

UNITED STATES TARIFF COMMISSION

**SHEET GLASS
(BLOWN OR DRAWN FLAT GLASS)**

**Report to the President (No. TEA-IR-7-68)
Under Section 351(d)(1) of the
Trade Expansion Act of 1962**



TC Publication 262

**Washington, D. C.
September 1968**

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REPORT TO THE PRESIDENT

U.S. Tariff Commission,
Sept. 9, 1968

To the President:

This report is made pursuant to section 351(d)(1) of the Trade Expansion Act of 1962 (76 Stat. 900), which provides that--

So long as any increase in, or imposition of, any duty or other import restriction pursuant to this section or pursuant to section 7 of the Trade Agreements Extension Act of 1951 remains in effect, the Tariff Commission shall keep under review developments with respect to the industry concerned, and shall make annual reports to the President concerning such developments.

Introduction

Pursuant to various concessions granted in the General Agreement on Tariffs and Trade, the United States reduced the rates of duty applicable to sheet glass in 1948, 1951, and 1956-58. ^{1/} Following a Tariff Commission investigation under the escape-clause procedure of the Trade Agreements Extension Act of 1951, the President modified the concessions on such glass by increasing the rates of duty, effective at the close of business June 17, 1962. On January 11, 1967, the President, pursuant to the provisions of section 351(c)(1)(A) of the Trade Expansion Act of 1962, terminated some of the aforementioned increases in the rates that had been imposed under the escape-clause procedure and reduced others. The latter rates (i.e., the modified escape-action rates) were scheduled to

^{1/} Since 1951, concession rates have not applied to imports from countries or areas designated by the President as Communist controlled.

terminate at the close of October 11, 1967, unless extended by the President. Following a report made by the Tariff Commission on September 8, 1967, ^{1/} the President extended, until the close of December 31, 1969, all rates of duty on sheet glass that were higher than the trade-agreement rates.

For the purpose of this report, sheet glass is discussed under three general categories--thin sheet glass, window glass, and heavy sheet glass--which, on a weight basis, are designated as follows:

<u>Category</u>	<u>Weight per square foot</u>
Thin sheet-----	Not over 16 ounces
Window glass-----	Over 16, not over 28 ounces
Heavy sheet-----	Over 28 ounces

Window glass measuring 100 united inches (length plus width) or less is currently dutiable at rates significantly higher than the trade-agreement rates. Window glass measuring over 100 united inches, all thin sheet glass, and all heavy sheet glass are dutiable at the trade-agreement rates (table 1). The modified escape-action rates of duty currently applicable to imports of window glass, as well as the trade-agreement rates scheduled to become effective at the close of December 31, 1969, and the ad valorem equivalents of those rates, based on 1967 imports, are as follows:

^{1/} U.S. Tariff Commission, Sheet Glass (Blown or Drawn Flat Glass): Report to the President on Investigation No. TEA-I-EX-4 Under Section 351(d)(3) of the Trade Expansion Act of 1962, TC Publication 215, 1967 (processed).

Description	Rates of duty		Average ad valorem equivalent	
	Modified escape-action rate	Trade-agreement rate	Modified escape-action rate	Trade-agreement rate
			Percent	Percent
Window glass measuring in united inches--				
Not over 40:				
Ordinary-----	1.1¢ per lb.	0.7¢ per lb.	19.3	12.3
Colored or special-----	1.1¢ per lb.	0.7¢ per lb.	3.9	3.4
	+ 2.5% ad val.	+ 2.5% ad val.		
Over 40 but not over 60:				
Ordinary-----	1.5¢ per lb.	0.9¢ per lb.	25.7	15.4
Colored or special-----	1.5¢ per lb.	0.9¢ per lb.	6.7	5.0
	+ 2.5% ad val.	+ 2.5% ad val.		
Over 60 but not over 100:				
Ordinary-----	1.5¢ per lb.	1.1¢ per lb.	21.1	15.4
Colored or special-----	1.5¢ per lb.	1.1¢ per lb.	8.6	7.0
	+ 2.5% ad val.	+ 2.5% ad val.		

For window glass measuring not over 40 united inches, the current (modified escape-action) rate reflects a duty reduction of 15 percent below the escape-action rate effective before January 11, 1967; for window glass measuring over 40 but not over 60 united inches, 6 percent; and for that measuring over 60 but not over 100 united inches, 21 percent. Reductions from the current rates amounting to 36, 40, and 27 percent, respectively, will occur when the modified escape-action rates expire on December 31, 1969.

Inasmuch as increased rates of duty remain in effect for a particular category of sheet glass, the Commission is required, under the provisions of section 351(d)(1) of the Trade Expansion Act of 1962, to make an annual report on developments with respect to the sheet glass industry. This report presents data for all sheet glass as well as for the three categories of such glass; it is confined principally to developments that have occurred since those described in the Commission's report of September 8, 1967.

U.S. Consumption

The apparent U.S. consumption of sheet glass was 7.5 percent lower in 1967 than in 1966, marking the third consecutive year that such consumption had declined (table 3). The apparent consumption of window glass, ^{1/} was slightly higher (1 percent) in 1967 than in 1966, but that of thin and heavy sheet glass was lower by 46 and 16 percent, respectively (table 5). The reduced consumption of sheet glass in 1967 is attributable primarily to a decline in automobile production and a sluggishness in residential construction--the principal markets for sheet glass (table 4).

^{1/} Data on U.S. consumption, production, and shipments of window glass include such glass measuring over 100 united inches because data thereon cannot be segregated in the statistics obtained from the U.S. producers. Window glass measuring over 100 united inches constitutes only a small portion of total U.S. consumption, production, and shipments of such glass.

In 1966 window glass made up about 60 percent, thin glass about 4 percent, and heavy glass about 36 percent of the apparent U.S. consumption. Corresponding ratios for 1967 were 65, 2, and 33 percent, respectively, reflecting the increased importance of window glass in the U.S. sheet glass market in 1967.

Preliminary data for January-June 1968 indicate that the apparent U.S. consumption of all sheet glass, as well as that of window glass, was higher than that in the comparable period in 1967.

U.S. Producers

In 1967, 6 firms produced sheet glass in 14 plants in the United States, including a new plant on the West Coast which began operations early in that year. Early in 1968 one of the plants located in Pennsylvania was shut down. On June 30, 1968, 4 establishments were producing sheet glass in West Virginia, 2 in Oklahoma, and 1 each in Pennsylvania, Louisiana, Arkansas, Ohio, Illinois, California, and Tennessee.

The 6 firms were operating 27 glass furnaces (or tanks) with attached glass-drawing machines in June 1968. Not all of the drawing machines in operation at this time, however, drew glass for sale to the trade; some were used to draw glass for experimental purposes.

About 10 percent of productive capacity was idled by furnace shutdowns for repair or modifications in 1967 and the first half of 1968. The U.S. sheet glass industry continued to modify production facilities

in order to increase productivity, lower costs, and improve product quality. The principal modifications consisted of increased automation in the cutting and handling of cut sheet glass but other phases of the production process were also improved.

U.S. productive capacity as of June 1968 was about 5 percent greater than that at the end of 1966, principally because of the addition of a new production facility on the West Coast.

U.S. Production, Shipments, and Inventories

U.S. production in 1967 was lower than in any year since 1961 and U.S. shipments were lower than in any year since 1958. U.S. production and shipments of sheet glass were lower in 1967 than in 1966 by 7 and 10 percent, respectively (tables 6 and 3). Preliminary data indicate that both production and shipments in January-June 1968 were about 9 percent greater than those in the comparable period of 1967.

U.S. producers' shipments of window glass were about 3 percent lower in 1967 than in 1966, even though U.S. consumption of such glass was slightly higher in 1967. In 1967, however, window glass constituted 68 percent of total U.S. shipments of sheet glass, as compared with 63 percent in 1966. Preliminary data for the first half of 1968 indicate that U.S. shipments of window glass were 7 percent higher than those in the first half of 1967.

U.S. shipments of thin sheet and heavy sheet glass were lower by 24 and 22 percent, respectively, in 1967 than in 1966; they were about 14 percent larger in the first half of 1968 than in the corresponding period of 1967.

The U.S. producers' share of the market for all sheet glass decreased from 75 percent in 1966 to 73 percent in 1967, whereas their share of the market for window glass decreased from 78 percent to 73 percent. For all sheet glass this development reflected a decline of 10 percent in U.S. producers' shipments and a decline of less than 1 percent in imports; for window glass there was a 3 percent decrease in U.S. producers' shipments and a 12 percent increase in imports. U.S. producers' share of the total sheet glass market and the window glass market was smaller by 9 and 10 percent, respectively, in the first half of 1968 than in the corresponding period of 1967.

Inventories of all sheet glass ^{1/} at the end of 1967 were about 9 percent below those at the end of 1966 and were equivalent to about 10 percent of U.S. production in 1967 (table 6). Inventories were 3 percent lower at the end of June 1968 than at the end of June 1967.

Employment

Establishments engaged in the production of sheet glass employed an average of 9,783 workers in 1967, of which 7,989 were production and related workers (table 7). Man-hours on sheet glass accounted for

^{1/} Includes only inventories of glass inspected for defects and cut to the size in which it is intended to be sold; does not include inventories of glass intended to be recut before shipment.

approximately three-fourths of the total man-hours worked by all production and related workers in the establishments.

The number of workers and the man-hours worked on sheet glass, as well as those on other products, declined from 1965 to 1966, and decreased further in 1967. Man-hours on sheet glass were 3 percent lower in 1967 than in 1966; the decline in man-hours was not as great as the decline (7 percent) in production.

U.S. Exports

U.S. exports of sheet glass (mostly window glass) totaled 10.7 million pounds in 1967, when they were 1.7 million pounds greater than in 1966 (table 3). In 1967, exports were equal to slightly less than 1 percent of shipments by the U.S. producers. Exports in the first half of 1968 were 23 percent below those for the comparable period in 1967.

U.S. Imports

U.S. imports of sheet glass in 1967 were less than 1 percent below those in 1966; a 12 percent increase in imports of window glass was accompanied by a sharp decline (58 percent) in imports of thin sheet glass (table 9). A 1 percent decline in imports dutiable at most-favored-nation (MFN) tariff rates was accompanied by a 10 percent increase in imports dutiable at full rates (applicable to countries designated as Communist). The share of the U.S. market for window glass and for all sheet glass supplied by imports increased by 22 and 8 percent, respectively, in 1967.

Preliminary data indicate that imports in January-June 1968 were 52 percent greater than those in the comparable period of 1967 (table 8). In January-June 1968, imports supplied 31 percent of the U.S. window glass market and 33 percent of the total U.S. sheet glass market compared with 23 and 26 percent, respectively, for the corresponding period in 1967.

In 1967 imports of window glass, ^{1/} which constituted more than half of sheet-glass imports, were 10 percent greater than in 1966 (table 10), notwithstanding that U.S. consumption in that year increased by only 1 percent. In 1967 imports of window glass at MFN rates of duty (85 percent of window glass imports in that year) were greater by 7 percent than in 1966, while those at the full rates were 31 percent greater.

Imports of window glass ^{1/} in the first 6 months of 1968 increased sharply over those of the corresponding period in 1967 (table 10); such imports at MFN rates were 56 percent higher than in the comparable period of 1967; those at full rates were 10 percent higher.

The principal suppliers of both imported sheet glass and window glass in 1967 were Belgium, West Germany, Japan, the United Kingdom, and the Republic of China (formerly Taiwan) (table 8).

The Republic of China, which has supplied about 2.4 percent of the U.S. annual imports of sheet glass in recent years, increased its share to 7 percent in 1967 and to 8 percent in the first 6 months of 1968. In 1967, imports of all sheet glass were 132 percent greater than in 1966; imports of window glass ^{1/} were 71 percent above those in 1966. In the first half of 1968, imports of all sheet glass and window glass ^{1/} were

^{1/} Glass dutiable at modified escape-action rates.

120 and 70 percent, respectively, greater than those of the corresponding period of 1967. Most of the sheet glass imported from the Republic of China consists of heavy sheet glass and window glass.

Prices

In July 1967 the domestic producers announced a price increase of 7-1/2 percent on window glass and thin sheet glass packed in 50-foot and 100-foot boxes. Sales agents of the principal foreign suppliers subsequently announced comparable increases.

On November 30, 1967, the leading U.S. producers of sheet glass announced a 6 percent price increase on thin, window, and heavy sheet glass to become effective on December 4, 1967. Similar increases were later announced by most domestic producers and the agents of the principal foreign suppliers. On December 18, 1967, however, the principal U.S. producer withdrew the 6 percent price increase until March 1, 1968; most of the other U.S. producers followed suit. The response by the agents of foreign producers varied, but by May 1, 1968 the prices of both domestic and imported sheet glass had been increased by 6 percent. Table 11 shows delivered prices of representative sizes of domestic and West European sheet glass to direct-factory buyers in New York on selected dates during the period 1960-68.

Subsequently, the leading U.S. producer announced, effective June 11, 1968, a 15 percent discount applicable to window glass and other clear sheet glass shipped from its new California plant to destinations in that State and in Oregon and Washington.

Tabular Appendix

Table 1.--Sheet glass weighing over 4 ounces per square foot: U.S. rates of duty provided in the Tariff Schedules of the United States (TSUS) ^{1/}

(In cents per pound and percent ad valorem)							
TSUS item	Article	Appendix item ^{2/}	Statutory rate ^{3/}	Trade-agreement rate ^{4/}	Escape-action rate ^{5/}	Currently applicable rate ^{6/}	
	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 4 oz. per sq. ft., provided for in TSUS items 542.11-.98, inclusive:						
	Ordinary glass:						
	Weighing over 4 oz. but not over 12 oz. per sq. ft.:						
542.11	Measuring not over 40 united inches-----		1.5¢	0.7¢	1.3¢	0.7¢	
542.13	Measuring over 40 united inches-----		1.9¢	.9¢	1.6¢	.9¢	
	Weighing over 12 oz. but not over 16 oz. per sq. ft.:						
542.21	Measuring not over 40 united inches-----		2.1¢	1.0¢	1.3¢	1.0¢	
542.23	Measuring over 40 but not over 60 united inches-----		2.4¢	1.1¢	1.6¢	1.1¢	
542.25	Measuring over 60 united inches-----		2.5¢	1.2¢	1.9¢	1.2¢	
	Weighing over 16 oz. but not over 28 oz. per sq. ft.:						
542.31	Measuring not over 40 united inches-----	923.31	1.5¢	.7¢	1.3¢	1.1¢	
542.33	Measuring over 40 but not over 60 united inches-----	923.33	1.9¢	.9¢	1.6¢	1.5¢	
542.35	Measuring over 60 but not over 100 united inches-----	923.35	2.4¢	1.1¢	1.9¢	1.5¢	
542.37	Measuring over 100 united inches-----	923.37	2.8¢	1.4¢	2.4¢	1.4¢	
	Weighing over 28 oz. per sq. ft.:						
542.42	Not over 2-2/3 sq. ft. in area-----		1.5¢	.7¢	1.3¢	.7¢	
542.44	Over 2-2/3 but not over 7 sq. ft. in area-----		1.9¢	.9¢	1.6¢	.9¢	
542.46	Over 7 but not over 15 sq. ft. in area-----		2.4¢	1.1¢	1.9¢	1.1¢	
542.48	Over 15 sq. ft. in area-----		2.8¢	1.4¢	2.4¢ or 3.5¢ ^{7/}	1.4¢	
	Colored or special glass:						
542.57	Weighing over 4 oz. but not over 12 oz. per sq. ft.:						
542.67	Weighing over 12 oz. but not over 16 oz. per sq. ft.:		4.0¢	1.7¢	2.2¢	1.7¢	
	Weighing over 16 oz. but not over 28 oz. per sq. ft.:		13.0¢	6.0¢	9.0¢	6.0¢	
542.71	Measuring not over 40 united inches-----	923.71	1.5¢ + 5%	0.7¢ + 2.5%	1.3¢ + 2.5%	1.1¢ + 2.5%	
542.73	Measuring over 40 but not over 60 united inches-----	923.73	1.9¢ + 5%	0.9¢ + 2.5%	1.6¢ + 2.5%	1.5¢ + 2.5%	
542.75	Measuring over 60 but not over 100 united inches-----	923.75	2.4¢ + 5%	1.1¢ + 2.5%	1.9¢ + 2.5%	1.5¢ + 2.5%	
542.77	Measuring over 100 united inches-----	923.77	2.8¢ + 5%	1.4¢ + 2.5%	2.4¢ + 2.5%	1.4¢ + 2.5%	
	Weighing over 28 oz. per sq. ft.:						
542.92	Not over 2-2/3 sq. ft. in area-----		1.5¢ + 5%	0.7¢ + 2.5%	1.3¢ + 2.5%	0.7¢ + 2.5%	
542.94	Over 2-2/3 but not over 7 sq. ft. in area-----		1.9¢ + 5%	0.9¢ + 2.5%	1.6¢ + 2.5%	0.9¢ + 2.5%	
542.96	Over 7 but not over 15 sq. ft. in area-----		2.4¢ + 5%	1.1¢ + 2.5%	1.9¢ + 2.5%	1.1¢ + 2.5%	
542.98	Over 15 sq. ft. in area-----		2.8¢ + 5%	1.4¢ + 2.5%	2.4¢ + 2.5%	1.4¢ + 2.5%	
					or 3.5¢ + 2.5% ^{7/}		
544.16	Glass, cut to other than rectangular shape, and glass, whether in rectangles or cut to other than rectangular shape, subjected to processing, all the foregoing glass provided for in TSUS item 544.16 if drawn or blown and not containing wire netting and not surface ground or polished-----		60%	15%	22.5%	15%	

^{1/} The rates of duty originally provided in the TSUS and the TSUS appendix were placed in effect Aug. 31, 1963, by Presidential Proclamation No. 3548.

^{2/} The rates of duty currently applicable to glass as the result of escape-clause action are set forth in these items of the TSUS appendix.

^{3/} Rates of duty currently applied to the products of countries or areas designated as Communist dominated or controlled.

^{4/} The most recent rates of duty placed in effect as a result of concessions granted under the General Agreement on Tariffs and Trade, as modified by proclamation of the TSUS. These rates were temporarily suspended on June 17, 1962.

^{5/} Rates of duty placed in effect June 17, 1962, by Presidential Proclamation No. 3455 under the escape-clause procedure, as modified by proclamation of the TSUS. These rates were superseded by the rates which were placed in effect by Presidential Proclamation No. 3762 on January 11, 1967.

^{6/} Rates of duty placed in effect on January 11, 1967 by Presidential Proclamation No. 3762 of that date. The rates of duty applicable to TSUS appendix items 923.31, 923.33, 923.35, 923.71, 923.73, and 923.75 are higher than the trade-agreement rates and are therefore temporary. Presidential Proclamation 3816, dated October 11, 1967, extended the time period for the increased rates of duty to the close of December 31, 1969. The rates applicable to all other TSUS items are the trade-agreement rates.

^{7/} The escape-action rate on sheet glass weighing over 28 ounces per square foot and measuring over 15 but not over 16-2/3 sq. ft. in area was 2.4¢ per lb. (plus 2.5% ad valorem if colored or special); that on sheet glass weighing over 28 oz. per sq. ft. and measuring over 16-2/3 sq. ft. in area was 3.5¢ per lb. (plus 2.5% ad valorem if colored or special).

of duty imposed on ordinary and colored or special sheet glass ^{1/} entitled to most-favored-nation tariff treatment imported during 1963-67, and January-June 1968

Description	Average ad valorem equivalents					Jan. - June 1968 ^{3/}	
	1963	1964	1965	1966	1967 ^{2/}	Percent	Percent
Sheet glass weighing not over 16 ounces per square foot and measuring in united inches--							
Not over 40	12.4	15.2	15.4	13.5	7.5	7.2	7.2
Over 40 but not over 60	28.2	25.2	27.9	27.9	15.5	15.7	15.7
Over 60	33.1	28.9	30.3	29.3	17.2	11.7	11.7
Sheet glass weighing over 16 ounces but not over 28 ounces per square foot and measuring in united inches--							
Not over 40	23.4	21.6	21.7	22.0	17.9	18.2	18.2
Over 40 but not over 60	27.7	26.4	28.2	23.7	24.7	24.9	24.9
Over 60 but not over 100	29.1	27.0	28.3	28.7	20.8	20.9	20.9
Over 100	32.0	30.6	33.5	33.8	18.1	18.2	18.2
Sheet glass weighing over 28 ounces per square foot and measuring in square feet--							
Not over 2-2/3	25.2	22.9	23.2	22.7	12.5	11.5	11.5
Over 2-2/3 but not over 7	25.4	25.1	26.4	27.3	12.3	11.1	11.1
Over 7 but not over 15	27.9	27.0	29.8	30.3	14.1	14.0	14.0
Over 15	56.9	53.6	59.4	57.6	18.1	17.2	17.2

^{1/} The ad valorem equivalents shown here do not include the 2 1/2 percent ad valorem additional rate of duty applicable to imports of colored or special sheet glass.

^{2/} The TSUS nomenclature for sheet glass which was placed in effect on Aug. 31, 1963, differs somewhat from the nomenclature provided in the Tariff Act of 1930. The ad valorem equivalents for the periods prior to Aug. 31, 1963, are therefore partially estimated.

^{3/} Based on the modified escape-action rates which became effective on Jan. 11, 1967.

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

Table 3.--Sheet glass: Shipments by U.S. producers, U.S. exports of domestic merchandise, U.S. imports for consumption, and apparent U.S. consumption, annual 1959-67 and January-June 1967 and 1968

Item	1959	1960	1961	1962	1963	1964	1965	1966	1967	Jan.- June 1967	Jan.- June 1968
Quantity (million pounds)											
Shipments by U.S. producers	1,580.0	1,265.7	1,273.8	1,443.2	1,556.0	1,530.0	1,532.1	1,383.4	1,248.3	565.8	616.3
U.S. exports ^{1/}	3.2	4.3	3.0	3.5	3.9	4.2	4.0	9.0	10.7	6.2	4.8
U.S. imports for consumption:											
At most-favored-nation rates	491.4	391.3	350.0	435.0	376.3	446.3	389.3	425.0	419.2	178.4	279.1
At full rates of duty	15.6	19.2	25.4	35.6	17.5	32.3	38.4	40.4	44.5	17.2	18.4
Total (all rates of duty)	507.0	410.5	375.4	470.6	393.8	478.6	427.7	465.4	463.7	195.6	297.5
Apparent U.S. consumption	2,083.8	1,671.9	1,646.2	1,910.3	1,945.9	2,004.4	1,955.8	1,839.8	1,701.3	755.2	909.0
Percent of U.S. consumption											
Share supplied by--											
Shipments ^{3/} by U.S. producers	75.7	75.4	77.2	75.4	79.8	76.1	78.1	74.7	72.7	74.1	67.3
U.S. imports for consumption:											
At most-favored-nation rates	23.6	23.4	21.3	22.8	19.3	22.3	19.9	23.1	24.7	23.6	30.7
At full rates of duty	.7	1.2	1.5	1.8	.9	1.6	2.0	2.2	2.6	2.3	2.0
Total (all rates of duty)	24.3	24.6	22.8	24.6	20.2	23.9	21.9	25.3	27.3	25.9	32.7

^{1/} Official statistics are reported in square feet and have been converted to pounds at the ratio of 1 sq. ft.=1.16 pounds. Data for 1961-64 do not include colored glass; it is believed, however, that exports of colored glass were small.

^{2/} Includes imported float glass, Jan. 1, 1960 through Aug. 31, 1963; the quantity of float glass imported was very small compared with that of total imports of sheet glass.

^{3/} Less exports.

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

Table 4.--Indexes of U.S. producers' shipments of sheet glass, apparent U.S. consumption of sheet glass, and selected U.S. business indicators, 1955-67

(1957-59=100)

Year	Selected U.S. business indicators				
	U.S. producers' shipments of sheet glass 1/	Apparent U.S. consumption of sheet glass 2/	Total industrial production 3/	Residential construction starts 4/	Automobile production 6/
1955	121	111	91	119	139
1956	120	115	100	98	103
1957	95	89	101	89	112
1958	85	86	94	100	80
1959	120	126	106	111	108
1960	96	101	109	92	131
1961	97	99	110	97	109
1962	110	115	118	107	136
1963	118	118	124	117	150
1964	116	121	132	7/111	151
1965	116	118	143	7/108	183
1966	105	111	156	7/85	170
1967	95	103	158	94	146

1/ Based on the number of pounds shipped; includes exports.

2/ Based on the number of pounds of U.S. producers' shipments, less exports, plus imports for consumption.

3/ Based on the Federal Reserve Index of Quantity Output; includes durable and nondurable goods, mining, and utilities.

4/ Based on the number of public and private, nonfarm, new housing starts.

5/ Based on the value of public residential and nonfarm private residential construction put in place, adjusted to constant dollars.

6/ Based on the Federal Reserve Index of Quantity Output.

7/ Revised.

Source: Computed from official statistics of the U.S. Department of Commerce and the Board of Governors of the Federal Reserve System, and from data supplied to the U.S. Tariff Commission by the domestic producers of sheet glass.

Table 5.--Sheet glass: Shipments by U.S. producers, 1/ and U.S. imports for consumption, by thickness (weight per square foot) and by kinds, 1961-67 and January-June 1967 and 1968

Item	Weighting per square foot--										Total	
	Not over 16 ounces, but not over 28 ounces					Over 28 ounces						
	Total or average	Clear	Colored	Total or average	Clear	Colored	Total or average	Clear	Colored	Total or average		
<u>1961</u>												
U.S. shipments-----1,000 pounds	20,822	789,714	10,730	800,474	387,846	61,654	449,500	1,188,412	72,384	2/	1,270,796	
U.S. imports-----do-----	30,772	270,775	864	271,639	71,795	317	72,112	371,458	3,022	950	375,430	
Apparent U.S. consumption--do--	51,594	1,060,519	11,594	1,072,113	459,641	61,971	521,612	1,559,870	3/	2/	1,646,226	
Ratio of imports to consumption-----percent--	59.6	25.5	7.5	25.3	15.6	0.5	13.8	23.7	3/	3/	22.8	
<u>1962</u>												
U.S. shipments-----1,000 pounds	25,462	881,870	8,816	890,686	456,552	57,014	523,566	1,373,884	65,830	2/	1,439,714	
U.S. imports-----do-----	40,165	261,777	612	262,389	165,769	166,305	428,694	466,400	2,238	1,916	470,554	
Apparent U.S. consumption--do--	65,627	1,143,647	9,428	1,153,075	622,321	57,550	689,871	1,840,284	3/	3/	1,910,268	
Ratio of imports to consumption-----percent--	61.2	22.9	6.5	22.8	26.2	0.9	24.1	25.3	3/	3/	24.6	
<u>1963</u>												
U.S. shipments-----1,000 pounds	25,462	915,226	9,628	924,854	515,490	56,260	601,750	1,486,750	65,888	2/	1,552,066	
U.S. imports-----do-----	38,325	200,633	945	201,578	182,902	728	183,630	389,371	3,292	1,161	393,824	
Apparent U.S. consumption--do--	63,787	1,115,859	10,574	1,126,433	708,392	56,988	765,380	1,875,549	3/	3/	1,945,881	
Ratio of imports to consumption-----percent--	60.1	18.0	8.9	17.9	23.0	1.3	21.4	20.8	3/	3/	20.2	
<u>1964</u>												
U.S. shipments-----1,000 pounds	30,102	904,654	12,702	917,356	547,520	31,262	578,782	1,482,276	43,964	2/	1,526,240	
U.S. imports-----do-----	52,033	244,755	1,188	245,943	177,550	1,384	178,934	473,699	3,212	1,724	478,635	
Apparent U.S. consumption--do--	82,135	1,149,409	13,890	1,163,299	725,070	32,646	757,716	1,955,975	3/	3/	2,004,875	
Ratio of imports to consumption-----percent--	63.3	21.3	8.6	21.1	24.5	4.2	23.6	24.2	3/	3/	23.9	
<u>1965</u>												
U.S. shipments-----1,000 pounds	23,954	892,339	17,806	910,145	549,260	44,544	593,804	1,465,553	62,350	2/	1,527,903	
U.S. imports-----do-----	58,610	212,570	1,168	213,738	151,516	1,428	152,944	421,910	3,413	2,455	427,778	
Apparent U.S. consumption--do--	82,564	1,104,909	18,974	1,123,883	700,776	45,972	746,748	1,887,463	3/	3/	1,955,681	
Ratio of imports to consumption-----percent--	71.0	19.2	6.2	19.0	21.6	3.1	20.5	22.4	3/	3/	21.9	
<u>1966</u>												
U.S. shipments-----1,000 pounds	24,824	818,766	42,978	861,744	451,100	26,796	487,896	1,304,690	69,774	2/	1,374,464	
U.S. imports-----do-----	48,059	239,973	1,301	241,274	170,949	2,271	173,220	457,385	5,169	2,326	462,554	
Apparent U.S. consumption--do--	72,883	1,058,739	44,279	1,103,018	622,049	29,067	661,116	1,762,074	3/	3/	1,839,943	
Ratio of imports to consumption-----percent--	65.9	22.7	2.9	21.9	27.0	7.8	26.2	26.0	3/	3/	25.3	
<u>1967</u>												
U.S. shipments-----1,000 pounds	18,966	800,123	35,612	835,735	362,732	20,426	382,858	1,181,821	55,738	2/	1,237,559	
U.S. imports-----do-----	20,144	267,395	1,658	269,053	161,009	10,719	171,728	446,407	14,488	2,831	463,726	
Apparent U.S. consumption--do--	39,050	1,067,518	37,270	1,104,788	523,741	30,845	554,586	1,628,228	3/	3/	1,701,285	
Ratio of imports to consumption-----percent--	51.5	25.0	4.4	26.8	30.7	34.8	31.0	26.4	3/	3/	27.3	
<u>Jan.-June 1967</u>												
U.S. shipments-----1,000 pounds	8,178	350,171	20,356	370,529	172,202	8,700	180,902	530,551	29,058	2/	559,609	
U.S. imports-----do-----	11,581	108,844	1,026	109,870	71,233	1,414	72,647	190,167	3,901	1,493	195,561	
Apparent U.S. consumption--do--	19,759	458,985	21,384	480,369	243,435	10,114	253,549	720,718	3/	3/	755,170	
Ratio of imports to consumption-----percent--	58.6	23.7	4.8	22.9	29.3	14.0	28.7	26.4	3/	3/	25.9	
<u>Jan.-June 1968</u>												
U.S. shipments-----1,000 pounds	9,338	384,449	12,876	397,325	178,002	26,796	204,798	571,789	39,672	2/	611,461	
U.S. imports-----do-----	9,757	176,624	648	177,272	95,762	11,903	107,665	281,452	13,242	2,809	297,503	
Apparent U.S. consumption--do--	19,095	561,073	13,524	574,597	273,764	38,699	312,463	853,241	3/	3/	908,965	
Ratio of imports to consumption-----percent--	51.1	31.5	4.8	30.9	34.9	30.8	34.5	33.0	3/	3/	32.7	

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/ Data included under total colored glass in order to avoid disclosure of the operations of the individual producers.

3/ Not applicable.

Table 6.--Sheet glass: U.S. production and U.S. producers' end-of-period inventories, ^{1/} annual 1961-67 and January-June 1967 and 1968

(In millions of pounds)

Period	Production	Inventory at end of period
Annual:		
1961-----	1,233	102.1
1962-----	1,503	159.6
1963-----	1,519	132.4
1964-----	1,554	164.4
1965-----	1,556	195.2
1966-----	1,379	140.9
1967-----	1,278	127.8
January-June:		
1967-----	592	152.0
1968-----	647	147.4

^{1/} Includes only inventories of glass inspected for defects and cut to the size in which it is intended to be sold; does not include inventories of glass intended to be recut before shipment.

Source: Compiled from data submitted to the U.S. Tariff Commission by U.S. producers.

Table 7.---Employment in U.S. establishments in which sheet glass was produced, 1961-67

Item	1961	1962	1963	1964	1965	1966	1967
All employees, average number-----	9,979	10,922	10,657	10,938	11,018	10,365	9,783
Production and related workers making--							
All products:							
Average number-----	8,572	9,505	9,109	9,369	9,348	8,636	7,989
Man-hours worked-----1,000 hours--	17,046	19,291	18,644	18,447	19,461	17,733	16,693
Sheet glass:							
Man-hours worked-----1,000 hours--	12,775	14,994	14,542	14,301	14,438	12,848	12,415
Other products:							
Man-hours worked-----1,000 hours--	4,271	4,297	4,102	4,146	5,023	4,885	4,278

Source: Compiled from data submitted to the U.S. Tariff Commission by U.S. producers.

Table 8.--Sheet glass: ^{1/} U.S. imports for consumption, by principal sources, annual 1962-67 and January-June 1967 and 1968

Country	1962	1963	1964	1965	1966	1967	Jan.-June 1967	Jan.-June 1968
	Quantity (1,000 pounds)							
Belgium	153,650	114,324	148,037	123,162	143,954	135,241	59,762	88,284
West Germany	49,204	44,463	46,198	45,603	53,079	53,142	23,978	31,286
Japan	59,357	67,045	78,416	63,212	50,871	51,401	19,502	29,695
Republic of China (Taiwan)	12,983	8,337	7,558	9,570	13,874	32,245	10,877	24,022
Italy	6,602	4,772	16,982	22,508	33,573	26,112	10,425	22,529
United Kingdom ^{2/}	51,511	30,339	25,527	30,449	38,241	36,533	17,786	21,044
France	35,684	31,625	30,947	22,494	20,926	17,205	8,225	11,119
Finland	10,715	12,286	16,804	13,281	15,118	10,129	4,481	6,114
Sweden	12,340	11,021	10,769	9,171	4,029	2,193	831	634
All other	42,942	52,138	65,089	49,887	51,368	55,034	22,538	44,376
Total	434,988	376,350	446,327	369,337	425,033	419,235	178,405	279,103
Communist dominated Countries at full rates of duty	35,566	17,474	32,308	38,441	40,447	44,491	17,156	18,400
Grand total	470,554	393,824	478,635	427,778	465,480	463,726	195,561	297,503
	Value (1,000 dollars)							
Belgium	9,924	7,025	9,795	7,482	8,834	9,724	4,204	6,643
West Germany	3,880	3,335	3,535	3,403	4,104	4,929	2,323	2,842
Japan	4,112	4,160	5,477	4,240	3,733	4,461	1,702	2,528
Republic of China (Taiwan)	684	439	434	604	859	1,830	691	1,320
Italy	440	288	1,077	1,233	1,717	1,848	688	1,670
United Kingdom ^{2/}	3,360	1,980	1,671	1,927	2,287	2,493	1,229	1,533
France	2,928	2,476	2,292	1,728	1,958	1,772	941	1,042
Finland	571	662	874	746	886	665	288	414
Sweden	828	624	629	547	250	142	57	32
All other	2,553	2,871	3,686	2,700	2,630	2,836	1,143	2,376
Total	29,280	23,860	29,470	24,610	27,258	30,700	13,266	20,400
Communist dominated Countries at full rates of duty	1,208	617	1,271	1,446	1,663	1,826	673	733
Grand total	30,488	24,477	30,741	26,056	28,921	32,526	13,939	21,133

^{1/} Prior to Aug. 31, 1963, dutiable under par. 219 or pars. 219 and 224 of the Tariff Act of 1930. Currently dutiable under TSUS items 542.11-542.25, 542.42-542.67, 542.92-542.98, 544.16, and TSUS appendix items 923.31-923.77, inclusive. Imports dutiable under the TSUS appendix items are reported statistically under TSUSA items 542.31-542.37 and 542.71-542.77.

^{2/} Imports of float glass, which began in 1960, are included through Aug. 31, 1963; the quantity of float glass imported is very small compared with that of total imports of sheet glass.

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

Table 9.--Sheet glass: ^{1/} U.S. imports for consumption entered at most-favored-nation rates of duty, by tariff provisions, 1964-67 and January-June 1968

(In thousands of pounds)

Item	1964	1965	1966	1967	Jan.-June 1968
Sheet glass weighing over 4 but not over 12 oz. per sq. ft. measuring in united inches--					
Not over 40-----	2,108	2,742	4,067	4,233	1,951
Over 40-----	-	1	107	-	-
Total, weighing not over 12 oz. per sq. ft.-----	2,108	2,743	4,174	4,233	1,951
Sheet glass weighing over 12 but not over 16 oz. per sq. ft. and measuring in united inches--					
Not over 40-----	20,499	25,436	23,958	13,442	5,917
Over 40 but not over 60-----	21,687	23,278	12,065	1,650	870
Over 60-----	7,456	5,350	5,068	197	168
Total, weighing over 12 but not over 16 oz. per sq. ft.-----	49,642	54,064	41,091	15,289	6,955
Sheet glass weighing over 16 but not over 28 oz. per sq. ft. and measuring in united inches--					
Not over 40-----	36,631	32,807	42,034	54,911	39,291
Over 40 but not over 60-----	95,748	77,964	86,830	92,115	61,061
Over 60 but not over 100-----	83,874	69,167	70,522	66,358	49,236
Over 100-----	10,953	10,277	12,239	17,044	12,636
Total, weighing over 16 but not over 28 oz. per sq. ft.-----	227,206	190,215	211,625	230,428	162,224
Sheet glass weighing over 28 oz. per sq. ft. and measuring in sq. ft.--					
Not over 2-2/3-----	20,390	16,111	17,719	20,832	17,001
Over 2-2/3 but not over 7-----	20,009	14,507	30,235	30,273	17,365
Over 7 but not over 15-----	15,054	15,975	18,926	19,166	14,573
Over 15 but not over 16-2/3-----	11,708	6,259	5,381	8,076	4,821
Over 16-2/3-----	98,485	87,008	92,957	88,115	51,404
Total, weighing over 28 oz. per sq. ft.-----	165,646	139,860	165,218	166,462	105,164
Grand total, at most-favored-nation rates of duty-----	444,602	386,882	422,108	416,412	276,294

^{1/} Dutiable under TSUS items 542.11-542.25, 542.42-542.67, 542.92-542.98, and TSUS appendix items 923.31-923.77, inclusive. Imports dutiable under the TSUS appendix items are reported statistically under TSUSA items 542.31-542.37, and 542.71-542.77.

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

Table 10.--Sheet glass weighing over 16 but not over 28 ounces per square foot and measuring not over 100 united inches: ^{1/} U.S. imports for consumption, by principal sources, annual 1965-67 and January-June 1967 and 1968

Country	1965	1966	1967	Jan.-June 1967	Jan.-June 1968
Quantity (1,000 pounds)					
Belgium-----	48,073	51,695	42,709	21,334	30,716
Italy-----	7,882	21,588	20,525	8,344	17,594
Japan-----	30,767	25,035	22,079	11,733	14,528
United Kingdom-----	14,711	11,684	26,474	12,006	14,302
West Germany-----	15,492	20,822	23,004	11,997	14,039
Republic of China (Taiwan)-----	7,585	9,390	16,023	6,593	11,240
Israel-----	5,943	10,577	10,735	5,471	6,971
France-----	7,955	8,827	8,702	3,774	6,147
Finland-----	6,823	8,685	8,566	3,645	5,532
All other-----	34,707	31,083	34,567	11,266	28,519
Total-----	179,938	199,386	213,384	96,163	149,588
Communist dominated countries at full rates of duty-----	23,397	29,456	38,447	13,634	14,973
Grand total-----	203,335	228,842	251,831	109,797	164,561
Value (1,000 dollars)					
Belgium-----	2,813	3,061	2,647	1,462	1,903
Italy-----	451	1,093	1,332	529	1,245
Japan-----	2,142	1,808	1,816	962	1,124
United Kingdom-----	952	775	1,570	820	984
West Germany-----	1,114	1,515	1,813	870	1,060
Republic of China (Taiwan)-----	475	581	905	528	596
Israel-----	305	419	501	266	362
France-----	572	619	721	333	474
Finland-----	363	474	548	228	366
All other-----	1,843	1,650	1,900	405	1,470
Total-----	11,030	11,995	13,753	6,403	9,584
Communist dominated countries at full rates of duty-----	1,002	1,255	1,610	553	618
Grand total-----	12,032	13,250	15,363	6,956	10,202

^{1/} Dutiable in accordance with escape-clause provisions under TSUS appendix items 923.31, 923.33, 923.35, 923.71, 923.73, and 923.75. Such imports are reported statistically under TSUSA items 542.3120-542.3570 and 542.7100-542.7500, inclusive.

Table 11.--Delivered prices of representative sizes of domestic and West European sheet glass to direct-factory buyers ^{1/} in New York City on selected dates, 1960-68

Description and date	Delivered	Delivered	Amount or percent	
	price of domestic glass	price of West European glass	by which the West European glass was lower in delivered price than the domestic	
Single strength "B" (19 oz.):	Per 100	Per 100	Per 100	Percent
Over 50, not over 60 united:	sq. ft.	sq. ft.	sq. ft.	
inches:				
Nov. 1, 1960-----	\$9.38	\$8.64	\$0.74	7.9
May 1, 1961-----	9.38	8.64	.74	7.9
Nov. 1, 1961-----	9.38	8.64	.74	7.9
May 1, 1962-----	9.85	8.64	2/1.21	2/12.3
Nov. 1, 1962-----	9.85	9.50	.35	3.6
May 1, 1963-----	9.85	9.32	.53	5.4
Nov. 1, 1963-----	10.53	9.94	.59	5.6
May 1, 1964-----	11.06	10.41	.65	5.9
Nov. 1, 1964-----	11.06	10.41	.65	5.9
May 1, 1965-----	10.95	10.21	.74	6.8
Nov. 1, 1965-----	10.73	10.21	.52	4.8
May 1, 1966-----	10.61	10.40	.21	2.0
Nov. 1, 1966-----	11.15	10.71	.44	3.9
May 1, 1967-----	11.15	10.71	.44	3.9
Nov. 1, 1967-----	11.15	10.71	.44	3.9
May 1, 1968-----	11.82	11.35	.47	4.0
Heavy sheet "B" (3/16 inches):				
Over 16-2/3, not over 25:				
square feet:				
Nov. 1, 1960-----	24.48	22.31	2.17	8.9
May 1, 1961-----	24.48	22.31	2.17	8.9
Nov. 1, 1961-----	24.48	22.31	2.17	8.9
May 1, 1962-----	25.71	22.31	2/3.40	2/13.2
Nov. 1, 1962-----	25.71	24.54	1.17	4.6
May 1, 1963-----	25.71	24.54	1.17	4.6
Nov. 1, 1963-----	26.99	25.72	1.27	4.7
May 1, 1964-----	26.99	25.72	1.27	4.7
Nov. 1, 1964-----	26.99	25.72	1.27	4.7
May 1, 1965-----	26.72	25.23	1.49	5.6
Nov. 1, 1965-----	26.72	25.23	1.49	5.6
May 1, 1966-----	27.92	26.32	1.60	5.7
Nov. 1, 1966-----	29.35	27.29	2.06	7.0
May 1, 1967-----	29.35	27.29	2.06	7.0
Nov. 1, 1967-----	29.35	27.29	2.06	7.0
May 1, 1968-----	31.11	28.92	2.19	7.0

^{1/} Direct-factory buyers are those distributors, jobbers, fabricators, and processors selected by the individual producers as the only concerns that can buy sheet glass directly from the factory. Other concerns desiring to purchase sheet glass, in carload lots, must purchase their glass from the direct-factory buyers at higher prices. Sales agents for the principal foreign manufacturers generally sell only to firms previously recognized by the domestic producers as direct-factory buyers.

^{2/} In effect for about 2 months.

Source: Compiled from manufacturers' and sales agents' pricelists.

Note.--Prices reflect payment discounts and discounts for packing in standard pallets. Prices do not reflect special discounts for large volume orders, shipments of special stock sizes, or shipments in extra heavy pallets. Customs brokerage, loading, and trucking charges have been added to the prices of the imported glass in effect on Nov. 1, 1962 through May 1, 1966.

