sq.	3.5¢ per sq.	2.5¢ per sq.
	in area.	ft.	ft.	ft.
543.27	Over 7 sq. ft. in area-----	5.6¢ per	3.9¢ per sq.	2.8¢ per sq.
		sq. ft.	ft.	ft.
543.31	Measuring over 15/32 inch in thickness--	21% ad	14.5% ad val.	10.5% ad val
		val.		
	Colored or special glass:			
	Measuring not over 15/32 inch in			
	thickness:			
543.61	Not over 2-2/3 sq. ft. in area-----	3.5¢ per	2.4¢ per sq.	1.7¢ per sq.
		sq. ft. +	ft. + 1.5%	ft. + 1% ad
		2.5% ad	ad val.	val.
		val.		
543.63	Over 2-2/3 but not over 7 sq. ft. in	5¢ per sq.	3.5¢ per sq.	2.5¢ per sq.
	area.	ft. +	ft. + 1.5%	ft. + 1%
		2.5% ad	ad val.	ad val.
		val.		
543.67	Over 7 sq. ft. in area-----	5.6¢ per	3.9¢ per sq.	2.8¢ per sq.
		sq. ft. +	ft. + 1.5%	ft. + 1%
		2.5% ad	ad val.	ad val.
		val.		
543.69	Measuring over 15/32 inch in thickness:	23.5% ad	16.0% ad val.	11.5% ad val
		val.		

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The rates in effect prior to January 1, 1968, had remained unchanged from August 31, 1963 (the effective date of the TSUS), through 1967. The third and final stages show two of the five 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 amount to total reductions of about 50 percent (see pertinent sections of the TSUSA-1970, reproduced in appendix A, for the staged rates).

The average ad valorem equivalents of the 1969 specific rates of duty, based on imports in 1969, were 9.7 percent for item 543.21, 13.5 percent for item 543.23, 12.3 percent for item 543.27, 18.5 percent for item 543.31, 3.3 percent for item 543.61, 16.4 percent for item 543.63, 14.7 percent for item 543.67, and 21.0 percent for item 543.69.

#### U.S. consumption

The annual consumption of plate and float glass in the United States increased substantially in the 5 years 1964-68 (table 1). Apparent U.S. consumption of such glass in 1968 (2,284 million pounds) was 39 percent larger than in 1964 (1,642 million pounds). The respective roles of plate and float glass in supplying U.S. uses for such glass have altered strikingly since the mid-1960's. In 1964, the year in which float glass was first produced in the United States, plate glass probably accounted for 95 percent of the aggregate

consumption of plate and float glass in the United States; it is likely that the respective shares of U.S. consumption approached 50-50 in 1968.

Changes in the combined annual consumption of plate and float glass in the United States are tied closely to changes in motor vehicle production. Both annual consumption of plate and float glass and annual motor vehicle production rose substantially from 1964 to 1966, declined in 1967, and then increased sharply in 1968. Over the 5-year period, however, the U.S. consumption of plate and float glass grew more than would be indicated by changes in the output of motor vehicles. The extra growth of consumption of plate and float glass probably resulted from the substitution of float glass for heavy sheet glass in automobile windows and the increased use of these types of glass as an architectural medium.

#### U.S. production

The combined annual shipments of plate and float glass by U.S. producers have followed closely changes in U.S. consumption since 1964 (table 1). Shipments totaled 2,169 million pounds in 1968--34 percent larger than in 1964 (1,613 million pounds). During the period since the mid-1960's, annual shipments of plate glass by U.S. producers have decreased substantially, while annual shipments of float glass have increased greatly, in absolute terms and as a share of aggregate plate and float glass shipments. Float glass accounted for about 4 percent of the aggregate shipments of plate and float glass in 1964 and 49 percent in 1968.

Nearly all of the plate and float glass shipped by U.S. producers has consisted of glass ranging in thickness from 1/8 inch to 1/4 inch inclusive. In terms of square feet, considerably more than half of both the plate glass and the float glass shipped by U.S. producers in 1968 was 1/8 inch glass. Shipments of plate and float glass thicker than 1/4 inch accounted for less than 1 percent of all plate and float glass shipped. Small quantities of plate and float glass thinner than 1/8 inch were also produced.

Plate glass was produced in the United States in 1968 by five firms operating 10 plants. Three of these firms were large diversified flat-glass manufacturers producing a wide range of flat-glass products. One of the remaining firms was an automobile manufacturer producing plate glass for its captive use as well as for the automobile-glass replacement market and construction glazing. The fifth firm was a small producer specializing in making very large sizes of plate glass.

Float glass was produced in 1968 by two large flat-glass manufacturers and the automobile firm that produced plate glass. Of the seven float-glass facilities operated by these firms, two produced float glass only, four produced plate and float glass, and one produced sheet glass in addition to plate and float glass.

#### U.S. exports

Annual U.S. exports of plate and float glass ranged from about 60 million to 100 million pounds in the period 1964-68 (table 2). They were generally equivalent to 3 percent to 5 percent of U.S. shipments

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in those years; they were equivalent in quantity to 70 percent or more of annual imports of plate and float glass in 1964-66, but to 35 percent in 1968. Canada was by far the major market in the period 1964-68.

#### U.S. imports

Annual U.S. imports of plate and float glass increased steadily during the 5-year period 1964-68 (table 3). Imports of such glass in 1968 (178 million pounds) were nearly double those in 1964 (94 million pounds). In 1969 imports amounted to 157 million pounds. In 1967 and 1968 imports of plate and float glass were equivalent to about 8 percent of U.S. consumption of such glass, compared with about 6 percent in 1964.

The bulk of the U.S. imports of plate and float glass consists of glass that is 1/4 inch in thickness. About three-fourths of recent annual imports have been clear glass, and one-fourth colored.

All of the U.S. imports of plate and float glass in 1964-68 entered the United States at MFN rates. In 1969 a trivial volume of such glass (91,000 pounds) was entered at full rates of duty from East Germany. Japan and Belgium were the chief foreign sources of plate and float glass in 1968; substantial quantities also were imported from Italy, Canada, France, and West Germany (table 3).



Table 1.--Plate and float glass: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, 1964-69

Year	Production	Imports	Exports	Apparent consumption	Ratio of imports to consumption
	<u>Million</u> <u>pounds</u>	<u>Million</u> <u>pounds</u>	<u>Million</u> <u>pounds</u>	<u>Million</u> <u>pounds</u>	<u>Percent</u>
1964-----	1,613.2	93.8	65.2	1,641.8	5.7
1965-----	1,951.3	97.4	91.6	1,957.1	5.0
1966-----	1,946.1	131.2	102.3	1,975.0	6.6
1967-----	1,748.4	145.1	89.5	1,804.0	8.0
1968-----	2,168.6	178.1	62.9	2,283.8	7.8
1969-----	<u>1/</u>	156.7	75.7	<u>1/</u>	<u>1/</u>

1/ Not available.

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

## PLATE AND FLOAT GLASS

Table 2.--Plate and float glass: U.S. exports of domestic merchandise, by principal markets, 1964-69

Market	1964	1965	1966	1967	1968	1969
Quantity (1,000 pounds) <sup>1/</sup>						
Canada-----	55,533	75,062	79,747	63,880	32,042	53,329
Mexico-----	1,820	2,334	5,596	9,891	11,734	5,190
Australia-----	2,871	3,972	4,218	3,349	4,423	3,541
Venezuela-----	170	1,454	2,547	2,714	3,132	2,610
Japan-----	58	144	1,646	1,348	1,478	1,084
Brazil-----	186	859	1,024	1,248	2,544	1,514
All other-----	4,564	7,729	7,476	7,066	7,570	8,452
Total-----	65,202	91,554	102,254	89,496	62,923	75,720
Value (1,000 dollars)						
Canada-----	9,935	13,678	14,500	11,677	5,685	8,016
Mexico-----	545	494	1,048	1,985	2,225	987
Australia-----	620	877	982	816	1,007	811
Venezuela-----	45	316	548	592	696	577
Japan-----	20	77	269	294	502	352
Brazil-----	37	192	238	299	560	318
All other-----	888	1,633	1,663	1,603	1,532	1,891
Total-----	12,090	17,267	19,248	17,266	12,207	12,952

<sup>1/</sup> Converted to pounds from square feet by using factors developed by the Tariff Commission.

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

Table 3.--Plate and float glass: U.S. imports <sup>1/</sup> for consumption, by principal sources, 1964-69

Source	1964	1965	1966	1967	1968	1969
Quantity (1,000 pounds) <sup>1/</sup>						
Japan-----	5,229	18,599	48,957	62,061	54,394	58,429
Belgium-----	49,436	44,285	42,373	40,819	41,813	40,644
France-----	18,817	18,439	20,025	14,391	18,605	22,519
West Germany--	8,209	4,836	5,704	8,234	14,100	15,506
United Kingdom----	9,656	8,229	8,057	5,702	5,170	11,086
Italy-----	5	958	4,786	10,967	22,949	7,893
Canada-----	63	1	578	1,617	19,973	134
All other----	2,423	2,030	706	1,326	1,104	440
Total-----	93,838	97,377	131,186	145,117	178,108	156,651
Value (1,000 dollars)						
Japan-----	734	2,185	5,540	8,867	8,512	9,597
Belgium-----	6,720	5,830	5,695	5,959	6,383	6,384
France-----	2,597	2,545	2,808	2,168	2,704	3,239
West Germany--	1,099	706	1,037	1,583	2,534	2,428
United Kingdom----	1,364	1,085	1,082	896	960	1,739
Italy-----	1	121	551	1,416	5,533	1,398
Canada-----	12	<u>3/</u>	79	242	3,015	24
All other----	323	254	92	204	168	85
Total-----	12,850	12,726	16,884	21,335	29,809	24,894

<sup>1/</sup> Imports dutiable at most-favored-nation rates of duty.

<sup>2/</sup> Converted to pounds from square feet by using factors developed by the Tariff Commission.

<sup>3/</sup> Less than \$500.

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



<u>Commodity</u>	<u>TSUS item</u>
Glass strips-----	544.11

Note.--For the statutory description see the Tariff Schedules of the United States Annotated (TSUSA-1970).

#### U.S. trade position

In 1964-68, U.S. consumption was supplied principally by domestic producers. Imports were considerably greater than exports.

#### Description and uses

This summary covers narrow strips of glass not over 6 inches in width, weighing over 16 ounces per square foot and having all longitudinal edges ground or otherwise smoothed or processed. Narrow strips of glass with rough unprocessed edges are covered in summaries, in this volume, on ribbon glass, sheet glass, rolled glass, and plate and float glass, as are narrow strips of glass with ground edges but weighing less than 16 ounces per square foot.

The principal products covered by this summary are glass counter dividers, glass shelving, and glass louvres for jalousies, all of which are usually made from sheet or rolled glass. The most important of these articles are the louvres--narrow strips of glass usually about 4 inches wide, either clear or obscured, which are used in the manufacture of jalousies.

A jalousie consists of a frame, usually aluminum, in which the edged louvres are mounted, and a mechanism for turning the louvres so as to control the admission of air. In the South, jalousies are used

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largely in window and door openings, whereas in the more northern areas they are used largely in breezeways and porch enclosures. Jalousies are also used in window openings of mobile homes (trailers) and houseboats.

Glass strips used as counter dividers and shelving are usually transparent and often are somewhat narrower than jalousie louvres.

#### U.S. tariff treatment

The column 1 (trade-agreement) rate of duty applicable to imports (see general headnote 3 in the TSUSA-1970) is 22 percent ad valorem. This rate had remained unchanged from August 31, 1963 (the effective date of the TSUS), through 1967, and was not affected by the 1964-67 trade conference.

#### Comment

Annual U.S. consumption of glass strips in 1964-68 is unknown but it is estimated to have been below the annual average of 25 million square feet for the preceding 5 years. During the earlier period approximately 80 percent of consumption consisted of glass louvres for jalousies, but in the later period the consumption of louvres declined. Consumption of the other glass strips covered by this summary was stable during 1964-68.

The increased utilization of air conditioning and the increasing popularity of other types of ventilating windows, such as awning windows, were the principal causes of the decline in the use of glass louvres.

U.S. producers of glass strips included major manufacturers of flat glass, jalousie fabricators, and a few window and door manufacturers. Most of these producers, apart from those that produced flat glass, are termed "edgers" since they purchase unfinished strips of glass and grind or smooth the edges to produce a louvre, divider, or shelf. In addition, some edgers purchased larger sheets of glass and cut strips for edging from them. Although many of these firms were engaged solely in the production of edged louvres, dividers, and shelving, some also fabricated other flat-glass products. In addition, some were distributors of flat-glass products manufactured by flat-glass producers.

U.S. exports of edged glass strips are known to be small.

Annual U.S. imports in 1964-68 (see accompanying table) averaged 3.9 million square feet, valued at about \$609,000. Imports in 1969 amounted to 5.8 million square feet, valued at \$824,000. Nearly all of these imports were jalousie louvres. The principal supplying countries were the Republic of China, Italy, and Belgium.

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## EDGED GLASS STRIPS

Glass strips: U.S. imports for consumption, by principal sources, 1964-69

Source	: 1964	: 1965	: 1966	: 1967	: 1968	: 1969
Quantity (1,000 square feet)						
China (Taiwan)-----	1,344	1,962	1,670	1,002	2,123	2,451
Australia-----	-	-	89	964	1,216	1,494
Italy-----	280	265	669	633	804	443
Belgium-----	979	672	504	446	249	232
Japan-----	633	377	271	46	16	5
All other-----	139	431	380	531	663	1,211
Total-----	3,375	3,707	3,583	3,622	5,071	5,836
Value (1,000 dollars)						
China (Taiwan)-----	200	301	250	140	282	349
Australia-----	-	-	11	133	152	190
Italy-----	50	46	100	105	130	68
Belgium-----	195	138	109	107	65	59
Japan-----	92	55	52	10	6	1
All other-----	26	41	63	86	99	157
Total-----	563	581	585	581	734	824

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



Commodity

TSUS  
item

Processed flat glass--- 544.14, -.16, -.17, -.18, -.20

Note:--For the statutory description see the Tariff Schedules of the United States Annotated (TSUSA-1970).

U.S. trade position

U.S. consumption in 1964-68 is unknown. Imports and exports are believed to be nearly equal and represent only a small share of the quantities of processed flat glass produced and consumed in the United States.

Description and uses

This summary covers flat glass except ribbon glass that has been cut to other than rectangular shape and flat glass whether or not cut to rectangular shape that is further subjected to special processing. Such glass may or may not contain wire netting. Related glass products, such as laminated glass, tempered glass, jalousies, and mirrors, are covered in other summaries in this volume. Ribbon glass and unprocessed sheet glass, rolled and cast glass, and plate and float glass are also covered in other summaries in this volume.

The principal products of processed flat glass covered herein are made from sheet glass, cast or rolled glass, and plate and float glass. These glasses are produced in sheets by drawing, rolling, casting, or, as for float glass, by floating the molten glass on a bed of molten metal.

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The glass is then cut to a nonrectangular shape and may be further processed or is cut to rectangular shape and then further processed. Processing consists principally of bending or beveling but also includes curving, edging, notching, drilling, chipping, sanding, embossing, engraving, etching, coating, staining, enameling, painting, decorating, or any combination thereof.

The processed flat glass covered herein may be a finished product or an intermediate product used in the manufacture of other products. The myriad shapes and sizes of processed flat glass have an infinite number of uses, including mirrors, table and desk tops, curved display windows, counter glass, partition glass, and structural glass.

#### U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1970) are as follows:

TSUS item	Commodity	Rate prior to Jan. 1, 1968	U.S. concessions granted in 1964-67 trade conference (Kennedy Round)	
			Third stage, effective Jan. 1, 1970	Final stage, effective Jan. 1, 1972
	Glass (including cast, rolled, drawn, or blown glass, whether or not containing wire netting or surface ground or polished), cut to other than rectangular shape (except glass provided for in item 541.01), and glass (including cast, rolled, drawn, or blown glass, whether or not containing wire netting or surface ground or polished), whether in rectangles or cut to other than rectangular shape, subjected to bending, curving, beveling, edging, notching, drilling, chipping, sanding, embossing, engraving, etching, coating, staining, enameling, painting, decorating, or any combination thereof, all the foregoing glass, whether or not such cutting or processing dedicates the glass to a specific use, but not including any article hereinafter described in this subpart or described in subpart A or C of this part:			
	Other (than strips, not over 6 inches in width, weighing over 16 ounces per square foot, and having all longitudinal edges ground or otherwise smoothed or processed):			
544.14	Glass measuring over 15/32 inch in thickness.	23.5% ad val.	16% ad val.	11.5% ad val.
	Other:			
544.16	Glass, drawn or blown and not containing wire netting and not surface ground or polished.	15% ad val. <u>1</u> /	<u>2</u> /	<u>2</u> /
544.17	If Canadian article and original motor-vehicle equipment (see headnote 2, pt. 6B, schedule 6).	Free	<u>3</u> /	<u>3</u> /
544.18	Other-----	15% ad val.	10% ad val.	7.5% ad val.
544.20	If Canadian article and original motor-vehicle equipment (see headnote 2, pt. 6B, schedule 6).	Free	<u>3</u> /	<u>3</u> /

1/ Rate increased effective June 17, 1962, by Presidential Proclamation No. 3455 pursuant to escape-clause procedure. See pt. 2 of the Appendix to the Tariff Schedules reproduced in appendix A of this volume. The increased rate was terminated effective Jan. 11, 1967, by Presidential Proclamation No. 3762.

2/ Rate not affected by trade conference.

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

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The rate of duty in effect prior to January 1, 1968, on items 544.14 and 544.18 had remained unchanged from August 31, 1963 (the effective date of the TSUS), through 1967. The third and final stages show two of the five 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. These concessions amount to total reductions of about 50 percent (see pertinent sections of the TSUSA-1970, reproduced in appendix A, for the staged rates).

Articles entered under item 544.16 had been dutiable at an increased rate effective June 17, 1962 by Presidential Proclamation No. 3455 pursuant to escape-clause procedures. The increased rate was terminated effective January 11, 1964 by Presidential Proclamation No. 3762. This item was not negotiated in the Kennedy Round of tariff negotiations.

The duty-free treatment of Canadian articles which are original motor-vehicle equipment (items 544.17 and 544.20) became effective as to articles entered on and after January 18, 1965, under the provisions of the Automotive Products Trade Act of 1965 (Public Law 89-283). From August 31, 1963 through January 17, 1965, imports of this type of glass had been dutiable at 15 percent ad valorem under item 544.17. These items were not negotiated in the Kennedy Round of tariff negotiations.

Comment

U.S. production and consumption of processed flat glass in 1964-68 are unknown. Unprocessed flat glass is produced in very large quantities in the United States, and much of it is subjected to one or more types of processing.

Large quantities of processed flat glass are used by the flat-glass producers in the manufacture of other products. These firms also ship large quantities of processed and unprocessed flat glass to numerous other firms which in turn incorporate the processed glass into other products or process the unprocessed glass for their own use or for resale.

Processed flat glass was produced by six major flat-glass manufacturers and numerous smaller firms that purchased unprocessed flat glass for processing. A few of these smaller firms manufactured limited quantities of unprocessed flat glass.

Not all U.S. exports of processed flat glass were separately reported in 1964-68, but annual exports during that time are believed to have exceeded the yearly average, 1965-68--2 million square feet valued at \$1 million--of those that were separately reported (see table 1 for annual figures). Canada, Mexico, and the Bahamas were the principal foreign markets for such exports.

Annual U.S. imports of processed flat glass rose steadily from 3.3 million square feet, valued at \$878,000, in 1964 to 6.7 million square feet, valued at \$2.4 million, in 1968. Even with the increase,

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imports still accounted for only a very small percentage of annual U.S. consumption.

Approximately 60 percent of the imported processed glass consisted of sheet glass (table 2), and about 36 percent, of plate, float, or rolled glass (table 3). The remainder consisted of any of these types of flat glass over 15/32 inch in thickness (table 4).

Belgium supplied 37 percent of the quantity and 49 percent of the value of imports of processed glass in 1964-68. The imports from Belgium consisted principally of drawn or blown processed glass (table 2) and processed glass, not elsewhere specified (table 3).

Japan supplied 17 percent of the quantity and 13 percent of the value of imports of processed glass. The bulk of the imports from Japan consisted of drawn or blown processed glass.

West Germany supplied substantial quantities of processed glass in 1964-68, and in 1968 the Republic of China (Taiwan) became a major supplier of drawn or blown processed glass.

Table 1.--Processed glass: U.S. exports of domestic merchandise, by principal markets, 1965-69

Market	1965	1966	1967	1968	1969
Quantity (1,000 square feet)					
Canada-----	1,214	888	713	756	957
Mexico-----	247	294	576	429	423
Bahamas-----	70	64	89	65	130
All other-----	349	955	590	746	1,079
Total-----	1,880	2,201	1,968	1,996	2,589
Value (1,000 dollars)					
Canada-----	639	510	368	372	437
Mexico-----	135	129	257	173	188
Bahamas-----	24	21	38	31	60
All other-----	222	496	327	375	444
Total-----	1,020	1,156	990	951	1,129

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

## PROCESSED FLAT GLASS

Table 2.--Processed glass, drawn or blown, and not containing wire netting: U.S. imports for consumption, by principal sources, 1964-69

Source	1964	1965	1966	1967	1968	1969
Quantity (1,000 square feet)						
Belgium-----	691	739	888	549	915	1,297
Japan-----	349	486	547	517	955	1,180
West Germany-----	269	209	259	256	480	744
China (Taiwan)-----	6	43	38	271	1,630	417
Finland-----	133	546	545	441	283	315
All other-----	38	93	245	407	838	1,132
Total-----	1,486	2,116	2,522	2,441	5,101	5,085
Value (1,000 dollars)						
Belgium-----	256	287	361	250	420	606
Japan-----	91	128	144	148	239	331
West Germany-----	42	60	63	138	144	292
China (Taiwan)-----	1	10	8	20	119	51
Finland-----	13	51	55	40	44	46
All other-----	11	31	116	120	141	255
Total-----	414	567	747	716	1,107	1,581

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



Table 3.--Processed glass not elsewhere enumerated: U.S. imports for consumption, by principal sources, 1964-69

Source	1964	1965	1966	1967	1968	1969
Quantity (1,000 square feet)						
Belgium-----	880	692	1,003	948	622	596
West Germany-----	439	285	167	294	91	15
Japan-----	237	111	160	204	196	190
Portugal-----	9	12	52	52	35	72
France-----	1	32	408	169	1/	6
All other-----	259	283	133	209	135	568
Total-----	1,825	1,415	1,923	1,876	1,079	1,447
Value (1,000 dollars)						
Belgium-----	227	246	361	437	350	233
West Germany-----	106	58	47	124	109	49
Japan-----	56	32	46	78	85	143
Portugal-----	1	6	39	37	28	37
France-----	1	2	423	182	6	7
All other-----	39	47	30	57	91	98
Total-----	430	391	946	915	669	567

1/ Less than 500 square feet.

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

## PROCESSED FLAT GLASS

Table 4.--Processed glass over 15/32 inch thick: U.S. imports for consumption, by principal sources, 1964-69

Source	: 1964	: 1965	: 1966	: 1967	: 1968	: 1969
	:	:	:	:	:	:
	Quantity (1,000 square feet)					
Belgium-----	15	34	62	168	268	595
West Germany-----	-	-	8	11	144	325
Portugal-----	<u>1</u>	7	9	57	90	132
United Kingdom-----	1	1	1	5	2	27
All other-----	-	2	6	2	5	50
Total-----	16	44	86	243	509	1,129
	Value (1,000 dollars)					
Belgium-----	26	57	84	209	400	645
West Germany-----	-	-	3	11	113	435
Portugal-----	<u>2</u>	12	9	79	110	184
United Kingdom-----	5	7	5	11	5	44
All other-----	3	4	7	3	8	20
Total-----	34	80	108	313	636	1,328
	:	:	:	:	:	:

1/ Less than 500 square feet.2/ Less than \$500.

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

<u>Commodity</u>	<u>TSUS item</u>
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Tempered glass----- 544.31, -.32

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1970).

U.S. trade

The United States was one of the world's largest producers and consumers of tempered glass in 1964-68. Imports supplied less than 5 percent of U.S. consumption; exports accounted for about 2 percent of U.S. production.

Description and uses

Tempered or toughened glass is a type of safety glass made principally from sheet, plate, or float glass that has been specially processed to increase its strength. This summary covers tempered or toughened flat glass whether or not shaped or framed or both. Laminated glass, another form of safety glass, is covered in another summary in this volume, as are ribbon glass, sheet glass, cast and rolled glass, and plate and float glass.

Two basic processes are used for tempering glass: thermal and chemical. In thermal tempering, the glass is heated to just below its softening point then rapidly quenched by jets of air. The resulting product is 3 to 5 times as strong as ordinary glass of the same thickness and surface area.

In chemical tempering, additional strength is attained by making a chemical change in the surface of the glass. Chemical tempering can

produce stronger and more flexible glass than thermal tempering but it is a more expensive process.

As a safety glass, tempered glass, when broken, disintegrates into small round-edged pieces, minimizing the danger of serious injury from the broken glass. There is no known way to cut tempered glass since it will shatter when its surface is significantly penetrated, nor can it be bent or otherwise altered in form without the loss of its temper. All tempered glass products must be formed and sized before tempering.

Tempered glass is principally used for glazing all automobile windows except the windshield. It is also used extensively in homes for sliding doors, patio doors, shower enclosures, large fixed glass panels, and wherever there is danger of injury from broken glass. Tempered glass is also used in miscellaneous industrial applications requiring glass with greater thermal resistance such as in molds used in making plexiglass (an acrylic resin product).

#### U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1970) are as follows:

TSUS item	Commodity	Rate prior to Jan. 1, 1968	U.S. concessions granted in 1964-67 trade conference (Kennedy Round)	
			Third stage, effective Jan. 1, 1970	Final stage, effective Jan. 1, 1972
544.31	Toughened (specially tempered) glass, made of any of the glass described in items 541.11 through 544.18, whether or not shaped or framed or both.	22% ad val.	15% ad val.	11% ad val.
544.32	If Canadian article: and original motor-vehicle equipment (see headnote 2, pt. 6B, schedule 6).	Free	<u>1/</u>	<u>1/</u>

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

The rate on item 544.31 in effect prior to January 1, 1968 had remained unchanged from August 31, 1963 (the effective date of the TSUS), through 1967. The third and final stages show two of the five annual rate modifications resulting from a concession on item 544.31 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 amounts to a total reduction of 50 percent (see pertinent sections of the TSUSA-1970, reproduced in appendix A, for the staged rates).

Item 544.32 became effective as to articles entered on or after January 18, 1965, under the provisions of the Automotive Products

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Trade Act of 1965 (Public Law 89-283). No concession was made on this item in the sixth round of tariff negotiations.

#### U.S. consumption

Apparent annual U.S. consumption of tempered glass increased irregularly from 216 million square feet in 1964 to 356 million square feet in 1968 (table 1). In the middle years 1965-67, annual U.S. consumption was stable averaging about 279 million square feet; consumption in 1964 was 29 percent below this average and in 1968, 28 percent above it.

U.S. consumption of tempered glass is dependent primarily on automobile production; annual variations in output by that industry are reflected in corresponding changes in annual consumption of tempered glass. The lower level of apparent U.S. consumption of tempered glass in 1964 may be attributed primarily to a low level of automobile production. In a similar manner, the increased consumption in 1968 resulted primarily from increased automobile production in that year. Since 1966, more tempered glass has been used per automobile. Such changes accounted largely for the static level of consumption in 1967, although automobile production in that year was well below that of 1966.

The annual quantities of tempered glass used in nonautomotive applications nearly tripled from 1964 to 1968; they accounted in 1968 for about 18 percent of apparent U.S. consumption of all tempered glass, as compared with about 11 percent in 1964. The consumption of

tempered glass in nonautomotive uses should continue to expand as more and more building codes are altered to require the use of safety glass.

#### U.S. production

Annual U.S. shipments of tempered glass correspond very closely to annual U.S. production of such glass, as most of the glass is supplied directly to the automobile industry. Production and shipment schedules of tempered glass, therefore, are geared to automobile production schedules.

Annual U.S. shipments of tempered glass, which followed changes in U.S. automobile production, rose from 217 million square feet in 1964 to 287 million square feet in 1965, then declined to 273 million square feet in 1966 (table 1). Shipments in 1967 remained at the 1966 level even though automobile production declined considerably in 1967. A change to larger tempered side and rear windows by U.S. automobile manufacturers in 1967 largely offset the decreased requirements from lower automobile production in that year. U.S. shipments of tempered glass rose in 1968 to 348 million square feet.

The share of the U.S. market for tempered glass supplied by U.S. producers' shipments declined from 99 percent in 1964 to 95 percent in 1968.

The relative shares of the three types of flat glass (plate, float, and sheet) used to manufacture tempered automobile windows have changed considerably in recent years. In 1964, 68 percent of U.S. shipments of tempered automobile glass was made from plate glass; 25 percent, from sheet glass; and 7 percent, from float glass. By

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## TEMPERED FLAT GLASS

1968, the share held by plate glass declined to 21 percent, that of sheet glass, to 24 percent (21 percent in 1966 and 1967) whereas that for float glass had increased to 55 percent.

U.S. shipments of tempered glass for nonautomotive uses consist principally of sheet glass and lesser quantities of plate, float, and rolled glass. Tempered sheet glass accounted for about 60 percent and tempered rolled glass for about 8 percent of annual U.S. shipments in 1964-68. Shipments of tempered plate glass were equivalent to 28 percent of U.S. shipments in 1964 and 15 percent in 1968. Shipments of tempered float glass amounted to 6 percent in 1964 and 16 percent in 1968, of U.S. shipments of tempered glass for nonautomotive uses.

U.S. producers

Tempered glass was produced in the United States in 1964-68 by about 23 firms. Five large producers of flat glass which temper glass for their own manufacture, accounted for most of the U.S. production of tempered glass in 1964-68. Two of these firms accounted for more than half of this production. In addition to the five firms, an automobile manufacturer produced large quantities of tempered glass for its own use as well as for the replacement market.

Tempered glass for the automotive market was also produced by several large independent fabricators that purchased domestic and imported raw flat glass and processed it into tempered side and rear windows.



U.S. exports

Annual U.S. exports of tempered glass increased steadily from 2.5 million square feet in 1964 to 9.3 million square feet in 1968 (table 1). Annual U.S. exports, as a share of annual U.S. shipments, increased from 1 percent in 1964 to 3 percent in 1968.

About 90 percent of the tempered glass exported in recent years was shipped to Canada by two U.S. automobile manufacturers; the remainder consisted of automotive glass and small quantities of non-automotive glass also shipped to Canada.

U.S. imports

Annual U.S. imports of tempered glass increased sharply from 1 million square feet in 1964 to 17 million square feet in 1968 (table 2). Such imports amounted to 22 million square feet in 1969. The share of the U.S. market for tempered glass supplied by imports increased from 0.5 percent in 1964 to 4.8 percent in 1968.

Imports of tempered glass fall into three general categories-- (1) component parts of original automotive equipment imported from Canada duty-free under the provisions of the Automotive Products Trade Act of 1965 (APTA); (2) replacement glass (windows) for imported automobiles, and (3) nonautomotive tempered glass for use in residential and commercial construction.

Imports under the provisions of the APTA increased from 40,000 square feet in 1965, to 7.7 million square feet in 1968, and then to 11 million square feet in 1969. Under the provisions of the APTA, Canada is the sole source of these imports. The share of the total

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U.S. market for tempered glass supplied by these imports increased from about 1 percent in 1966 to 2 percent in 1968.

Imports of automotive replacement tempered glass are not reported separately from those of nonautomotive tempered glass. Combined imports of these forms of tempered glass increased from 1.1 million square feet in 1964 to 9.3 million square feet in 1968. Based on a partial analysis of imports during 1966-68, imports of nonautomotive tempered glass accounted for from 70 to 90 percent of annual imports of the two forms of tempered glass. Belgium, Poland, and West Germany were the principal suppliers in most years. More recently Japan (1967) and the Republic of China (Taiwan) (1968) have become important sources.

Table 1.--Tempered flat glass: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, 1964-68

Year	Production <u>1/</u>	Imports	Exports <u>1/</u>	Apparent consumption	Ratio (percent) of imports to consumption
	<u>1,000</u> <u>sq. ft.</u>	<u>1,000</u> <u>sq. ft.</u>	<u>1,000</u> <u>sq. ft.</u>	<u>1,000</u> <u>sq. ft.</u>	
1964-----	217,247	1,107	2,469	215,885	0.5
1965-----	286,629	2,922	2,796	286,755	1.0
1966-----	272,485	5,063	3,148	274,400	1.8
1967-----	273,458	9,043	6,195	276,307	3.3
1968-----	348,322	17,034	9,287	356,069	4.8
1969-----	<u>2/</u>	22,427	9,694	<u>2/</u>	<u>2/</u>

1/ Data as reported to the Tariff Commission by producers of tempered glass except for exports in 1969.

2/ Not available.

Source: Compiled from official statistics of the U.S. Department of Commerce and from information submitted to the U.S. Tariff Commission.

## TEMPERED FLAT GLASS

Table 2.--Tempered flat glass: U.S. imports for consumption,  
by principal sources, 1964-69

Source	: 1964	: 1965	: 1966	: 1967	: 1968	: 1969
Quantity (1,000 square feet)						
Canada-----	3	61	2,593	4,841	7,763	11,290
Japan-----	3	47	166	562	912	4,104
Belgium-----	541	2,221	1,375	1,421	3,998	2,167
United Kingdom-----	306	267	420	148	356	388
West Germany-----	180	270	435	418	989	380
Poland-----	10	-	4	1,127	1,607	2,407
All other-----	64	56	70	526	1,409	1,691
Total-----	1,107	2,922	5,063	9,043	17,034	22,427
Value (1,000 dollars)						
Canada-----	5	50	1,670	3,205	7,181	13,289
Japan-----	2	24	62	185	311	1,403
Belgium-----	210	706	449	454	1,270	635
United Kingdom-----	353	385	592	188	438	522
West Germany-----	201	446	667	504	1,066	499
Poland-----	2	-	1	147	202	291
All other-----	28	25	38	157	399	579
Total-----	801	1,636	3,479	4,840	10,867	17,218

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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Laminated glass----- 544.41, -.42

Note.--For the statutory description, see the Tariff Schedules of the United States (TSUSA-1970).

#### U.S. trade position

The United States is probably the world's largest producer and consumer of laminated glass. The value of U.S. consumption in 1964-68 averaged about \$382 million a year, of which less than 1 percent was accounted for by imports. Exports were about 1 percent of U.S. shipments.

#### Description and uses

This summary covers laminated glass, a type of safety glass made from sheet glass, cast or rolled glass, plate and float glass, and toughened or specially tempered glass. Laminated glass may be shaped or framed or both.

Tempered or toughened glass, another type of safety glass, is covered in another summary in this volume. Also covered in other summaries in this volume are ribbon glass, sheet glass, cast and rolled glass, and plate and float glass.

Laminated glass is a safety glass consisting of two or more layers of glass separated by, and bonded to, thin transparent plastic interlayers. The plastic interlayers prevent the glass from shattering when broken and thereby minimize the danger of injury from the broken glass.

## LAMINATED GLASS

The automobile industry is by far the largest market for laminated glass. State laws require the use of laminated glass in automobile and truck windshields. Regulations established by the U.S. Interstate Commerce Commission require the use of laminated glass in the side and rear windows also of buses and of certain trucks. Laminated glass is also used in side windows in some automobiles. Plate and float glass are used to make laminated windshields, and plate, float, or sheet glass is used for laminated side and rear windows.

Laminated glass is also used for bank-cage windows, glass doors, desk and table tops, shower enclosures, and railroad passenger car windows, and in safety goggles.

U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1970) are as follows:

TSUS item	Commodity	U.S. concessions granted		
		Rate	in 1964-67 trade confer- prior to: <u>ence (Kennedy Round)</u>	
		Jan. 1, 1968	Third stage, effective	Final stage, effective
			Jan. 1, 1970	Jan. 1, 1972
544.41	Laminated glass made of	18% ad	12.5% ad	9% ad val.
	two or more layers of	val.	val.	
	any of the glass			
	described in items			
	541.11 through 544.31,			
	inclusive, and other			
	material, whether or not			
	shaped or framed or			
	both.			
544.42	If Canadian article	Free	<u>1/</u>	<u>1/</u>
	and original motor-			
	vehicle equipment			
	(see headnote 2,			
	pt. 6B, schedule 6).			

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

The rate on item 544.41 in effect prior to January 1, 1968, had remained unchanged from August 31, 1963 (the effective date of the TSUS), through 1967. The third and final stages show two of the five 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 amounts to a total reduction of 50 percent (see pertinent sections of the TSUSA-1970, reproduced in appendix A, for the staged rates).

Item 544.42 became effective for articles entered on or after January 18, 1965, under the provisions of the Automotive Products

Trade Act of 1965 (Public Law 89-283). This item was not negotiated in the sixth round of tariff negotiations.

U.S. consumption and production

Apparent U.S. consumption of laminated glass was valued at \$315.4 million in 1964 and \$435.6 million in 1968 (table 1). The annual average is estimated to have exceeded \$375 million during 1964-68. U.S. production closely paralleled U.S. consumption as only small quantities of laminated glass were imported. The value of shipments by U.S. producers is estimated to have ranged from \$319.6 million in 1964 to \$434.0 million in 1968 and to have averaged \$382.7 million a year in 1964-68 (table 1). Shipments of laminated plate and float glass accounted for about 95 percent of these shipments. Laminated sheet glass accounted for nearly all of the remainder.

Changes in the annual consumption and production of laminated glass in the United States are closely tied to motor vehicle production. In 1964-68, the automobile industry consumed approximately three-fourths of the U.S. shipments of laminated glass as original equipment for automobiles, trucks, and buses. Approximately 93 percent of laminated automotive glass consisted of windshields made from plate and float glass. The use of laminated plate and sheet glass in side and rear windows of automotive vehicles declined in 1964-68, principally because of increased use of tempered glass in these applications.



Consumption of laminated glass in other-than-automotive applications is estimated to have increased slightly in 1964-68.

#### U.S. producers

U.S. production of laminated glass in 1964-68 was dominated by two large producers of flat glass and an automobile manufacturer. Together these firms, laminating glass of their own manufacture, accounted for more than three-fourths of the U.S. production of such glass. The two flat glass producers laminated glass principally for the automobile industry; the automobile manufacturer laminated glass for its own use and for the replacement market.

A third producer of flat glass laminated lesser quantities of its own glass and another automobile manufacturer laminated glass for its own use from purchased glass. Several independent laminators accounted for the remainder of the laminated glass produced in the United States.

#### U.S. exports

U.S. exports of laminated glass were not separately reported in official statistics in 1965, 1966, and 1967. Exports of such glass were valued at \$5.2 million in 1964, \$17.4 million in 1968, and \$16.1 million in 1969 (table 2).

Canada was the principal market for exported laminated glass. The bulk of the exports to Canada consisted of automobile glass sent to automobile assembly plants owned by two U.S. automotive vehicle manufacturers.

U.S. imports

U.S. imports of laminated glass were small in 1964-68, making up less than 1 percent of U.S. consumption. During the 5 years 1964-68, the value of U.S. imports steadily increased from \$1 million in 1964 to \$4.4 million in 1968, and came principally from West Germany, the United Kingdom, and Japan (table 3).

During 1964-68 Canada sharply increased its shipments of laminated glass to the United States and was the principal source of such imports in 1968. Nearly all of these imports entered duty-free under item 544.42. Two U.S. automotive firms accounted for most of the imports from Canada. Canadian productive capacity for float glass, the principal raw material in Canadian laminated glass, exceeds that country's requirements and exports of laminated glass to the United States are expected to continue to rise.

Table 1.--Laminated glass: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, 1964-69

(In millions of dollars)

Year	:	Production	:	Imports	:	Exports	:	Apparent consumption <u>1/</u>
1964-----	:	<u>1/</u> 319.6	:	1.0	:	5.2	:	315.4
1965-----	:	<u>1/</u> 398.0	:	1.1	:	<u>2/</u>	:	<u>2/</u>
1966-----	:	<u>1/</u> 400.1	:	1.5	:	<u>2/</u>	:	<u>2/</u>
1967-----	:	361.7	:	2.1	:	<u>2/</u>	:	<u>2/</u>
1968-----	:	<u>1/</u> 434.0	:	4.4	:	17.4	:	435.6
1969-----	:	<u>2/</u>	:	6.5	:	16.1	:	<u>2/</u>

1/ Estimated.2/ Not available.

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

## LAMINATED GLASS

Table 2.--Glass, laminated: Exports of domestic merchandise, by principal markets, 1964-69

Market	: 1964	: 1965 <u>1/</u>	: 1966 <u>1/</u>	: 1967 <u>1/</u>	: 1968	: 1969
	:	:	:	:	:	:
	Quantity (1,000 square feet)					
Canada-----	<u>2/</u>	: 2,397	: 6,044	: 9,485	: 11,111	: 10,208
Mexico-----	<u>2/</u>	: 910	: 516	: 567	: 480	: 541
West Germany---	<u>2/</u>	: 15	: 213	: 293	: 355	: 1,216
Colombia-----	<u>2/</u>	: 29	: 76	: 110	: 187	: 134
Venezuela-----	<u>2/</u>	: 347	: 691	: 137	: 69	: 33
All other-----	<u>2/</u>	: 1,415	: 1,302	: 1,676	: 1,452	: 1,239
Total-----	<u>2/</u>	: 5,113	: 8,842	: 12,268	: 13,654	: 13,371
	:	:	:	:	:	:
	Value (1,000 dollars)					
Canada-----	1,018	: 2,284	: 6,685	: 10,425	: 12,467	: 11,782
Mexico-----	716	: 1,509	: 895	: 904	: 645	: 724
West Germany---	85	: 37	: 329	: 443	: 593	: 595
Colombia-----	264	: 66	: 179	: 267	: 450	: 345
Venezuela-----	586	: 652	: 942	: 343	: 207	: 102
All other-----	2,521	: 2,593	: 2,967	: 3,349	: 2,993	: 2,563
Total-----	5,190	: 7,141	: 11,997	: 15,731	: 17,355	: 16,111
	:	:	:	:	:	:

1/ Data include tempered glass.2/ Quantity not reported.

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

Table 3.--Laminated glass: U.S. imports for consumption,  
by principal sources, 1964-69

(In thousands of dollars)						
Source	1964	1965	1966	1967	1968	1969
Canada-----	16	7	303	589	2,061	2,793
West Germany-----	547	548	616	907	1,300	2,403
Japan-----	77	128	159	198	332	594
United Kingdom-----	303	276	242	274	308	255
China (Taiwan)-----	4	87	58	31	120	79
Belgium-----	23	14	55	15	57	35
Finland-----	6	28	59	41	52	37
Israel-----	-	4	5	26	41	55
All other-----	46	31	29	33	92	215
Total-----	1,022	1,123	1,526	2,114	4,363	6,466

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



<u>Commodity</u>	<u>TSUS</u> <u>item</u>
Glass mirrors-----	544.51, -.52, -.54, -.55

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1970).

#### U.S. trade position

Average annual U.S. consumption of glass mirrors in 1964-68 was valued at \$147 million. Imports supplied less than 3 percent of this consumption. Exports accounted for about 5 percent of U.S. production.

#### Description and uses

This summary covers glass mirrors, with or without frames or cases, made from cast, rolled, drawn, or blown flat glass weighing over 4 ounces per square foot. The mirrors covered herein are separated for tariff purposes into two classifications according to their sizes: those not over 1 square foot in reflecting area (as distinguished from framed area) and those over 1 square foot in reflecting area.

Mirrors made of base metal (item 652.70) and mirrors framed or cased in precious metals (item 652.72) are covered in volume 6:7. Mirrors for use in instruments (items 708.07 and 708.27) are covered in volume 7:2.

The glass mirrors covered herein are made by coating one side of plate, float, or sheet glass with a reflecting medium, principally silver nitrate. This coating is then covered with a thin metallic

layers, usually copper, in order to protect it from wear. The mirrors may then be framed or cased in metal, wood, or other materials. Glass mirrors, which may be functional or decorative or both, are produced in a great variety of sizes and shapes.

The smaller mirrors (those not over 1 square foot in reflecting area) include a great variety of types such as those used in automobiles, for shaving, in boudoirs, in cosmetic cases, and in handbags. Mirrors used in automobiles are the most important commercially in this size category, but substantial quantities of mirrors are also used for the other enumerated purposes.

The larger mirrors are used principally in furniture, in doors, in medicine cabinets, and for decorative purposes in homes and public buildings. In this larger size category the more expensive mirrors are normally made from plate glass (and recently from float glass), and the less expensive, from sheet glass.

#### U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1970) are as follows:



TSUS item	Commodity	U.S. concessions granted		
		Rate	in 1964-67 trade con-	
		prior to	ference (Kennedy Round)	
		Jan. 1, 1968	Third stage, effective Jan. 1, 1970	Final stage, effective Jan. 1, 1972
	Mirrors, made of any of the glass described in items 541.11 through 544.41, with or without frames or cases (except framed or cased mirrors of precious metal, and mirrors designed for use in instruments):			
544.51	Not over 1 sq. ft. in reflecting area.	33% ad val.	23.5% ad val.	17.5% ad val.
544.52	If Canadian article and original motor-vehicle equipment (see headnote 2, pt. 6B, schedule 6).	Free	<u>1</u> /	<u>1</u> /
544.54	Over 1 sq. ft. in reflecting area.	20% ad	14% ad val.	10% ad val.
544.55	If Canadian article and original motor-vehicle equipment (see headnote 2, pt. 6B, schedule 6).	Free	<u>1</u> /	<u>1</u> /

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

The rates of duty in effect prior to January 1, 1968 had remained unchanged from August 31, 1963 (the effective date of the TSUS), through 1967. The third and final stages show two of the five 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 amount to total reductions of about 50 percent (see pertinent

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sections of the TSUSA-1970, reproduced in appendix A, for the staged rates).

Items 544.52 and 544.55 became effective for articles entered on or after January 18, 1965, under the provisions of the Automotive Products Trade Act of 1965 (Public Law 89-283). From August 31, 1963 through January 17, 1965 imports of glass mirrors not over 1 square foot in reflecting area had been dutiable at 33 percent ad valorem under item 544.51 and glass mirrors over 1 square foot in reflecting area had been dutiable at 20 percent ad valorem under item 544.54. These items were not negotiated in the Kennedy Round of tariff negotiations.

#### U.S. consumption

Apparent U.S. consumption of the glass mirrors covered herein was valued at \$146 million in 1965 and \$165.7 million in 1967 and is believed to have increased again in 1968 (table 1). Apparent consumption has increased since 1958, when it was valued at about \$88 million.

The increased consumption is attributed in large part to increased use of a wide variety of mirrors in the home and to increased production of household furniture incorporating mirrors.

#### U.S. production and producers

The value of U.S. production (shipments) increased from \$135.2 million in 1964 to \$166.7 million in 1967 and averaged \$150 million

a year during 1964-66 (table 1). Approximately 5 percent of these shipments were exported.

It is estimated that about half of the U.S. shipments consisted of mirrors made from polished plate glass. The rest consisted principally of sheet glass.

Glass mirrors were produced in 1964-68 by more than 200 firms situated throughout the United States. About 80 percent of the production, however, was accounted for by about 30 firms, chiefly in the furniture-producing centers of North Carolina, Virginia, southern Michigan, and western New York, and around the cities of Chicago and New York. Most of these producers were independent firms and the principal part of their income was derived from mirror manufacture. Most of the remaining producers were distributors or fabricators of other glass products and derived only a portion of their revenues from mirror manufacturing. Only one of the major U.S. flat-glass manufacturing firms produced glass mirrors in any quantity.

#### U.S. exports

U.S. exports of glass mirrors, which declined during 1965-68, were valued at an average \$5.4 million a year during that time (table 2).

The principal foreign market was Canada, which received about 78 percent of the glass mirrors exported in 1965-68. It is estimated that approximately three-fourths of these exports were for automotive use.

U.S. imports

The value of U.S. imports of all the glass mirrors covered herein rose from \$3 million in 1964 to \$4.9 million in 1968 (table 3). The annual average during this time amounted to \$3.7 million. In terms of value, Japan supplied about 50 percent of total imports; the rest came from West Germany, Belgium, Hong Kong, and numerous other sources. Approximately 77 percent of these imports, in terms of value, consisted of mirrors with not more than 1 square foot of reflecting area.

The value of imports of glass mirrors in 1969 was more than double that of 1968. Much of the increase was attributed to increased imports from Japan and Canada of mirrors with not more than 1 square foot of reflecting area. The bulk of the mirrors from Canada entered duty-free under the provisions of APTA.

Annual U.S. imports of glass mirrors with not more than 1 square foot of reflecting area averaged 19 million mirrors, valued at \$2.9 million, in 1964-68 (table 4). Japan was the principal source, accounting for about 65 percent of the total number imported. West Germany, Hong Kong, and Belgium also supplied substantial quantities.

Nearly all of the imports from Japan consisted of men's inexpensive, framed shaving mirrors.

Annual U.S. imports of glass mirrors over 1 square foot in reflecting area averaged 1.8 million square feet, valued at \$759,000, in 1964-68 (table 5). Belgium accounted for about 74 percent of the quantity and 65 percent of the value of such imports. Numerous other countries supplied the remainder.

Table 1.--Glass mirrors: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, 1964-69

(In millions of dollars)				
Year	Production	Imports	Exports	Apparent consumption
1964-----	135.2	3	<u>1</u> /	<u>1</u> /
1965-----	149.0	4	7	146.0
1966-----	150.9	3	6	147.9
1967-----	166.7	3	4	165.7
1968-----	<u>1</u> /	5	5	<u>1</u> /
1969-----	<u>1</u> /	10	7	<u>1</u> /

1/ Not available.

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

## GLASS MIRRORS

Table 2.--Glass mirrors: U.S. exports of domestic merchandise, by principal markets, 1965-69

(In thousands of dollars)

Market	1965	1966	1967	1968	1969
Canada-----	5,751	4,457	2,708	3,809	4,859
United Kingdom-----	32	94	67	54	723
West Germany-----	291	206	134	169	-
Mexico-----	207	190	169	158	210
Bahamas-----	41	54	96	90	84
Venezuela-----	68	98	60	80	71
Australia-----	71	50	89	73	69
All other-----	451	575	433	618	1/ 1,399
Total-----	6,912	5,724	3,756	5,051	7,415

1/ Includes exports valued at \$866,000 to France.

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

Table 3.--Glass mirrors: U.S. imports for consumption,  
by principal sources, 1964-69

(In thousands of dollars)						
Source	: 1964	: 1965	: 1966	: 1967	: 1968	: 1969
Japan-----	1,422	1,907	1,698	1,843	2,512	4,497
Canada-----	9	29	57	122	212	2,289
West Germany-----	334	363	421	453	723	888
Hong Kong-----	69	110	133	224	437	754
Belgium-----	636	547	562	324	443	560
Italy-----	78	90	138	138	211	255
United Kingdom-----	109	124	135	180	105	154
All other-----	364	407	231	213	284	622
Total-----	3,021	3,577	3,375	3,497	4,927	10,019

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

## GLASS MIRRORS

Table 4.--Glass mirrors, not over 1 square foot in reflecting area:  
U.S. imports for consumption, by principal sources, 1964-69

Source	1964	1965	1966	1967	1968	1969
Quantity (thousands)						
Japan-----	10,878	11,698	11,168	13,063	14,884	19,489
Canada-----	-	12	16	53	64	1,099
West Germany---	585	545	818	1,126	1,547	1,555
Hong Kong-----	977	2,887	2,461	2,997	12,060	10,229
Belgium-----	194	163	62	165	397	714
United Kingdom--	63	108	101	125	78	776
Italy-----	32	43	51	75	73	92
All other-----	1/ 2,322	2/ 2,358	335	67	220	777
Total-----	15,051	17,809	15,012	17,671	29,323	34,731
Value (1,000 dollars)						
Japan-----	1,419	1,895	1,686	1,828	2,498	4,461
Canada-----	-	17	57	120	201	2,237
West Germany---	300	340	403	435	659	780
Hong Kong-----	69	110	133	178	396	724
Belgium-----	32	21	13	15	92	167
United Kingdom--	86	180	120	159	79	125
Italy-----	40	51	78	73	122	118
All other-----	1/ 271	2/ 243	88	65	104	252
Total-----	2,217	2,785	2,578	2,873	4,151	8,864

1/ Includes 2,275 thousand mirrors, valued at 204 thousand dollars from Israel.

2/ Includes 2,297 thousand mirrors, valued at 181 thousand dollars from Israel.

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



Table 5.--Glass mirrors, over 1 square foot in reflecting area:  
U.S. imports for consumption, by principal sources, 1964-69

Source	: 1964	: 1965	: 1966	: 1967	: 1968	: 1969
	:	:	:	:	:	:
	Quantity (1,000 square feet)					
Belgium-----	1,273	1,335	1,549	869	1,247	1,192
Italy-----	7	9	14	48	22	84
West Germany-----	136	83	80	37	190	204
Spain-----	20	6	7	10	28	1,203
France-----	9	5	9	11	6	5
Hong Kong-----	3	8	-	743	448	49
All other-----	45	189	125	62	180	621
Total-----	1,493	1,635	1,784	1,780	2,121	3,358
	Value (1,000 dollars)					
Belgium-----	604	526	549	309	351	393
Italy-----	37	39	60	65	89	137
West Germany-----	33	24	19	18	63	108
Spain-----	26	41	29	57	43	93
France-----	26	34	47	36	45	58
Hong Kong-----	1/	1	-	45	41	30
All other-----	78	127	93	94	145	336
Total-----	804	792	797	624	777	1,155
	:	:	:	:	:	:

1/ Less than \$500.

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



<u>Commodity</u>	<u>TSUS</u> <u>item</u>
Multiple-glazed glass units-----	544.61

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1970).

#### U.S. trade position

The United States was the world's largest producer and consumer of multiple-glazed glass units in 1964-68. Imports and exports were negligible during this period.

#### Description and uses

This summary covers multiple-glazed (walled) glass units containing a vacuum, or air or other gas. Hollow glass blocks (item 540.47), which are similar in construction, are covered in another summary in this volume.

A multiple-glazed glass unit consists of two or more (usually two parallel separated panes of flat glass joined at the edges by metal seals or by fusing together the edges of the panes. The space between the two panes of glass varies but usually is one-fourth or one-half inch in width and may be entirely evacuated or contain dry air or another gas. The glass used to manufacture these units may be plate, float, sheet, or rough-rolled flat glass. Approximately two-thirds of the units produced in the United States are made with sheet glass.

The principal functions of multiple-glazed glass units are to provide thermal insulation, reduce surface condensation, and reduce sound transmission, in addition to the normal functions of a window.

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Multiple-glazed glass units are used for glazing windows and doors in residential, commercial, and public buildings.

### U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1970) are as follows:

TSUS item	Commodity	Rate prior to Jan. 1, 1968	U.S. concessions granted in 1964-67 trade conference (Kennedy Round)	
			Third stage, effective Jan. 1, 1970	Final stage, effective Jan. 1, 1972
544.61	Multiple-glazed units:	22% ad	15% ad val.	11% ad val.
	made of any of the	val.		
	glass described in			
	items 541.11			
	through 544.41,			
	however sealed,			
	containing two or			
	more glass sheets			
	with a vacuum, or			
	air or other gas			
	between them.			

The rate of duty in effect prior to January 1, 1968, had remained unchanged from August 31, 1963 (the effective date of the TSUS), through 1967. The third and final stages show two of the five 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 amounts to a total reduction of 50 percent (see pertinent sections of the TSUSA-1970, reproduced in appendix A, for the staged rates).

U.S. consumption and production

Estimated U.S. consumption of multiple-glazed glass units rose in value from \$61 million in 1964 to \$128 million in 1968 (table 1). In terms of quantity, U.S. consumption of multiple-glazed glass units made of sheet glass was about 40 percent higher in 1968 than in 1964. U.S. consumption of such units made of plate or float glass was about 35 percent higher in 1968 than in 1964.

U.S. production was nearly equivalent to U.S. consumption since only negligible quantities were imported and exported.

U.S. producers

Two large integrated manufacturers of flat glass which fabricated multiple-glazed glass units from glass of their own manufacture dominated the industry in 1964-68. Together these firms accounted for more than half of the U.S. production of such units. In addition, there were about 60 independent firms, ranging in size from large concerns producing many types of flat-glass products to small shops employing a few workers engaged in fabricating multiple-glazed glass units.

U.S. exports and imports

In 1965-68, U.S. exports of multiple-glazed glass units ranged from 110,000 square feet, valued at \$211,000 in 1965 to 381,000 square feet, valued at \$454,000, in 1967 (table 2). The bulk of the exports of such glass units went to West Germany, Australia, and Canada.

U.S. imports in 1964-68, ranged in value from \$4,131 in 1964 to \$27,908 in 1965 (table 3). Canada and West Germany were the principal foreign sources for imports of multiple-glazed glass units.

Table 1.--Multiple-glazed glass units: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, 1964-68

(In thousands of dollars)					
Year	Production <u>1</u> /	Imports	Exports	Apparent consumption	
1964-----	60,976	4	<u>1</u> / 195	60,785	
1965-----	71,432	28	211	71,249	
1966-----	82,146	8	237	81,917	
1967-----	84,978	6	454	84,530	
1968-----	128,220	6	378	127,848	
1969-----	<u>2</u> /	10	802	<u>2</u> /	

1/ Estimated.

2/ Not available.

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

## MULTIPLE-GLAZED GLASS UNITS

Table 2.--Multiple-glazed glass units: U.S. exports of domestic merchandise, by principal markets, 1965-69

Market	1965	1966	1967	1968	1969
Quantity (1,000 square feet)					
West Germany-----	-	-	134	58	198
Canada-----	12	84	-	61	140
Australia-----	62	15	13	47	18
Sweden-----	21	21	40	-	7
All other-----	15	14	1/ 194	36	136
Total-----	110	134	381	202	499
Value (1,000 dollars)					
West Germany-----	-	-	337	154	289
Canada-----	26	130	-	43	153
Australia-----	133	33	14	101	41
Sweden-----	30	46	21	-	32
All other-----	22	28	1/ 82	80	287
Total-----	211	237	454	378	802

1/ Includes 181,000 square feet, valued at \$55,000, to Japan.

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



Table 3.--Multiple-glazed glass units: U.S. imports for consumption, by principal sources, 1964-69

Source	1964	1965	1966	1967	1968	1969
Quantity (number)						
Canada-----	35	60	50	36	82	48
West Germany-----	21	280	1,000	-	24	-
United Kingdom-----	-	921	75	-	-	-
Japan-----	3,564	378	-	-	-	-
All other-----	-	6	7	-	-	1/ 800
Total-----	3,620	1,645	1,132	36	106	848
Value						
Canada-----	\$3,003	\$2,537	\$1,407	\$5,723	\$5,516	\$4,546
West Germany-----	273	277	2,050	-	335	-
United Kingdom-----	-	23,949	4,138	-	-	-
Japan-----	855	845	-	-	-	-
All other-----	-	300	260	-	-	1/ 5,731
Total-----	4,131	27,908	7,855	5,723	5,851	10,277

1/ All from Sweden.

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



<u>Commodity</u>	<u>TSUS item</u>
Painted, colored, or stained glass windows-----	544.64

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1970).

#### U.S. trade position

Annual U.S. consumption of stained glass windows <sup>1/</sup> in 1964-68, is unknown. Imports declined sharply during this period; exports are believed to have been negligible.

#### Description and uses

This summary covers painted, colored, or stained glass windows, however set, and parts thereof for whatever use except those valued at more than \$15 per square foot for use in religious institutions. Painted, colored, or stained glass windows, and parts thereof, valued at more than \$15 per square foot and designed by, and produced by or under the direction of, a professional artist, for use in religious institutions (item 850.30), are covered in a summary in schedule 8, volume 1.

Stained glass windows consist of pieces of colored or painted, glass bound together by strips of lead, called comes, to form a pattern of color or a pictorial scene. In recent years, new techniques have partially replaced the lead comes, and stained glass windows may now be set in epoxy resins, cement, or other materials.

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<sup>1/</sup> The term "stained glass windows" is used in this summary to refer to painted, colored, or stained glass windows, and parts thereof.

Most stained glass is about 1/8 to 3/16 inch thick, but glass 1 inch thick is also used, particularly in faceted glass windows which consist of pieces of colored glass chipped at various angles--to vary light diffusion and color intensity--and set in epoxy resins or cement.

Stained glass windows are used principally in churches, cathedrals, and synagogues, but there is substantial demand for use in public buildings. Only minor quantities are used in residential construction.

#### U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1970) are as follows:

TSUS item	Commodity	Rate prior to Jan. 1, 1968	U.S. concessions granted in 1964-67 trade conference (Kennedy Round)	
			Third stage, effective Jan. 1, 1970	Final stage, effective Jan. 1, 1972
544.64	Painted, colored, or stained glass windows, however set, and parts thereof.	30% ad val.	21% ad val.	15% ad val.

The rate in effect prior to January 1, 1968, had remained unchanged from August 31, 1963 (the effective date of the TSUS), through 1967. The third and final stages show two of the five 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 amounts to a total reduction of 50 percent (see pertinent

sections of the TSUSA-1970, reproduced in appendix A, for the staged rates).

Comment

U.S. consumption of stained glass windows in 1964-68 is estimated to have been valued at about \$25 million a year. This consumption includes stained glass windows of whatever value for whatever use. More than half of the U.S. production of stained glass windows was valued at more than \$15 per square foot.

Stained glass windows were produced in about 200 studios situated throughout the United States. Most of these studios purchased their stained glass requirements from other sources, but a few manufactured such glass for their own use. Approximately 75 percent of total U.S. production was accounted for by about 24 large studios.

The value of U.S. imports of the stained glass windows covered herein declined from \$207,659 in 1964 to \$55,283 in 1969 (see accompanying table). The decline is attributed in part to increased acceptance of U.S.-produced colored glass and the stained glass windows produced therefrom. The principal sources of imported stained glass windows were the Netherlands, West Germany, and Italy.

U.S. exports of stained glass windows in 1964-68 were negligible.

## STAINED GLASS WINDOWS

Glass windows, painted, stained, or colored and parts: U.S.  
imports for consumption, by principal sources, 1964-69

Source	1964	1965	1966	1967	1968	1969
Quantity (square feet)						
Netherlands---	4,603	6,613	437	4,322	2,633	1,480
West Germany--	4,567	2,364	15,873	908	1,900	1,326
Italy-----	5,699	5,477	3,038	1,366	1,955	2,488
France-----	8,835	1,142	1,904	1,984	531	69
All other-----	6,255	15,239	8,717	3,201	4,641	4,037
Total-----	29,959	30,835	29,969	11,781	11,660	9,400
Value						
Netherlands---	\$25,213	\$32,049	\$2,587	\$31,416	\$18,033	\$8,829
West Germany--	25,916	19,295	68,980	6,249	15,035	8,143
Italy-----	45,631	23,030	28,904	12,709	12,450	12,808
France-----	66,540	5,889	20,064	15,366	2,290	1,385
All other-----	44,359	71,705	38,344	20,702	30,325	24,118
Total-----	207,659	151,968	158,879	86,442	78,133	55,283

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 (1970):  
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.





## GENERAL HEADNOTES AND RULES OF INTERPRETATION

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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 prescribed 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 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.

(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

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

## General Headnotes and Rules of Interpretation

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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. 2/ 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. + 50% 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.

2/ The purpose of headnote 3(g) was to provide for an effective date for the rates of duty initially contained in the Tariff Schedules of the United States. By Presidential Proclamation 3548 of August 21, 1963, these rates of duty, except as noted in subparagraphs (i), (ii), and (iii) of headnote 3(g), became effective on August 31, 1963.

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.

## General Headnotes and Rules of Interpretation

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.

## General Headnotes and Rules of Interpretation

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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;

(ij) 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;

(ij) 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.

## General Headnotes and Rules of Interpretation

Page 7

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 "100.3520".

(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
mc.	-	millicurie
cord	-	128 cubic feet
square	-	amount to cover 100 square feet of surface
sup. 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.

## HISTORICAL NOTES

Notes p. 1  
General  
HeadnotesAmendments and ModificationsPROVISIONS

Gen Hdnte--Language "Except as provided in headnote 6 of 3(a)(i) 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. 89-805, 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 ordinarily sold at retail with their contents 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**

## SCHEDULE 5. - NONMETALLIC MINERALS AND PRODUCTS

**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
- J. 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



## SCHEDULE 5. - NONMETALLIC MINERALS AND PRODUCTS

## Part 3. - Glass and Glass Products

5 - 3 - A  
540.11 - 540.37

Item	Stat. Surfix	Articles	Units of Quantity	Rates of Duty	
				1	2
		<p><b>PART 3. - GLASS AND GLASS PRODUCTS</b></p> <p><b>Part 3 heading:</b></p> <p>1. For the purposes of the tariff schedules, fused quartz and fused silica shall be regarded as glass.</p> <p><b>Subpart A. - Glass in the Mass; Glass in Parts, Shapes, Forms, or Certain Glass Forms; Foam Glass; Glass Fibers and Products Thereof</b></p> <p><b>Subpart A headnotes:</b></p> <p>1. This subpart does not cover --</p> <p>(i) articles (other than globules or balls) described in subpart C of this part;</p> <p>(ii) glass or synthetic optical crystals in any form optically worked (see part 2A of schedule 7);</p> <p>(iii) glass eyes (see parts 2B and 13A of schedule 7);</p> <p>(iv) toy marbles (see part 5E of schedule 7);</p> <p>(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</p> <p>(vi) reinforced or laminated plastics, or articles thereof (see part 12A of schedule 7).</p> <p>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.</p>			
		<p>Glass, in the mass; glass, crushed, granular, or fused (fritted or fused) or fused glass; all the foregoing except glass provided for in items 540.11 and 540.37</p> <p>Glass in the mass:</p> <p>540.11 60 Containing over 99 percent silicon by weight.....</p> <p>540.13 00 Other.....</p> <p>540.10 00 Fused or fused glass.....</p> <p>540.15 00 Other.....</p> <p>Globules, spheres, plates, and glasses, all the foregoing of glass, frit, or silica:</p> <p>540.21 60 Ground or pulverized.....</p> <p>540.22 00 Other.....</p> <p>Solid glass globules and balls, spherical or approximately spherical in shape, colored or not colored, not otherwise worked:</p> <p>540.35 00 Not over 6 millimeters in diameter.....</p> <p>540.37 00 Over 6 millimeters in diameter.....</p>	<p>kg.....</p> <p>kg.....</p> <p>kg.....</p> <p>kg.....</p> <p>kg.....</p> <p>kg.....</p> <p>kg.....</p> <p>kg.....</p> <p>kg.....</p> <p>kg.....</p>	<p>100 ad val.</p> <p>10.00 ad val.</p> <p>5.00 ad val.</p> <p>100 ad val.</p> <p>0.50 ad val.</p> <p>500 ad val.</p> <p>250 ad val.</p> <p>175 ad val.</p>	<p>100 ad val.</p> <p>500 ad val.</p> <p>100 ad val.</p> <p>100 ad val.</p> <p>100 ad val.</p> <p>500 ad val.</p> <p>100 ad val.</p> <p>500 ad val.</p>

## TARIFF SCHEDULES OF THE UNITED STATES ANNOTATED (1970)

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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. Sur- fix	Articles	Units of Quantity	Rates of Duty	
				1	2
540.41	00	Glass rods, tubes, and tubing, all the foregoing not processed	lb.	2.5% ad val.	60% ad val.
540.43	00	Containing over 25 percent silica by weight.	lb.	22.5% ad val.	65% ad val.
		Other.	lb.		
540.47	00	Bricks, blocks, tiles, slabs, squares, and other articles, all the foregoing, of pressed or molded glass, chiefly used in building.	X.	16.5% 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.	11.5% ad val.	60% ad val.
540.55	00	Foam glass in any form.	X.	21% ad val.	60% ad val.
		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.			
540.61	00	Synthetic optical crystals in the form of ingots.	lb.	7% ad val.	25% ad val.
		Lens blanks:			
540.63	00	Spectacle lens blanks.	Doz. pr.	14% ad val.	40% ad val.
540.65	00	Other lens blanks.	sq.	24% ad val.	40% ad val.
540.67	00	Other optical glass and synthetic optical crystals; polarizing material.	lb.	35% 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.	15% ad val.	50% ad val.
540.72	00	If 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;

## SCHEDULE 5. - NONMETALLIC MINERALS AND PRODUCTS

## Part 3. - Glass and Glass Products

5 - 3 - B

541.01 - 541.31

Item	Stat. Suffix	Articles	Units of Quantity	Rates of Duty	
				1	2
		<p>(c) the term "colored or special glass" refers to glass that has a transmittance of normally incident light of less than 66 percent at one or more wave lengths from 400 to 700 millimicrons, inclusive, or a transmittance of less than 80 percent at one or more wave lengths from 525 to 575 millimicrons, inclusive, for glass 1/4 inch in thickness, or of the equivalent transmittances for any other thickness, provided that, in determining such light transmittances, the effect of surface irregularities or configurations, or of other surface treatment (except flashing applied prior to solidification), and the effect of wire netting within the glass, shall be eliminated;</p> <p>(d) the term "united inches" refers to the sum in inches of the length and width of a rectangle of glass; and</p> <p>(e) the term "polished", as used with reference to glass, refers to glass one or both of the surfaces of which have been made smooth and glossy, in whole or in part, by abrasive or chemical means, or by floating the glass over molten metal.</p> <p>3. For the purposes of this subpart, superficial area shall be used in determining the surface area of cast or rolled glass.</p> <p>4. Glass provided for in items 542.11 through 542.98, imported in any shipment in quantities over 50 square feet of the same size and thickness, shall be denied entry unless --</p> <p>(i) packed in units containing, as nearly as the particular size permits, 50 square feet, or multiples thereof, or</p> <p>(ii) packed in units containing multiples of the number of sheets of the same size and thickness which would be contained in a unit if packed to contain, as nearly as such size permits, 50 or 100 square feet, or</p> <p>(iii) otherwise packed in a manner which conforms to the packing practices of the domestic glass industry as determined and published from time to time by the Secretary of the Treasury.</p>			
541.01	00	Ribbon glass, or flat glass, in rectangles or otherwise, not ground and not otherwise processed, weighing not over 4 oz. per sq. ft.....	Lb.....	Free	Free
		Glass (whether or not containing wire netting), in rectangles, not ground, not polished and not otherwise processed, weighing over 4 oz. per sq. ft.: Cast or rolled glass:			
541.11	00	Ordinary glass.....	Lb..... Sq. ft.	0.43¢ per lb.	1.5¢ per lb.
541.21	00	Colored or special glass: Opaque and measuring over 15/64 inch in thickness.....	Lb..... Sq. ft.	0.8¢ per lb.	5.5¢ per lb.
541.31	00	Opaque and measuring not over 15/64 inch in thickness, or not opaque and of any thickness.....	Lb..... Sq. ft.	0.43¢ per lb. + 1.5% ad val.	1.5¢ per lb. + 5% ad val.

## TARIFF SCHEDULES OF THE UNITED STATES ANNOTATED (1970)

## SCHEDULE 5. - NONMETALLIC MINERALS AND PRODUCTS

## Part 3. - Glass and Glass Products

5 - 3 - B

542.11 - 542.42

Item	Stat. Suffix	Articles	Units of Quantity	Rates of Duty	
				1	2
		Glass (whether or not containing wire netting), etc. (con.):			
		Other, including blown or drawn glass, but excluding pressed or molded glass:			
		Ordinary glass:			
		Weighing over 4 oz. but not over 12 oz. per sq. ft.:			
542.11	00	Measuring not over 40 united inches.....	Lb.....	0.7¢ per lb.	1.5¢ per lb.
542.13	00	Measuring over 40 united inches....	Lb.....	0.9¢ per lb.	1.9¢ per lb.
		Weighing over 12 oz. but not over 16 oz. per sq. ft.:			
542.21	00	Measuring not over 40 united inches.....	Lb.....	1¢ per lb.	2.1¢ per lb.
542.23	00	Measuring over 40 but not over 60 united inches.....	Lb.....	1.1¢ per lb.	2.4¢ per lb.
542.25	00	Measuring over 60 united inches....	Lb.....	1.2¢ per lb.	2.5¢ per lb.
		Weighing over 16 oz. but not over 28 oz. per sq. ft.:			
542.31		Measuring not over 40 united inches.....	.....	0.7¢ per lb. 1/	1.5¢ per lb.
	20	Weighing over 16 oz. but not over 18-1/2 oz. per sq. ft..	Lb.		
	40	Weighing over 18-1/2 oz. but not over 20 oz. per sq. ft..	Lb.		
	70	Weighing over 20 oz. but not over 28 oz. per sq. ft.....	Lb.		
542.33		Measuring over 40 but not over 60 united inches.....	.....	0.9¢ per lb. 1/	1.9¢ per lb.
	20	Weighing over 16 oz. but not over 18-1/2 oz. per sq. ft..	Lb.		
	40	Weighing over 18-1/2 oz. but not over 20 oz. per sq. ft..	Lb.		
	70	Weighing over 20 oz. but not over 28 oz. per sq. ft.....	Lb.		
542.35		Measuring over 60 but not over 100 united inches.....	.....	1.1¢ per lb. 1/	2.4¢ per lb.
	20	Weighing over 16 oz. but not over 18-1/2 oz. per sq. ft..	Lb.		
	40	Weighing over 18-1/2 oz. but not over 20 oz. per sq. ft..	Lb.		
	70	Weighing over 20 oz. but not over 28 oz. per sq. ft.....	Lb.		
542.37		Measuring over 100 united inches....	.....	1.4¢ per lb.	2.8¢ per lb.
	20	Weighing over 16 oz. but not over 18-1/2 oz. per sq. ft..	Lb.		
	40	Weighing over 18-1/2 oz. but not over 20 oz. per sq. ft..	Lb.		
	70	Weighing over 20 oz. but not over 28 oz. per sq. ft.....	Lb.		
542.42		Weighing over 28 oz. per sq. ft.:			
	20	Not over 2-2/3 sq. ft. in area....	.....	0.7¢ per lb.	1.5¢ per lb.
		Weighing over 28 oz. but not over 42 oz. per sq. ft.....	Lb.		
	50	Weighing over 42 oz. per sq. ft.....	Lb.		

1/ Rate increased pursuant to escape-clause proclamation. See Appendix to Tariff Schedules.

## SCHEDULE 5. - NONMETALLIC MINERALS AND PRODUCTS

## Part 3. - Glass and Glass Products

5 - 3 - B

542.44 - 542.98

Item	Stat. Surfix	Articles	Units of Quantity	Rates of Duty	
				1	2
		Glass (whether or not containing wire netting), etc. (con.):			
		Other, including blown or drawn glass, etc. (con.):			
		Ordinary glass (con.):			
42.44		Weighing over 28 oz. per sq. ft. (con.):			
		Over 2-2/3 but not over 7 sq. ft. in area.....	.....	0.9¢ per lb.	1.9¢ per lb.
	20	Weighing over 28 oz. but not over 42 oz. per sq. ft.....	Lb.		
	50	Weighing over 42 oz. per sq. ft.....	Lb.		
42.46		Over 7 but not over 15 sq. ft. in area.....	.....	1.1¢ per lb.	2.4¢ per lb.
	20	Weighing over 28 oz. but not over 42 oz. per sq. ft.....	Lb.		
	50	Weighing over 42 oz. per sq. ft.....	Lb.		
42.48		Over 15 sq. ft. in area.....	.....	1.4¢ per lb.	2.8¢ per lb.
		Over 15 but not over 16-2/3 sq. ft. in area:			
	10	Weighing over 28 oz. but not over 42 oz. per sq. ft.....	Lb.		
	25	Weighing over 42 oz. per sq. ft.....	Lb.		
	40	Over 16-2/3 sq. ft. in area:			
		Weighing over 28 oz. but not over 42 oz. per sq. ft.....	Lb.		
	55	Weighing over 42 oz. per sq. ft.....	Lb.		
		Colored or special glass:			
42.57	00	Weighing over 4 oz. but not over 12 oz. per sq. ft.....	Lb.....	1.7¢ per lb.	4¢ per lb.
42.67	00	Weighing over 12 oz. but not over 16 oz. per sq. ft.....	Lb.....	6¢ per lb.	13¢ per lb.
		Weighing over 16 oz. but not over 28 oz. per sq. ft:			
42.71	00	Measuring not over 40 united inches.....	Lb.....	0.7¢ per lb. + 2.5% ad val. 1/	1.5¢ per lb. + 5% ad val.
42.73	00	Measuring over 40 but not over 60 united inches.....	Lb.....	0.9¢ per lb. + 2.5% ad val. 1/	1.9¢ per lb. + 5% ad val.
42.75	00	Measuring over 60 but not over 100 united inches.....	Lb.....	1.1¢ per lb. + 2.5% ad val. 1/	2.4¢ per lb. + 5% ad val.
42.77	00	Measuring over 100 united inches...	Lb.....	1.4¢ per lb. + 2.5% ad val.	2.8¢ per lb. + 5% ad val.
		Weighing over 28 oz. per sq. ft.:			
42.92	00	Not over 2-2/3 sq. ft. in area....	Lb.....	0.7¢ per lb. + 2.5% ad val.	1.5¢ per lb. + 5% ad val.
42.94	00	Over 2-2/3 but not over 7 sq. ft. in area.....	Lb.....	0.9¢ per lb. + 2.5% ad val.	1.9¢ per lb. + 5% ad val.
42.96	00	Over 7 but not over 15 sq. ft. in area.....	Lb.....	1.1¢ per lb. + 2.5% ad val.	2.4¢ per lb. + 5% ad val.
42.98		Over 15 sq. ft. in area.....	.....	1.4¢ per lb. + 2.5% ad val.	2.8¢ per lb. + 5% ad val.
	20	Over 15 but not over 16-2/3 sq. ft. in area.....	Lb.		
	40	Over 16-2/3 sq. ft. in area...	Lb.		
1/ Rate increased pursuant to escape-clause proclamation. See Appendix to Tariff Schedules.					

## TARIFF SCHEDULES OF THE UNITED STATES ANNOTATED (1970)

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## SCHEDULE 5. - NONMETALLIC MINERALS AND PRODUCTS

## Part 3. - Glass and Glass Products

5 - 3 - B

543.11 - 544.11

Item	Stat. Sur- fix	Articles	Units of Quantity	Rates of Duty	
				1	2
		Glass (including plate glass and float glass), whether or not containing wire netting, in rectangles, ground or polished on one or both surfaces in whole or in part, but not further processed:			
543.11	00	Ordinary glass:			
		Containing wire netting.....	Sq. ft..	4.5¢ per sq. ft.	23¢ per sq. ft.
		Not containing wire netting:			
		Measuring not over 15/32 inch in thickness:			
543.21	00	Not over 2-2/3 sq. ft. in area.....	Sq. ft..	2.4¢ per sq. ft.	12.5¢ per sq. ft.
543.23	00	Over 2-2/3 but not over 7 sq. ft. in area.....	Sq. ft..	3.5¢ per sq. ft.	17.25¢ per sq. ft.
543.27		Over 7 sq. ft. in area.....	.....	3.9¢ per sq. ft.	19.75¢ per sq. ft.
	30	Measuring less than 7/32 inch in thickness.....	Sq. ft.		
	70	Measuring 7/32 inch or more but not over 15/32 inch in thickness.....	Sq. ft.		
543.31	00	Measuring over 15/32 inch in thickness.....	Sq. ft..	14.5% ad val.	50% ad val.
		Colored or special glass:			
		Measuring not over 15/32 inch in thickness:			
543.61	00	Not over 2-2/3 sq. ft. in area.....	Sq. ft..	2.4¢ per sq. ft. + 1.5% ad val.	12.5¢ per sq. ft. + 5% ad val.
543.63	00	Over 2-2/3 but not over 7 sq. ft. in area.....	Sq. ft..	3.5¢ per sq. ft. + 1.5% ad val.	17.25¢ per sq. ft. + 5% ad val.
543.67	00	Over 7 sq. ft. in area.....	Sq. ft..	3.9¢ per sq. ft. + 1.5% ad val.	19.75¢ per sq. ft. + 5% ad val.
543.69	00	Measuring over 15/32 inch in thickness.....	Sq. ft..	16% ad val.	55% ad val.
		Glass (including cast, rolled, drawn, or blown glass, whether or not containing wire netting or surface ground or polished), cut to other than rectangular shape (except glass provided for in item 541.01), and glass (including cast, rolled, drawn, or blown glass, whether or not containing wire netting or surface ground or polished), whether in rectangles or cut to other than rectangular shape, subjected to bending, curving, beveling, edging, notching, drilling, chipping, sanding, embossing, engraving, etching, coating, staining, enamelling, painting, decorating, or any combination thereof, all the foregoing glass, whether or not such cutting or processing dedicates the glass to a specific use, but not including any article hereinafter described in this subpart or described in subpart A or C of this part:			
544.11	00	Strips, not over 6 inches in width, weighing over 16 ounces per square foot, and having all longitudinal edges ground or otherwise smoothed or processed.....	Sq. ft..	22% ad val.	53% ad val.

## SCHEDULE 5. - NONMETALLIC MINERALS AND PRODUCTS

## Part 3. - Glass and Glass Products

5 - 3 - B

544.14 - 544.64

Item	Stat. Suf- fix	Articles	Units of Quantity	Rates of Duty	
				1	2
		Glass (including cast, rolled, drawn), etc. (con.):			
		Other:			
544.14	00	Glass measuring over 15/32 inch in thick- ness.....	Sq. ft..	16% ad val.	60% ad val.
		Other:			
544.16	00	Glass, drawn or blown and not containing wire netting and not surface ground or polished.....	Sq. ft..	15% ad val.	60% ad val.
544.17	00	If Canadian article and original motor-vehicle equipment (see head- note 2, part 6B, schedule 6).....	Sq. ft..	Free	
544.18	00	Other.....	Sq. ft..	10% ad val.	60% ad val.
544.20	00	If Canadian article and original motor-vehicle equipment (see head- note 2, part 6B, schedule 6).....	Sq. ft..	Free	
544.31	00	Toughened (specially tempered) glass, made of any of the glass described in items 541.11 through 544.18, whether or not shaped or framed or both.....	Sq. ft..	15% ad val.	50% ad val.
544.32	00	If Canadian article and original motor- vehicle equipment (see headnote 2, part 6B, schedule 6).....	Sq. ft..	Free	
544.41	00	Laminated glass made of two or more layers of any of the glass described in items 541.11 through 544.31, inclusive, and other material, whether or not shaped or framed or both.....	X.....	12.5% ad val.	60% ad val.
544.42	00	If Canadian article and original motor- vehicle equipment (see headnote 2, part 6B, schedule 6).....	X.....	Free	
		Mirrors, made of any of the glass described in items 541.11 through 544.41, with or without frames or cases (except framed or cased mirrors of precious metal, and mirrors designed for use in instruments):			
544.51	00	Not over 1 sq. ft. in reflecting area.....	No.....	23.5% ad val.	50% ad val.
544.52	00	If Canadian article and original motor-vehicle equipment (see headnote 2, part 6B, schedule 6).....	No.....	Free	
544.54	00	Over 1 sq. ft. in reflecting area.....	Sq. ft..	14% ad val.	45% ad val.
544.55	00	If Canadian article and original motor-vehicle equipment (see headnote 2, part 6B, schedule 6).....	Sq. ft..	Free	
544.61	00	Multiple-glazed units made of any of the glass de- scribed in items 541.11 through 544.41, however sealed, containing two or more glass sheets with a vacuum, or air or other gas between them.....	No.....	15% ad val.	50% ad val.
544.64	00	Painted, colored, or stained glass windows, however set, and parts thereof.....	Sq. ft..	21% ad val.	60% ad val.

## TARIFF SCHEDULES OF THE UNITED STATES ANNOTATED (1970)

## STAGED RATES AND HISTORICAL NOTES

Notes p. 1  
Schedule 5,  
Part 3

## Staged Rates

Modifications of column 1 rates of duty by Pres. Proc. 3744 (Japanese Compensation), Sept. 13, 1966, 3 CFR, 1966 Comp., p. 75, as modified by Pres. Proc. 3818, Nov. 6, 1967, 32 F.R. 15467:

TSUS item	Prior rate	Rate of duty, effective with respect to articles entered on and after October 1 --				
		1966	1967	1968	1969	1970
544.51	35% ad val.	33% ad val.	33% ad val.	<u>1/</u>	<u>1/</u>	<u>1/</u>

1/ See Kennedy Round staged rates, infra.

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	13% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
540.13	23% 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.
540.16	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.
540.34	35% ad val.	31% ad val.	28% ad val.	24% ad val.	21% ad val.	17.5% ad val.
540.37	23% ad val.	22% ad val.	20% ad val.	17% ad val.	15% ad val.	12.5% ad val.
540.41	1% ad val.	12.5% ad val.	11% ad val.	9.5% ad val.	8% ad val.	7% ad val.
540.42	31.5% ad val.	23% ad val.	20% ad val.	22.5% ad val.	19% ad val.	16% ad val.
540.47	24% ad val.	21.5% ad val.	19% ad val.	16.5% ad val.	14% ad val.	12% ad val.
540.51	17% ad val.	15% ad val.	13.5% ad val.	11.5% ad val.	10% ad val.	8.5% ad val.
540.55	30% ad val.	27% ad val.	24% ad val.	21% ad val.	18% ad val.	15% 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	40% ad val.	36% ad val.	32% ad val.	28% ad val.	24% ad val.	20% ad val.
540.71	22% ad val.	19.5% ad val.	17.5% ad val.	15% ad val.	13% ad val.	11% ad val.
541.11	0.625¢ per lb.	0.55¢ per lb.	0.5¢ per lb.	0.43¢ per lb.	0.35¢ per lb.	0.3¢ per lb.
541.21	1.2¢ per lb.	1.05¢ per lb.	0.95¢ per lb.	0.8¢ per lb.	0.7¢ per lb.	0.6¢ per lb.
541.31	0.625¢ per lb. + 2.5% ad val.	0.55¢ per lb. + 2% ad val.	0.5¢ per lb. + 2% ad val.	0.43¢ per lb. + 1.5% ad val.	0.35¢ per lb. + 1.5% ad val.	0.3¢ per lb. + 1% ad val.
543.11	6¢ per sq. ft.	5.5¢ per sq. ft.	5¢ per sq. ft.	4.5¢ per sq. ft.	4¢ per sq. ft.	3.8¢ per sq. ft.
543.21	3.5¢ per sq. ft.	3.1¢ per sq. ft.	2.8¢ per sq. ft.	2.4¢ per sq. ft.	2¢ per sq. ft.	1.7¢ per sq. ft.
543.23	5¢ per sq. ft.	4.5¢ per sq. ft.	4¢ per sq. ft.	3.5¢ per sq. ft.	3¢ per sq. ft.	2.5¢ per sq. ft.
543.27	5.6¢ per sq. ft.	5¢ per sq. ft.	4.4¢ per sq. ft.	3.9¢ per sq. ft.	3.3¢ per sq. ft.	2.8¢ per sq. ft.
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.
543.61	3.5¢ per sq. ft. + 2.5% ad val.	3.1¢ per sq. ft. + 2% ad val.	2.8¢ per sq. ft. + 2% ad val.	2.4¢ per sq. ft. + 1.5% ad val.	2¢ per sq. ft. + 1.5% ad val.	1.7¢ per sq. ft. + 1% ad val.
543.63	5¢ per sq. ft. + 2.5% ad val.	4.5¢ per sq. ft. + 2% ad val.	4¢ per sq. ft. + 2% ad val.	3.5¢ per sq. ft. + 1.5% ad val.	3¢ per sq. ft. + 1% ad val.	2.5¢ per sq. ft. + 1% ad val.
543.67	5.6¢ per sq. ft. + 2.5% ad val.	5¢ per sq. ft. + 2% ad val.	4.4¢ per sq. ft. + 2% ad val.	3.9¢ per sq. ft. + 1.5% ad val.	3.3¢ per sq. ft. + 1.5% ad val.	2.8¢ per sq. ft. + 1% ad val.
543.69	23.5% ad val.	21% ad val.	18.5% ad val.	16% ad val.	14% ad val.	11.5% ad val.
544.14	23.5% ad val.	21% ad val.	18.5% ad val.	16% ad val.	14% ad val.	11.5% ad val.
544.18	15% ad val.	13% ad val.	12% ad val.	10% ad val.	9% ad val.	7.5% ad val.
544.31	22% ad val.	19.5% ad val.	17.5% ad val.	15% ad val.	13% ad val.	11% ad val.
544.41	18% ad val.	16% ad val.	14% ad val.	12.5% ad val.	10.5% ad val.	9% ad val.
544.51	33% ad val.	29.5% ad val.	26.5% ad val.	23.5% ad val.	20.5% ad val.	17.5% ad val.
544.54	20% ad val.	18% ad val.	16% ad val.	14% ad val.	12% ad val.	10% ad val.
544.61	22% ad val.	19.5% ad val.	17.5% ad val.	15% ad val.	13% ad val.	11% ad val.
544.64	30% ad val.	27% ad val.	24% ad val.	21% ad val.	18% ad val.	15% ad val.
545.11	20% ad val.	18% ad val.	16% ad val.	14% ad val.	12% ad val.	10% ad val.
545.17	32% ad val.	28% ad val.	25% ad val.	22% ad val.	19% ad val.	16% ad val.
545.28	2¢ per gross	1.9¢ per gross	1.8¢ per gross	1.6¢ per gross	1.4¢ per gross	1.2¢ per gross



## TARIFF SCHEDULES OF THE UNITED STATES ANNOTATED (1970)

## STAGED RATES AND HISTORICAL NOTES

Notes p. 3  
Schedule 5,  
Part 3Other Amendments and ModificationsPROVISION

540.72--Item 540.72 added. Pub. L. 89-283, Secs. 401(a), 405(d), Oct. 21, 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.

542.11--Column 1 rates of duty for the enumerated items and  
542.13 column 2 rates of duty for items 542.48 and 542.98  
542.21 temporarily increased until Jan. 11, 1967 by former  
542.23 items 923.11, 923.13, 923.21, 923.23, 923.25,  
542.25 923.42, 923.44, 923.46, 923.48, 923.49, 923.57,  
542.37 923.67, 923.92, 923.94, 923.96, 923.98, and 923.99,  
542.42 and by items 923.37 and 923.77.  
542.44  
542.46  
542.48  
542.57  
542.67  
542.77  
542.92  
542.94  
542.96  
542.98

542.75--Article descriptions for items 542.75 and 542.77  
542.77 amended by deleting "90" and inserting "100" in lieu thereof. Pub. L. 89-241, Secs. 2(a), 30, Oct. 7, 1965, 79 Stat. 933, 939, effective date Dec. 7, 1965.

543.11--Column 1 rate of duty of 6.8¢ per sq. ft. reduced to 6¢ per sq. ft. on Jan. 1, 1964. General headnote 3(g).

544.18--Item 544.18 (Canada--free) added. Pub. L. 89-283, Secs. 401(a), 405(d), Oct. 21, 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--60% ad val.) and 544.18 (Canada--free) deleted and  
544.17 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. 3822 (Kennedy Round), Dec. 16, 1967, 32 F.R. 19002, effective date Jan. 1, 1968.

PROVISION

544.31--Article description modified by deleting "544.17" and inserting "544.18" in lieu thereof. Pres. Proc. 3822 (Kennedy Round), Dec. 16, 1967, 32 F.R. 19002, effective date Jan. 1, 1968.

544.32--Items 544.32, 544.42, 544.52, and 544.55 added.  
544.42 Pub. L. 89-283, Secs. 401(a), 405(d),  
544.52 Oct. 21, 1965, 79 Stat. 1021, 1025; entered into  
544.55 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.

545.62--Items 545.62 and 545.64 added. Pub. L. 89-283, Secs. 401(a), 405(d), Oct. 21, 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.

546.40--Items 546.41 (column 1 rate--74% ad val.; column 2 rate--60% ad val.), 546.42 (column 1 rate--22% ad val.; column 2 rate--60% ad val.), 546.43 (column 1 rate--50% ad val.; column 2 rate--60% ad val.), 546.44 (column 1 rate--35% ad val.; column 2 rate--60% ad val.), 546.45 (column 1 rate--22.5% ad val.; column 2 rate--60% ad val.), 546.46 and 546.47 (column 1 rate--30% ad val.; column 2 rate--60% ad val.) and headings immediately preceding items 546.41 and 546.45 deleted and items 546.40, 546.41, 546.42, 546.43, 546.44, 546.45, 546.46, 546.47, 546.48, 546.49, 546.50, 546.51, 546.52, 546.53, 546.54, 546.55, 546.56, 546.57, 546.58, 546.59, 546.60, 546.61, 546.62, 546.63, 546.64, 546.65, 546.66, 546.67, 546.68, 546.69, 546.70, 546.71, 546.72, 546.73, 546.74, 546.75, 546.76, 546.77, 546.78, 546.79, 546.80, 546.81, 546.82, 546.83, 546.84, 546.85, 546.86, 546.87, 546.88, 546.89, 546.90, 546.91, 546.92, 546.93, 546.94, 546.95, 546.96, 546.97, 546.98, 546.99, 547.00, 547.01, 547.02, 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554.53, 554.54, 554.55, 554.56, 554.57, 554.58, 554.59, 554.60, 554.61, 554.62, 554.63, 554.64, 554.65, 554.66, 554.67, 554.68, 554.69, 554.70, 554.71, 554.72, 554.73, 554.74, 554.75, 554.76, 554.77, 554.78, 554.79, 554.80, 554.81, 554.82, 554.83, 554.84, 554.85, 554.86, 554.87, 554.88, 554.89, 554.90, 554.91, 554.92, 554.93, 554.94, 554.95, 554.96, 554.97, 554.98, 554.99, 555.00, 555.01, 555.02, 555.03, 555.04, 555.05, 555.06, 555.07, 555.08, 555.09, 555.10, 555.11, 555.12, 555.13, 555.14, 555.15, 555.16, 555.17, 555.18, 555.19, 555.20, 555.21, 555.22, 555.23, 555.24, 555.25, 555.26, 555.27, 555.28, 555.29, 555.30, 555.31, 555.32, 555.33, 555.34, 555.35, 555.36, 555.37, 555.38, 555.39, 555.40, 555.41, 555.42, 555.43, 555.44, 555.45, 555.46, 555.47, 555.48, 555.49, 555.50, 555.51, 555.52, 555.53, 555.54, 555.55, 555.56, 555.57, 555.58, 555.59, 555.60, 555.61, 555.62, 555.63, 555.64, 555.65, 555.66, 555.67, 555.68, 555.69, 555.70, 555.71, 555.72, 555.73, 555.74, 555.75, 555.76, 555.77, 555.78, 555.79, 555.80, 555.81, 555.82, 555.83, 555.84, 555.85, 555.86, 555.87, 555.88, 555.89, 555.90, 555.91, 555.92, 555.93, 555.94, 555.95, 555.96, 555.97, 555.98, 555.99, 556.00, 556.01, 556.02, 556.03, 556.04, 556.05, 556.06, 556.07, 556.08, 556.09, 556.10, 556.11, 556.12, 556.13, 556.14, 556.15, 556.16, 556.17, 556.18, 556.19, 556.20, 556.21, 556.22, 556.23, 556.24, 556.25, 556.26, 556.27, 556.28, 556.29, 556.30, 556.31, 556.32, 556.33, 556.34, 556.35, 556.36, 556.37, 556.38, 556.39, 556.40, 556.41, 556.42, 556.43, 556.44, 556.45, 556.46, 556.47, 556.48, 556.49, 556.50, 556.51, 556.52, 556.53, 556.54, 556.55, 556.56, 556.57, 556.58, 556.59, 556.60, 556.61, 556.62, 556.63, 556.64, 556.65, 556.66, 556.67, 556.68, 556.69, 556.70, 556.71, 556.72, 556.73, 556.74, 556.75, 556.76, 556.77, 556.78, 556.79, 556.80, 556.81, 556.82, 556.83, 556.84, 556.85, 556.86, 556.87, 556.88, 556.89, 556.90, 556.91, 556.92, 556.93, 556.94, 556.95, 556.96, 556.97, 556.98, 556.99, 557.00, 557.01, 557.02, 557.03, 557.04, 557.05, 557.06, 557.07, 557.08, 557.09, 557.10, 557.11, 557.12, 557.13, 557.14, 557.15, 557.16, 557.17, 557.18, 557.19, 557.20, 557.21, 557.22, 557.23, 557.24, 557.25, 557.26, 557.27, 557.28, 557.29, 557.30, 557.31, 557.32, 557.33, 557.34, 557.35, 557.36, 557.37, 557.38, 557.39, 557.40, 557.41, 557.42, 557.43, 557.44, 557.45, 557.46, 557.47, 557.48, 557.49, 557.50, 557.51, 557.52, 557.53, 557.54, 557.55, 557.56, 557.57, 557.58, 557.59, 557.60, 557.61, 557.62, 557.63, 557.64, 557.65, 557.66, 557.67, 557.68, 557.69, 557.70, 557.71, 557.72, 557.73, 557.74, 557.75, 557.76, 557.77, 557.78, 557.79, 557.80, 557.81, 557.82, 557.83, 557.84, 557.85, 557.86, 557.87, 557.88, 557.89, 557.90, 557.91, 557.92, 557.93, 557.94, 557.95, 557.96, 557.97, 557.98, 557.99, 558.00, 558.01, 558.02, 558.03, 558.04, 558.05, 558.06, 558.07, 558.08, 558.09, 558.10, 558.11, 558.12, 558.13, 558.14, 558.15, 558.16, 558.17, 558.18, 558.19, 558.20, 558.21, 558.22, 558.23, 558.24, 558.25, 558.26, 558.27, 558.28, 558.29, 558.30, 558.31, 558.32, 558.33, 558.34, 558.35, 558.36, 558.37, 558.38, 558.39, 558.40, 558.41, 558.42, 558.43, 558.44, 558.45, 558.46, 558.47, 558.48, 558.49, 558.50, 558.51, 558.52, 558.53, 558.54, 558.55, 558.56, 558.57, 558.58, 558.59, 558.60, 558.61, 558.62, 558.63, 558.64, 558.65, 558.66, 558.67, 558.68, 558.69, 558.70, 558.71, 558.72, 558.73, 558.74, 558.75, 558.76, 558.77, 558.78, 558.79, 558.80, 558.81, 558.82, 558.83, 558.84, 558.85, 558.86, 558.87, 558.88, 558.89, 558.90, 558.91, 558.92, 558.93, 558.94, 558.95, 558.96, 558.97, 558.98, 558.99, 559.00, 559.01, 559.02,

## TARIFF SCHEDULES OF THE UNITED STATES ANNOTATED (1970)

## STAGED RATES AND HISTORICAL NOTES

Notes p. 4  
Schedule 5,  
Part 3

## Statistical Notes

PROVISION	Effective date	PROVISION	Effective date
542.35--		544.42--See Other Amendments and Modifications	
60--Disc.(transferred to 542.3570).....Jan. 1, 1966		00--Etab.(transferred from 544.4100pt).....Dec.20, 1965	
70--Etab.(transferred from 542.3560 & 80)....do		544.52--See Other Amendments and Modifications	
80--Disc.(transferred to 542.3570).....do		00--Etab.(transferred from 544.5100pt).....Dec.20, 1965	
542.37--		544.55--See Other Amendments and Modifications	
60--Disc.(transferred to 542.3770).....Jan. 1, 1966		00--Etab.(transferred from 544.5400pt).....Dec.20, 1965	
70--Etab.(transferred from 542.4240 & 80)....do			
80--Disc.(transferred to 542.3770).....do			
542.42--			
40--Disc.(transferred to 542.4250).....Jan. 1, 1966			
50--Etab.(transferred from 542.4240 & 80)....do			
60--Disc.(transferred to 542.4250).....do			
542.44--			
40--Disc.(transferred to 542.4450).....Jan. 1, 1966			
50--Etab.(transferred from 542.4440 & 80)....do			
60--Disc.(transferred to 542.4450).....do			
542.46--			
40--Disc.(transferred to 542.4650).....Jan. 1, 1966			
50--Etab.(transferred from 542.4640 & 80)....do			
60--Disc.(transferred to 542.4650).....do			
542.48--			
20--Disc.(transferred to 542.4825).....Jan. 1, 1966			
25--Etab.(transferred from 542.4820 & 30)....do			
30--Disc.(transferred to 542.4825).....do			
50--Disc.(transferred to 542.4855).....do			
55--Etab.(transferred from 542.4850 & 80)....do			
60--Disc.(transferred to 542.4855).....do			
542.75--See Other Amendments and Modifications			
542.77--See Other Amendments and Modifications			
543.11--See Other Amendments and Modifications			
543.27--			
20--Disc.(transferred to 543.2730).....Jan. 1, 1966			
30--Etab.(transferred from 543.2720 & 40)....do			
40--Disc.(transferred to 543.2730).....do			
60--Disc.(transferred to 543.2770).....do			
70--Etab.(transferred from 543.2760 & 80)....do			
80--Disc.(transferred to 543.2770).....do			
544.16--See Other Amendments and Modifications			
00--Etab.(transferred from 544.1720).....Jan. 1, 1966			
544.17--See Other Amendments and Modifications			
00--Etab.(transferred from 544.1800pt).....Jan. 1, 1966			
20--Disc.(transferred to 544.1600).....do			
40--Disc.(transferred to 544.1800).....do			
544.18--See Other Amendments and Modifications			
00--Etab.(transferred from 544.1720pt & 40pt).....Dec.20, 1965			
Articles subject to Automotive Products Trade Act (APTA) transferred to 544.1700 & 544.2000; processed glass, n.e.s., transferred from 544.1740.....Jan. 1, 1966			
544.20--See Other Amendments and Modifications			
00--Etab.(transferred from 544.1800pt).....Jan. 1, 1966			
544.31--			
00--Articles subject to APTA transferred to 544.3200.....Dec.20, 1965			
544.32--See Other Amendments and Modifications			
00--Etab.(transferred from 544.3100pt).....Dec.20, 1965			
544.41--			
00--Unit of quantity changed from "Sq. ft." to "X".....Jan. 1, 1964			
Articles subject to APTA transferred to 544.4200.....Dec.20, 1965			

**APPENDIX TO THE TARIFF SCHEDULES**

## APPENDIX TO THE TARIFF SCHEDULES

526

**Part 1 - Temporary Legislation**

- A. Temporary Provisions for Additional Duties
- B. Temporary Provisions Amending the Tariff Schedules

**Part 2 - Temporary Modifications Proclaimed Pursuant to Trade-Agreements Legislation**

- A. Escape-Clause Actions
- B. Temporary Modifications Pursuant to Section 252 of the Trade Expansion Act of 1962

**Part 3 - Additional Import Restrictions Proclaimed Pursuant to Section 22 of the Agricultural Adjustment Act, as Amended**Appendix Headnotes:

1. The provisions of this Appendix relate to legislation and to executive and administrative actions pursuant to duly constituted authority, under which --

- (a) one or more of the provisions in schedules 1 through 8 are temporarily amended or modified, or
- (b) additional duties or other import restrictions are imposed by, or pursuant to, collateral legislation.

2. Unless the context requires otherwise, the general headnotes and rules of interpretation and the respective schedule, part, and subpart headnotes in schedules 1 through 8 apply to the provisions of this Appendix.

Appendix statistical headnotes:

1. For statistical reporting of merchandise provided for herein --

(a) unless more specific instructions appear in the parts or subparts of this appendix, report the 5-digit item number (or 7-digit number, if any) found in the appendix in addition to the 7-digit number appearing in schedules 1-7 which would be applicable but for the provisions of this appendix; and

(b) the quantities reported should be in the units provided in schedules 1-7.

2. For those items herein for which no rate of duty appears (i.e., those items for which an absolute quota is prescribed), report the 5-digit item number herein followed by the appropriate 7-digit reporting number from schedules 1-7. The quantities reported should be in the units provided in schedules 1-7.

## TARIFF SCHEDULES OF THE UNITED STATES ANNOTATED (1970)

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## APPENDIX TO THE TARIFF SCHEDULES

## Part 2. - Temporary Modifications Proclaimed Pursuant to Trade-Agreements Legislation

9 - 2 - A  
922.50 - 923.75

Item	Stat. Suffix	Articles	Units of Quantity	Rates of Duty	
				1	2
		<p><b>PART 2. - TEMPORARY MODIFICATIONS PROCLAIMED PURSUANT TO TRADE-AGREEMENTS LEGISLATION</b></p> <p><u>Part 2 headnote:</u></p> <p>1. This part contains the temporary modifications of the provisions in the tariff schedules proclaimed by the President pursuant to trade-agreements legislation. Unless otherwise stated, the modified provisions are effective until suspended or terminated.</p> <p><b>Subpart A. - Escape-Clause Actions</b></p> <p><u>Subpart A headnote:</u></p> <p>1. This subpart contains the temporary modifications of the provisions of the tariff schedules proclaimed by the President pursuant to the escape-clause procedures prescribed in section 7 of the Trade Agreements Extension Act of 1951, as amended, or in sections 301 and 351 or 352 of the Trade Expansion Act of 1962.</p>			
922.50	00	Woven (including Brussels) and velvet (including tapestry) floor coverings, and floor coverings of like character or description, provided for in item 350.40 of part 54 of schedule 3 all the foregoing other than imitation oriental floor coverings . . . . .	Sq. ft.	40% ad val. 1/	No change
				<b>Rates of Duty</b>	
				<b>1</b>	
				<b>2</b>	
				<b>Effective on or after--</b>	
				Feb. 27, 1970	Jan. 31, 1972
				Jan. 31, 1973 2/	
		Glass (including blown or drawn glass, but excluding cast or rolled glass and excluding pressed or molded glass) (whether or not containing wire netting), in rectangles, not ground, not polished and not otherwise processed, weighing over 16 oz. but not over 28 oz. per sq. ft., provided for in items 542.31-.35, inclusive, and 542.71-.75, inclusive, of part 38 of schedule 5:			
		Ordinary glass:			
		Weighing over 16 oz. but not over 28 oz. per sq. ft.:			
923.31	3/	Measuring not over 40 united inches (item 542.31).....	3/	1.1¢ per lb. + 2.5% ad val.	1¢ per lb. + 2.5% ad val.
923.33	3/	Measuring over 40 but not over 60 united inches (item 542.33).....	3/	1.5¢ per lb. + 2.5% ad val.	1.1¢ per lb. + 2.5% ad val.
923.35	3/	Measuring over 60 but not over 100 united inches (item 542.35).....	3/	1.5¢ per lb. + 2.5% ad val.	1.3¢ per lb. + 2.5% ad val.
		Colored or special glass:			
		Weighing over 16 oz. but not over 28 oz. per sq. ft.:			
923.71	3/	Measuring not over 40 united inches (item 542.71).....	3/	1.1¢ per lb. + 2.5% ad val.	0.9¢ per lb. + 2.5% ad val.
923.73	3/	Measuring over 40 but not over 60 united inches (item 542.73).....	3/	1.5¢ per lb. + 2.5% ad val.	1.1¢ per lb. + 2.5% ad val.
923.75	3/	Measuring over 60 but not over 100 united inches (item 542.75).....	3/	1.5¢ per lb. + 2.5% ad val.	1.3¢ per lb. + 2.5% ad val.
		1/ Rate terminates at the close of Dec. 31, 1974.			
		2/ Effective.			

1/ Rate terminates at the close of Dec. 31, 1974.

2/ Effective period for column 1 rates of duty terminates at the close of Jan. 31, 1974.

3/ See Appendix statistical headnote 1.

(1st supp. 3/1/70)

## HISTORICAL NOTES

Notes p. 1  
Appendix,  
Part 2

## Amendments and Modifications

## PROVISION

Subpt A--Headnote 2 (Lead and Zinc quotas) deleted. Pres. Proc. 3681, Hante 2 Oct. 22, 1965, 3 CFR, 1965 Supp., p. 69, effective dates Oct. 22, 1965 and Nov. 21, 1965.

922.01--Increased column 1 rates of duty provided in items 922.01, 922.02 (10% ad val. + 0.35% ad val. for each number), 922.02, 922.03 (5¢ per lb. + 10% ad val. + 0.35% ad val. for each number), 922.04 (5¢ per lb. + 41.5¢ ad val.), 922.04 (base rate + 3% ad val.), and 922.05 (base rate + 6% ad val.) for cotton typewriter ribbon cloth terminated and items deleted. Pub. L. 87-794, Sec. 351(c)(1)(B), Oct. 11, 1962, 76 Stat. 990, effective date Oct. 17, 1967.

922.50--Effective period for increased column 1 rate of duty extended to the close of Dec. 31, 1969. Pres. Proc. 3815, Oct. 11, 1967, 32 F.R. 14195.

Article description modified by deleting "360.45" and inserting "360.46" in lieu thereof. Pres. Proc. 3822 (Kennedy Round), Dec. 18, 1967, 32 F.R. 19002, effective date Jan. 1, 1968.

① Effective period for increased column 1 rate of duty extended to the close of Dec. 31, 1972, for other than imitation oriental floor coverings. Pres. Proc. 3833, Dec. 31, 1969, 35 F.R. 141.

923.11--Increased column 1 rates of duty provided in items 923.11 (1.3¢ per lb.), 923.13 (1.6¢ per lb.), 923.21 (1.3¢ per lb.), 923.23 (1.6¢ per lb.), and 923.25 (1.9¢ per lb.) for ordinary glass weighing over 4 oz. but not over 16 oz. per sq. ft. terminated and items deleted. Pres. Proc. 3762, Jan. 11, 1967, 32 F.R. 361, effective date Jan. 11, 1967.

923.31--Heading preceding item 923.31 modified. Pres. Proc. 3762, Jan. 11, 1967, 32 F.R. 361, effective date, Jan. 11, 1967.

923.33  
923.35  
923.37  
923.71  
923.73  
923.75  
923.77

923.31--Increased column 1 rates of duty for items 923.31 (1.3¢ per lb.), 923.33 (1.6¢ per lb.), 923.35 (1.9¢ per lb.), and 923.35 (2.4¢ per lb.) reduced to 1.1¢ per lb., 1.5¢ per lb., 1.5¢ per lb., and 1.4¢ per lb., respectively. Pres. Proc. 3762, Jan. 11, 1967, 32 F.R. 361, effective date Jan. 11, 1967.

Effective period for column 1 rates of duty extended to the close of Dec. 31, 1969. Pres. Proc. 3816, Oct. 11, 1967, 32 F.R. 14197.

① Effective period for column 1 rates of duty extended to the close of March 31, 1970. Pres. Proc. 3951, Dec. 24, 1969, 34 F.R. 20381.

① Item 923.37 (column 1 rate--1.4¢ per lb.; column 2 rate--2.8¢ per lb.) deleted; column 1 rates of duty for items 923.31, 923.33, and 923.35 extended to the close of Jan. 30, 1972, and reduced for subsequent periods prior to the close of Jan. 31, 1974. Pres. Proc. 3967, Feb. 27, 1970, 35 F.R. 3975, effective date Feb. 27, 1970.

## PROVISION

923.42--Increased column 1 rates of duty provided in items 923.42 (1.3¢ per lb.), 923.44 (1.6¢ per lb.), 923.46 (1.9¢ per lb.), 923.48 (2.4¢ per lb.), 923.49 (3.5¢ per lb.), 923.57 (2.2¢ per lb.), and 923.67 (9¢ per lb.) for ordinary glass weighing over 28 oz. per sq. ft. and for colored or special glass weighing over 4 oz. but not over 16 oz. per sq. ft. and increased column 2 rate of duty provided in item 923.49 (3.5¢ per lb.) terminated and items deleted. Pres. Proc. 3762, Jan. 11, 1967, 32 F.R. 361, effective date Jan. 11, 1967.

923.71--Increased column 1 rates of duty for items 923.71 (1.3¢ per lb. + 2.5% ad val.) and 923.73 (1.6¢ per lb. + 2.5% ad val.) reduced to 1.1¢ per lb. + 2.5% ad val. and 1.5¢ per lb. + 2.5% ad val., respectively. Pres. Proc. 3762, Jan. 11, 1967, 32 F.R. 361, effective date Jan. 11, 1967.

Effective period for column 1 rates of duty extended to the close of Dec. 31, 1969. Pres. Proc. 3816, Oct. 11, 1967, 32 F.R. 14197.

① Effective period for column 1 rates of duty extended to the close of March 31, 1970. Pres. Proc. 3951, Dec. 24, 1969, 34 F.R. 20381.

① Column 1 rates of duty extended to the close of Jan. 30, 1971 and reduced for subsequent periods prior to the close of Jan. 31, 1974. Pres. Proc. 3967, Feb. 27, 1970, 35 F.R. 3975, effective date Feb. 27, 1970.

923.75--Article descriptions for items 923.75 and 923.77 amended by deleting "90" and inserting "100" in lieu thereof. Pub. L. 89-241, Secs. 2(a), 30, Oct. 7, 1965, 79 Stat. 933, 939, effective date Dec. 7, 1965.

Increased column 1 rates of duty for items 923.75 (1.9¢ per lb. + 2.5% ad val.) and 923.77 (2.4¢ per lb. + 2.5% ad val.) reduced to 1.5¢ per lb. + 2.5% ad val. and 1.4¢ per lb. + 2.5% ad val., respectively. Pres. Proc. 3762, Jan. 11, 1967, 32 F.R. 361, effective date Jan. 11, 1967.

Effective period for column 1 rates of duty extended to close of Dec. 31, 1969. Pres. Proc. 3816, Oct. 11, 1967, 32 F.R. 14197.

① Effective period for column 1 rates of duty extended to the close of March 31, 1970. Pres. Proc. 3951, Dec. 24, 1969, 34 F.R. 20381.

① Item 923.77 (column 1 rate--1.4¢ per lb. + 2.5% ad val.; column 2 rate--2.8¢ per lb. + 5% ad val.) deleted; column 1 rate of duty for item 923.75 extended to the close of Jan. 30, 1972, and reduced for subsequent periods prior to the close of Jan. 31, 1974. Pres. Proc. 3967, Feb. 27, 1970, 35 F.R. 3975, effective date Feb. 27, 1970.

## HISTORICAL NOTES

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Appendix,  
Part 2

## Amendments and Modifications--(con.)

## PROVISION

923.92--Increased column 1 rates of duty provided in items 923.92 (1.5¢ per lb. + 2.5% ad val.), 923.94 (1.6¢ per lb. + 2.5% ad val.), 923.96 (1.9¢ per lb. + 2.5% ad val.), 923.98 (2.4¢ per lb. + 2.5% ad val.), 923.99 (3.5¢ per lb. + 2.5% ad val.), and 924.00 (22.5% ad val.) for colored or special glass weighing over 28 oz. per sq. ft. and for certain other drawn or blown glass and increased column 2 rate of duty provided in item 923.99 (3.5¢ per lb. + 5% ad val.) terminated and items deleted. Pres. Proc. 3762, Jan. 11, 1967, 52 F.R. 361, effective date Jan. 11, 1967.

924.00--See item 924.00 added. Pres. Proc. 3664, Feb. 21, 1970, 35 F.R. 1645, effective date Feb. 21, 1970.

925.01--Absolute quotas provided in items 925.01 and 925.02 for certain lead-bearing ores and materials and zinc-bearing ores and materials terminated and items deleted. Pres. Proc. 3683, Oct. 22, 1965, 3 CFR, 1965 Supp., p. 69, effective date Oct. 22, 1965.

925.03--Absolute quotas provided in items 925.03 and 925.04 for certain unwrought lead, lead waste and scrap, unwrought zinc, and zinc waste and scrap terminated and items deleted. Pres. Proc. 3683, Oct. 22, 1965, 3 CFR, 1965 Supp., p. 69, effective date Nov. 21, 1965.

927.50--Heading preceding item 927.50 modified; items 927.51 (column 1 and 2 rate--3¢ each + 67.5% ad val.) and 927.52 (column 1 and 2 rate--60% ad val.) deleted and items 927.60, 927.61, and 927.62 and heading immediately preceding item 927.60 added in lieu thereof. Pres. Proc. 3693, Jan. 7, 1966, 3 CFR, 1966 Comp., p. 18, effective date Nov. 1, 1965.

927.62--Rates of duty provided in items 927.60 (column 1--3¢ each + 15% ad val.; column 2--3¢ each + 18% ad val. but not less than 2¢ each + 45% ad val.), 927.61 (column 1--3¢ each + 20% ad val.; column 2--3¢ each + 20% ad val. but not less than 2¢ each + 45% ad val.), and 927.62 (column 1--40% ad val.) for certain stainless steel knives, forks, and spoons terminated and aforementioned items and items 927.50, 927.51, and 927.52 deleted. Pub. L. 87-794, Sec. 351(c)(1)(B), Oct. 11, 1963, 78 Stat. 900, effective date Oct. 12, 1967.

930.00--Increased column 1 rate of duty provided in item 930.00 (85% ad val.) for clinical thermometers terminated and item deleted. Pres. Proc. 3696, Jan. 7, 1966, 3 CFR, 1966 Comp., p. 16, effective date Jan. 7, 1966.

## PROVISION

932.10--Increased column 1 rates of duty provided in items 932.11 (\$1.35 each), 932.12 (\$1.125 each), 932.13 (\$1.05 each), 932.14 (93¢ each), 932.15 (84¢ each), 932.16 (75¢ each), 932.20 (\$2.50 each), 932.21 (\$3.025 each), 932.22 (\$1.60 each), 932.23 (\$1.75 each), 932.24 (\$1.55 each), 932.25 (\$1.35 each), 932.26 (\$1.25 each), 932.30 (\$4.50 each + 13.5¢ for each jewel over 7), 932.31 (\$2.025 each + 13.5¢ for each jewel over 7), 932.32 (\$2.00 each + 13.5¢ for each jewel over 7), 932.33 (\$1.75 each + 13.5¢ for each jewel over 7), 932.34 (\$1.55 each + 13.5¢ for each jewel over 7), 932.35 (\$1.25 each + 13.5¢ for each jewel over 7), 932.36 (column 1 base rate + 75¢ each), and 932.37 (column 1 base rate + 15¢ each + 50¢ for each adjustment) for certain watch movements terminated and aforementioned items and item 932.38 deleted. Pres. Proc. 3761, Jan. 11, 1967, 32 F.R. 267, effective date Jan. 11, 1967.

932.35  
932.36  
932.37  
932.38

943.10--Increased column 1 rate of duty provided in item 943.10 (35% ad val.) for safety pins terminated and item deleted. Pres. Proc. 3703, Jan. 28, 1966, 3 CFR, 1966 Comp., p. 25, effective date Jan. 28, 1966.

945.13--Item 945.13 added. Pres. Proc. 3564, Dec. 4, 1963, 3 CFR, 1959-1963 Comp., p. 318, effective date Jan. 7, 1964.

945.16--Item 945.16 added. Pres. Proc. 3564, Dec. 4, 1963, 3 CFR, 1959-1963 Comp., p. 318, effective date Jan. 7, 1964.

Article description modified by deleting "brandy, valued over \$9.00 per gallon (provided for in items 168.20 and 168.21)" and inserting "brandy provided for in items 168.20 and 168.21" in lieu thereof. Pres. Proc. 3827 (Kennedy Round), Dec. 16, 1967, 32 F.R. 19002, effective date Jan. 1, 1968.

945.49--Item 945.49 added. Pres. Proc. 3564, Dec. 4, 1963, 3 CFR, 1959-1963 Comp., p. 318, effective date Jan. 7, 1964.

945.69--Item 945.69 added. Pres. Proc. 3564, Dec. 4, 1963, 3 CFR, 1959-1963 Comp., p. 318, effective date Jan. 7, 1964.

Article description modified by deleting "692.05" and inserting "692.02" in lieu thereof. Pres. Proc. 3822 (Kennedy Round), Dec. 16, 1967, 32 F.R. 19002, effective date Jan. 1, 1968.





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 three  
principal suppliers, 1969

Value of U.S. imports for consumption, by TSUS items included in the individual summaries of this volume, total and from the three principal suppliers, 1969

(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 :	All :	First :	Second :	Third :
title :	countries :	supplier :	supplier :	supplier :
and :	Amount :	Percent :	Country :	Country :
page; :	in :	change :	Value :	Value :
TSUS :	1969 :	from :	Country :	Country :
item :	1968 :	Country :	Value :	Value :

Glass blocks, bricks, and tile (p. 3)

540.47 : 46 : +63.4 : West Germany : 34 : Italy : 9 : Portugal : 2

Glass mosaic tile (p. 7)

540.51 : 229 : -5.1 : Italy : 211 : Mexico : 15 : Japan : 1

Foam glass (p. 11)

540.55 : 13 : +285.7 : Netherlands : 13 : - : - : - : -

Nontextile glass fibers (p. 15)

540.71 : 692 : +59.7 : Canada : 316 : Switzerland : 108 : Belgium : 75

540.72 : - : - : - : - : - : - : - : -

Ribbon glass (p. 25)

541.01 : 462 : +14.9 : West Germany : 417 : U. Kingdom : 25 : Japan : 20

Rolled glass and polished wire glass (p. 29)

541.11 : 2,586 : -23.3 : Japan : 822 : Belgium : 644 : U. Kingdom : 401

541.21 : 66 : +46.3 : West Germany : 25 : Belgium : 8 : France : 6

541.31 : 946 : +4.9 : West Germany : 520 : Belgium : 414 : Italy : 8

543.11 : 2,107 : +9.1 : Japan : 1,358 : U. Kingdom : 688 : Netherlands : 38

Drawn or blown flat glass (sheet glass) (p. 41)

542.11 : 807 : +18.1 : West Germany : 590 : Belgium : 186 : Switzerland : 29

542.13 : 8 : -2.8 : Belgium : 6 : West Germany : 2 : - : -

542.21 : 1,125 : +2.2 : West Germany : 522 : Belgium : 304 : Japan : 128

542.23 : 96 : -27.1 : West Germany : 22 : Israel : 18 : Rumania : 17

542.25 : 10 : -75.4 : Rumania : 5 : Czecho. : 2 : Japan : 2

542.31 : 4,509 : -7.9 : U. Kingdom : 1,150 : Italy : 597 : West Germany : 553

542.33 : 7,241 : -19.6 : West Germany : 1,090 : Italy : 963 : Belgium : 887

542.35 : 6,106 : -24.2 : Japan : 1,114 : Belgium : 961 : Italy : 800

542.37 : 1,899 : -2.2 : Japan : 535 : Taiwan : 274 : Italy : 258

542.42 : 1,547 : -14.3 : U. Kingdom : 437 : Belgium : 368 : West Germany : 280

542.44 : 1,576 : -5.5 : Belgium : 843 : West Germany : 280 : Canada : 180

542.46 : 1,643 : +.7 : Belgium : 838 : West Germany : 231 : Canada : 166

542.48 : 9,114 : -4.7 : Belgium : 2,817 : West Germany : 1,538 : Japan : 1,093

542.57 : 317 : -28.5 : France : 193 : West Germany : 118 : Belgium : 6

542.67 : 41 : +363.7 : France : 28 : West Germany : 11 : Japan : 2

542.71 : 358 : +46.7 : West Germany : 177 : France : 122 : U. Kingdom : 52

542.73 : 161 : -30.4 : West Germany : 65 : Belgium : 60 : France : 35

542.75 : 74 : +40.6 : West Germany : 32 : Belgium : 19 : France : 15

542.77 : 62 : -6.8 : West Germany : 37 : Belgium : 17 : France : 4

542.92 : 298 : +3.9 : Belgium : 275 : France : 16 : U. Kingdom : 4

542.94 : 1,118 : -12.3 : Belgium : 1,075 : West Germany : 38 : Japan : 4

542.96 : 694 : -16.0 : Belgium : 666 : Canada : 18 : Japan : 8

542.98 : 674 : +74.4 : Belgium : 501 : Japan : 154 : West Germany : 8

: : : : : : : : :

Value of U.S. imports for consumption, by TSUS items included in the individual summaries of this volume, total and from the three principal suppliers, 1969

(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 :	All	:	First	:	Second	:	Third
title :	countries	:	supplier	:	supplier	:	supplier
and :	Amount	:	Percent	:	:	:	:
page; :	in	:	change	:	:	:	:
TSUS :	1969	:	from	:	Country	:	Value
item :	:	:	1968	:	:	:	:

Plate glass and float glass (p. 57)

543.21 :	293 :	-18.6 :	Japan	:	187 :	France	:	34 :	Sweden	:	30
543.23 :	861 :	+60.4 :	Japan	:	375 :	France	:	315 :	U. Kingdom	:	146
543.27 :	19,645 :	-10.5 :	Japan	:	8,641 :	Belgium	:	3,696 :	France	:	2,870
543.31 :	187 :	-33.1 :	U. Kingdom	:	86 :	Belgium	:	67 :	Japan	:	60
543.61 :	92 :	+8.9 :	West Germany	:	51 :	Japan	:	21 :	France	:	14
543.63 :	13 :	-98.1 :	West Germany	:	8 :	France	:	4 :	Belgium	:	1
543.67 :	3,775 :	-36.1 :	Belgium	:	2,600 :	West Germany	:	804 :	Japan	:	336
543.69 :	40 :	+16.1 :	Belgium	:	18 :	West Germany	:	14 :	U. Kingdom	:	6

Edged glass strips (p. 69)

544.11 :	824 :	+12.2 :	Taiwan	:	349 :	Australia	:	190 :	Poland	:	132
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Processed flat glass (p. 73)

544.14 :	1,328 :	+108.9 :	Belgium	:	645 :	West Germany	:	435 :	Portugal	:	184
544.16 :	1,581 :	+42.8 :	Belgium	:	606 :	Japan	:	331 :	West Germany	:	292
544.17 :	- :	- :	-	:	- :	-	:	- :	-	:	-
544.18 :	567 :	-15.2 :	Belgium	:	233 :	Japan	:	143 :	West Germany	:	49
544.20 :	2 :	- :	Canada	:	2 :	-	:	- :	-	:	-

Tempered flat glass (p. 83)

544.31 :	4,220 :	+13.7 :	Japan	:	1,403 :	Belgium	:	635 :	West Germany	:	499
544.32 :	12,998 :	+81.6 :	Canada	:	12,998 :	-	:	- :	-	:	-

Laminated glass (p. 93)

544.41 :	3,684 :	+59.4 :	West Germany	:	2,403 :	Japan	:	594 :	U. Kingdom	:	255
544.42 :	2,782 :	+35.6 :	Canada	:	2,782 :	-	:	- :	-	:	-

Glass mirrors (p. 103)

544.51 :	6,736 :	+70.3 :	Japan	:	4,461 :	West Germany	:	780 :	Hong Kong	:	724
544.52 :	2,128 :	+991.7 :	Canada	:	2,128 :	-	:	- :	-	:	-
544.54 :	1,151 :	+48.7 :	Belgium	:	393 :	Italy	:	137 :	Australia	:	135
544.55 :	3 :	+19.0 :	Canada	:	3 :	-	:	- :	-	:	-

Multiple-glazed glass units (p. 115)

544.61 :	10 :	+75.6 :	Canada	:	4 :	Sweden	:	6 :	-	:	-
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Stained glass windows (p. 123)

544.64 :	55 :	-29.2 :	Italy	:	13 :	Spain	:	10 :	Netherlands	:	9
:	:	:	:	:	:	:	:	:	:	:	:
:	:	:	:	:	:	:	:	:	:	:	:

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

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1	10	Beverages
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1	13	Hides, Skins, Leather, Feathers, and Miscellaneous Articles of Animal Origin
1	14	Edible Preparations, Natural Resins, and Miscellaneous Articles of Vegetable Origin
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2	2	Wood and Related Products II
2	3	Paper and Related Products I
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3	2	Fibers, Yarns, Waste, and Intermediate Products of Silk, Manmade Fiber, Metalized, Paper, Certain Hair, and Yarns, N. S. P. F.
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3	4	Felts, Batting, Nonwoven Fabrics, Fish Nets, Machinery Belts and Clothing, Hose, Coated Fabrics, and Other Fabrics for Special Purposes
3	5	Textile Furnishings and Apparel
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