

This Report on the Glass Industry relates to establishments engaged wholly or mainly in manufacturing all types of flat glass, safety glass, glass bricks, glass rods, glass tubing, domestic glassware, mirrors, leaded lights, lamp glasses and glass envelopes for lamp bulbs, scientific and medical glassware, glass bottles, bottle stoppers, jars, syphons and vacuum flasks, glass fibre roving, mat, chopped strand and roving, and thermal insulating materials of glass fibre. Glass cutting, decorating, engraving, polishing, staining, etc are included but the cutting of glass to size in the course of distribution, is excluded. The manufacture of optical glass is included but the grinding of lenses is excluded. Glass fibre yarn, tape and cloth, resin bonded fibre-glass sheets and mouldings, complete fibreglass boats, and other manufactures of glass fibre are also excluded.

This industry corresponds to minimum list heading 463 in the Standard Industrial Classification (Revised 1968) which has been used for the first time as a basis of classification in the 1968 Census.

The industry corresponds to the Glass Industry (Part 104) in the Reports on the last detailed Census of Production for 1963, except that manufactures of glass fibre not specifically included elsewhere were formerly included in this report but thermal insulating materials of glass fibre formerly included in the report on the Miscellaneous Building Materials, etc Industry (Part 107) are now included in this report.

Throughout this Report, the figures given for 1963 have been reclassified, as far as possible, according to the Standard Industrial Classification (Revised 1968) so that data for 1963 and 1968 are on the same industrial basis. However the reclassification of small firms, which provided limited information only, has been arbitrary.

In interpreting the data in the tables it is essential to bear in mind the notes and definitions which appear on pages (i) to (iv).

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(c) Including services rendered to other organisations (amounts charged for hiring out plant, machinery or other goods, for providing transport, or for technical or other services rendered).

(d) Administrative, technical and clerical employees.

(e) Excluding expenditure for establishments not yet in production.

(f) Acquisitions less disposals.TABLE 1 Industry summary, 1963 and 1968
United Kingdom (a) (b)

	Unit	All establishments		
		1963	1968	
Number of enterprises	No.	560	530	
Number of establishments	"	645	628	
Gross output	£'000	174,513	251,677	
Net output	"	96,033	138,556	
Net output per head	£	1,332	1,907	
Sales and work done	{ goods produced and work done (c)	£'000	163,522	227,382
	{ merchanted goods and canteen takings	"	11,606	24,186
Purchases	{ materials for use in production and packaging and fuel	"	63,149	86,163
	{ goods for merchenting and canteen purchases	"	9,038	19,048
Payments to other organisations	{ for work done on materials given out for transport	"	359	623
	{ by road	"	6,540	7,209
	{ by rail and other means excluding postal services	"			1,362
Stocks and work in progress				
Total stocks and work in progress	{ change during year	"	- 9	+ 1,393
	{ at end of year	"	30,317	37,098
Goods on hand for sale	{ change during year	"	- 506	+ 784
	{ at end of year	"	13,675	17,641
Work in progress	{ change during year	"	- 109	- 675
	{ at end of year	"	2,403	3,369
Materials, stores and fuel	{ change during year	"	+ 607	+ 1,283
	{ at end of year	"	14,240	16,089
Number employed on average during the year	{ total, including working proprietors	Th.	72.1	72.6
	{ operatives	"	56.0	55.3
	{ other employees (d)	"	15.4	16.8
Wages and salaries	{ of operatives	£'000	40,555	53,747
	{ of other employees (d)	"	14,675	21,397
Capital expenditure (e)				
Total	"	9,386	19,905	
New building work	"	2,622	3,852	
Land and existing buildings (f)	"	- 358	34	
Plant and machinery (f)	"	6,625	15,046	
Vehicles (f)	"	497	973	

(a) For 1968, estimates for establishments not making satisfactory returns and for small establishments, from which only employment data were collected, accounted for 6 per cent. of the total figures in which they were incorporated: of this, unsatisfactory returns accounted for 1 per cent. A similar situation existed for 1963.

(b) The following information relates to small establishments (employing fewer than 25 persons) in this industry. It includes an estimate for small establishments not making satisfactory returns.

	1963	1968
Number of establishments	457	442
Average number employed		
Working proprietors	615	487
Other persons employed	3,707	3,761

Footnotes continued on page 71/2.

TABLE 2 Analysis by size of establishment within the industry, 1968

(i) Output and employment

All establishments: United Kingdom

Number employed on average during the year by the establishment (a)	Estab-lish-ments	Enter-prises (b)	Total number employed on average during the year (a)	Gross output	Net output	Net output per head
1-5	127	127	414	..	..	..
6-10	97	94	778	..	..	..
11-24	139	135	2,435	..	..	..
25-49	36	34	1,311	5,385	2,316	1,767
50-99	44	43	3,076	9,612	4,839	1,573
100-199	30	28	4,239	13,409	6,832	1,612
200-299	16	15	3,772	11,230	5,831	1,546
300-399	11	10	3,903	12,992	6,865	1,759
400-749	17	9	9,645	31,188	17,721	1,837
750-999	8	6	6,730	23,374	13,793	2,049
1,000-1,499	9	4	11,002	39,835	21,188	1,926
1,500-1,999	6	5	9,736	35,979	20,157	2,070
2,000 and over	4	3	14,530	52,301	30,088	2,071
Unsatisfactory returns	84	81	1,074	..	..	..
Total	628	530	72,645	251,677(c)	138,556(c)	1,907(c)

(ii) Employees, wages and salaries

All establishments: United Kingdom

Number employed on average during the year by the establishment (a)	Employees		Wages and salaries		Wages and salaries per head	
	Oper-atives	Others (d)	Oper-atives	Others (d)	Oper-atives	Others (d)
1-5	..	..	..	..	..	..
6-10	..	..	..	..	..	..
11-24	..	..	..	..	..	..
25-49	990	294	834	325	842	1,105
50-99	2,454	594	2,020	736	823	1,239
100-199	3,257	972	2,922	1,146	897	1,180
200-299	3,119	652	3,077	790	986	1,212
300-399	3,249	652	2,816	758	867	1,162
400-749	7,813	1,832	7,810	2,366	1,000	1,291
750-999	5,019	1,711	5,081	2,235	1,012	1,306
1,000-1,499	8,789	2,213	9,234	3,012	1,051	1,361
1,500-1,999	7,584	2,152	6,937	2,558	915	1,189
2,000 and over	9,769	4,761	9,883	6,219	1,012	1,306
Unsatisfactory returns	..	..	..	..	..	..
Total	55,262(c)	16,823(c)	53,747(c)	21,397(c)	973(c)	1,272(c)

(a) Including working proprietors.

(b) The sum of the figures for the size groups exceeds the total for the industry to the extent that enterprises made returns for establishments in more than one size group.

(c) Including estimates for establishments employing fewer than 25 persons and for establishments not making satisfactory returns.

(d) Administrative, technical and clerical employees.

TABLE 3 Percentage analysis of employees, by age and sex, 1969 (a)

All establishments: United Kingdom

Ages	Males	Females	All employees
	Per cent.	Per cent.	Per cent.
Under 18	3	2	5
18 and over	72	23	95
All ages	75	25	100

Source: Department of Employment

(a) The percentages relate to the numbers employed (excluding working proprietors) at June 1969, the earliest date for which the information is available on the basis of the Standard Industrial Classification, (Revised 1968).

Footnotes to Table 4

- (a) Some establishments employing fewer than 25 persons were included in returns for larger establishments. These amounted to 12 establishments in 1968 and 24 in 1963.
- (b) The method of classifying returns to sub-divisions of the industry is explained in the notes; the characteristic products of each sub-division are identified in Table 5.
- (c) The classification of establishments to this sub-division of the industry is not strictly comparable: for 1963 the cutting of glass to size in the course of distribution was not separately distinguished and was treated as a principal product for classification purposes but for 1968 such activity was simply regarded as merchandising and was not taken into account.
- (d) The sum of the figures for the sub-division exceeds the total for the industry to the extent that the enterprises made returns for more than one sub-division.
- (e) Including services rendered to other organisations (amounts charged for hiring out plant, machinery or other goods, for providing transport, or for technical or other services rendered).
- (f) Direct sales of goods (excluding canteen takings) made to, and work done for, the general public by larger establishments are included. These amount to £350,000 in 1968. Similar information is not available for 1963.
- (g) Characteristic products relate only to specific sub-divisions of the industry.
- (h) For sub-divisions of the industry, this is the ratio of sales of characteristic products to total sales of goods produced and work done. For the industry as a whole, this is the ratio of total sales of principal products by the industry to total sales of goods produced and work done.
- (i) Administrative, technical and clerical employees.
- (j) Excluding expenditure for establishments not yet in production.
- (k) Acquisitions less disposals.

TABLE 4 Analysis of larger establishments, 1963 and 1968

Establishments employing 25 or more persons: Analysis of returns received, United Kingdom (a)

	Unit	Sub-division of the industry (b)				Sub-division of the industry (b)								
		Glass (other than glass containers)				Glass (other than glass containers)								
		Plate, sheet, rolled or figured and safety glass, glass mirrors, shelves, etc 11		Domestic and fancy glassware 12		Illuminating glassware 13		Glass tubing and glassware for electrical, industrial and scientific purposes 14		Glass fibre and manufactures thereof not elsewhere specified 15		Other (c) 16		
		1963	1968	1963	1968	1963	1968	1963	1968	1963	1968	1963	1968	
Number of enterprises (d)	No.	38	43	15	16	10	8	19	20	9	7	18	12	
Number of establishments	"	64	73	18	24	11	8	24	25	12	10	27	12	
Gross output	£'000	64,806	95,338	9,191	21,562	7,321	11,521	8,413	8,201	9,494	14,900	4,400	7,239	
Net output	"	34,995	48,992	6,620	14,865	4,510	7,028	5,302	5,093	5,756	9,904	2,479	3,197	
Net output per head	£	1,527	2,097	1,198	1,550	1,194	1,815	963	1,450	1,873	2,813	1,270	1,904	
Sales and work done	£'000	59,507	80,591	8,869	21,133	6,592	11,392	8,311	7,197	9,558	14,877	3,443	4,699	
	{ goods produced and work done (e) (f)													
	{ merchanted goods and canteen takings	"	5,928	14,865	577	554	220	72	342	939	125	186	943	2,572
Sales of characteristic products	"	49,480	68,853	6,548	15,140	5,737	9,959	6,132	6,457	8,925	14,382	(g)	(g)	
Index of specialisation (h)	Per cent.	83	85	74	72	87	87	74	90	93	97	..	..
Purchases	£'000	24,208	33,591	2,134	6,023	2,426	4,205	2,536	2,338	3,162	4,335	1,304	1,975	
	{ materials for use in production and packaging, and fuel	"	4,353	11,030	256	438	203	69	269	707	141	142	615	1,948
	{ goods for merchenting and canteen purchases	"	36	216	5	75	7	8	48	43	129	125	38	67
Payments to other organisations	"													
	{ for work done on materials given out	"	1,430	1,238	126	269	222	176	22	357	199	26	58	
	{ for transport	"		406		180		215			294		3	
	{ by road	"												
	{ by rail and other means excluding postal services	"												
Stocks and work in progress														
Goods on hand for sale	{ change during year	"	- 308	+ 502	- 309	- 149	+ 314	+ 38	- 252	+ 60	- 132	- 184	+ 14	+ 59
	{ at end of year	"	3,438	5,644	1,139	2,846	764	564	894	606	480	594	254	572
Work in progress	{ change during year	"	- 320	- 619	+ 54	+ 24	+ 195	+ 19	+ 12	+ 5	- 57	+ 22	+ 1	- 90
	{ at end of year	"	1,025	891	307	536	362	496	281	453	111	110	90	532
Materials, stores and fuel	{ change during year	"	+ 216	+ 135	- 51	+ 288	+ 46	+ 180	- 110	+ 43	+ 51	+ 97	+ 63	+ 10
	{ at end of year	"	3,695	4,312	548	1,958	884	1,123	631	611	714	854	1,017	404
Number employed on average during the year	No.	22,916	23,360	5,527	9,593	3,777	3,872	5,508	3,513	3,074	3,521	1,953	1,679	
	{ proprietors	"	16,594	15,967	4,409	7,775	3,266	3,337	4,366	2,553	2,065	2,510	1,467	1,093
	{ operatives	"	6,288	7,354	1,115	1,811	508	534	1,131	953	1,006	1,007	472	580
	{ other employees (i)	"												
Wages and salaries	£'000	13,619	17,275	2,660	6,428	2,010	2,786	2,802	1,962	1,490	2,542	944	1,091	
	{ of operatives	"	6,101	9,462	872	2,124	473	648	1,047	1,181	932	1,212	386	699
	{ of other employees (i)	"												
Wages and salaries per head	£	821	1,082	603	827	615	835	642	768	722	1,013	643	998	
	{ operatives	"	970	1,287	782	1,173	932	1,213	925	1,240	927	1,203	819	1,204
	{ other employees (i)	"												
Capital expenditure (j)														
New building work	£'000	1,203	1,037	83	358	173	85	264	123	51	154	78	32	
Land and existing buildings	"	5	70(k)	28(k)	3(k)	119(k)	-	13	-	-	4(k)	37	-	
	{ acquisitions	"	89					3		5		19	-	
	{ disposals	"												
Plant and machinery	"	2,925	7,004(k)	194	956	100	427	741	266	693	732(k)	94	373	
	{ acquisitions	"	161					6		7		-	73	
	{ disposals	"												
Vehicles	"	271	665	59	57	11	12	39	32	40	87	28	42	
	{ acquisitions	"	42	72	36	21	2	14	12	7	10	10	14	
	{ disposals	"												

For notes to this table - see page 127/5.

TABLE 4 (continued)

	Unit	Sub-divisions of the industry (b)		Total	
		Glass containers including vacuum flasks 20		1963	1968
		1963	1968		
Number of enterprises (d)	No.	27	22	129	119
Number of establishments	"	46	41	202	193
Gross output	£'000	59,858	77,216	163,484	235,976
Net output	"	30,302	40,834	89,964	129,912
Net output per head	£	1,223	1,809	1,332	1,907
Sales and work done	£'000	goods produced and work done (e) (f)	73,309	153,187	213,197
		merchanted goods and canteen takings	2,738	3,490	10,873	22,677
Sales of characteristic products	"	54,069	72,208	(g)	(g)
Index of specialisation (h)	Per cent.	95	98	96	97
Purchases	£'000	materials for use in production and packaging, and fuel	28,321	59,158	80,788
		goods for merchanted and canteen purchases	2,630	3,526	8,467	17,860
Payments to other organisations	"	for work done on materials given out	49	336	584
		for transport by road	3,818	4,797	6,759
		by rail and other means excluding postal services				139	1,277
Stocks and work in progress					
Goods on hand for sale	"	change during year	+ 409	- 474	+ 735
		at end of year	5,841	5,714	12,810	16,540
Work in progress	"	change during year	+ 7	- 102	- 632
		at end of year	75	141	2,251	3,158
Materials, stores and fuel	"	change during year	+ 450	+ 568	+ 1,203
		at end of year	5,851	5,823	13,340	15,085
Number employed on average during the year	No.	total including working proprietors	22,575	67,531	68,113
		operatives	18,927	52,924	52,162
		other employees (i)	3,640	14,518	15,879
Wages and salaries	£'000	of operatives	18,649	38,307	50,732
		of other employees (i)	4,871	13,867	20,196
Wages and salaries per head	£	operatives	985	724	973
		other employees (i)	1,338	955	1,272
Capital expenditure (j)					
New building work	£'000	603	1,821	2,456	3,611
Land and existing buildings	"	acquisitions	86	156	321
		disposals	249	118	491	289
Plant and machinery	"	acquisitions	4,496	6,547	14,852
		disposals	45	341	745
Vehicles	"	acquisitions	204	619	1,099
		disposals	42	154	187

For notes to this table - see page 127/5.

TABLE 5 Sales of principle products of the industry by larger establishments, including sales by establishments classified to other industries, 1963 and 1968

Establishments employing 25 or more persons: Analysis of returns received, United Kingdom

Industry sub-division (a)		1963			1968			Enterprises	Entries
		Quantity		Value	Quantity		Value		
		Th.sq. ft.	Th.cwt.	£'000	Th.sq. ft.	Th.cwt.	£'000		
11	Flat glass (other than spectacle glass and safety glass for road vehicles, etc) manufactured (not purchased)								
	Plain sheet window glass (including thick drawn sheet glass)	340,270	5,098	10,918	331,947	4,986	10,703	*	
	Plate glass (b)	24,555	682	4,031	1,689	93.0	544	*	
	Float glass	53,596	1,441	7,494	135,983	3,209	17,523	*	
	Rolled, cast, wired, figured and cathedral glass	115,201	2,389	6,228	130,918	2,877	9,265	*	
		..	..	778				
11	Processed flat glass (excluding purchased flat glass cut to size but not further processed)								
	Flat glass (clear, opal or coloured) bevelled, sand blasted, backed with other materials, drilled, painted or otherwise finished (excluding flat glass silvered or metallised)	..	..	2,706	5,604	..	1,716	29
					..	..	1,277	35
	Flat glass silvered or metallised and glass mirrors unframed, framed or backed, but not further assembled	2,291	57.2	526	8,974	197	2,755	36	
		2,303	..	542	1,144	..	398	41	
		..	..	1,111	..	..	906	
	Shelves, finger plates, table tops and advertisement tablets	367	10.5	63	1,039	29.0	307	26	
		70.6	..	24	235	..	58	29	
		..	..	206	..	..	376	
	Other processed flat glass	..	83.5	635	4,855	..	1,363	27	
		..	..	629	..	..	1,224	29
11	Multiple glazed units, factory made, hermetically sealed	..	..	(c)	4,704	610	2,200	15
					..	..	486	17
	Total flat glass manufactured and processed (excluding spectacle and safety glass) and multiple glazed units			35,891			51,100	..	
20	Glass containers (other than domestic and scientific glassware)	Millions	Th.tons		Millions	Th.tons			
	Made from tubing (eg ampoules)	438	..	1,287	301	..	1,103	6	
					..	..	432	6

Continued on next page

TABLE 5 (continued)

Industry sub-division (a)	1963			1968			Enterprises	Entries
	Quantity		Value	Quantity		Value		
	Millions	Th.tons	£'000	Millions	Th.tons	£'000	Number	Number
20	Glass containers (other than domestic and scientific glassware) (continued)							
	Other than made from tubing							
	Milk bottles							
	389	156	5,969	442	150	6,877	6	20
	Soft drink and mineral water bottles							
	420	202	6,032	704 87.4	239 ..	9,472 1,424	10	25
	Beer, wine, spirit and similar bottles							
	995	443	15,549	1,195	526	21,490	9	25
	Other bottles jars and containers							
	For preserved foods							
	1,233 231	241 ..	9,066 1,643	1,568	273	12,844	10	25
	For chemicals, drugs, medicines and medicinal preparations							
	794	134	6,397	374 ..	58.2 ..	3,402 3,534	14	29
	For perfumes, cosmetics and toilet preparations							
	338 67.4	43.4 ..	2,693 684	366 21.6 ..	35.1 ..	3,659 251 722	14	25
	For all other purposes, not elsewhere specified (including complete syphons and syphon vases sold as such)							
	232 ..	45.9 ..	1,897 411	370 103	90.8 ..	3,795 1,255	14	26
20	Thousands			Thousands				
	8,498		2,694	10,425		3,339	5	5
20	Glass inners and refills for vacuum flasks, complete (silvered, exhausted and sealed)							
	1,546		229	1,677		321	*	*
	Total glass containers (other than domestic and scientific glassware)							
			54,551			73,920	..	..
12	Domestic and fancy glassware							
	Mouth blown							
	Stemmed glass drinking vessels							
	3,453		942	2,875		1,571	10	12
	Tumblers of all descriptions							
	2,556		512	1,421		628	11	13
	Other mouth blown table glassware and toilet, ornamental and stationery glassware							
	..		690	..		1,143	11	18

TABLE 5 (continued)

Industry sub-division (a)	1963		1968		Enterprises	Entries
	Quantity	Value	Quantity	Value		
	Thousands	£'000	Thousands	£'000	Number	Number
12	Domestic and fancy glassware (continued)					
	Other than mouth blown					
	Stemmed glass drinking vessels					
	24,990 ..	974 186	44,052	1,353	*	*
	Tumblers and beer mugs					
	100,162	1,839	124,367	3,925	8	8
	Other table glassware and toilet, ornamental and stationery glassware					
	21,556 ..	860 306	23,640	1,040	10	10
	Heat-resisting glassware (excluding tumblers)					
	30,569	3,926	38,732 ..	4,693 1,131	5	6
	Other kitchen-ware, cooking-ware, refrigerator jars and trays etc					
			..	162	*	*
	Total domestic and fancy glassware					
		10,234		15,646	..	..
13	Illuminating glassware					
	Glass bulbs					
	For electric lamps					
	800,195	2,976	940,907	3,250	*	*
	For electronic valves and tubes or the like (including cones, screens and necks sold separately)					
	..	3,997	..	6,757	8	11
	Tubing for fluorescent lamps					
	36,043 ..	827 137	57,268	1,536	*	5
	Globes, bowls and shades not elsewhere specified					
	9,036 ..	617 334	13,547	992	11	12
	Other illuminating glassware					
	..	1,016	..	1,368	8	8
	Total illuminating glassware					
		9,905		13,903	..	..
14	Scientific medical and laboratory glassware (except tubing and rod) (d)					
	..	4,156	..	6,622	28	32
	Th.cwt.					
	181 ..	1,510 1,704	230 ..	2,874 864	10	11
14	Glassware for electrical and industrial purposes					
	Machinery glassware (eg gauge glasses)					
	1.4 ..	69 194	2.3 ..	151 202	14	14
	Glass insulators and other electrical glassware not elsewhere specified					
	..	..	92.5 ..	1,567 396	8	9
	139 ..	2,191 948	..	..	..	..
	Other glassware for industrial purposes					
	..	..	88.0 ..	1,503 926	21	22

TABLE 5 (continued)

Industry sub-division (a)	1963		1968			
	Quantity	Value	Quantity	Value	Enter-prises	Entries
	Thousands	£'000	Thousands	£'000	Number	Number
16 Lenses and prisms, pressed or moulded, unworked (including pressed or moulded blanks or unworked or worked lenses or prisms) other than spectacle or optical glass	8,052	300	7,559	330	9	9
	..	164	..	207		
16 Leaded lights and stained glass memorial tablets	..	195	..	187	16	17
11 Safety glass for aircraft	..	(c)	..	412	*	*
11 Safety glass for road vehicles etc						
Toughened	..	11,984	..	14,461	13	18
Laminated	..	2,026	..	3,759	7	7
15 Glass fibre and manufactures thereof, including roving, mat, flock, chopped strand, chopped roving, but excluding yarn, woven fabrics and resin bonded mouldings	..	10,094	..	15,633	16	20
16 Glass bulbs for making vacuum ware inner			24,759	390	*	*
			Th.cwt.			
16 Tiles, blocks and squares of cast or pressed glass	..	2,391	27.9	174	6	6
Other products (including optical and spectacle glass)			..	3,558	11	12
Waste products	..	281	..	280	33	50
Work done						
16 Cutting (other than merely cutting to size), bending, bevelling, silvering, engraving, staining etc of glass supplied by customers (e)		1,408		105	17	18
Other work done on commission, sub-contract work etc but excluding glazing work done on buildings		215		152	9	9
Total		150,414		209,324	..	..
Sales in other industries (see Table 6)		3,401		2,663	..	..
Principal products of this industry sold by establishments in the industry		147,013		206,661	119	166

(a) The number given is that of the sub-division of which the item is a characteristic product. The sales shown are total sales by larger establishments, not merely sales by establishments classified to the sub-division.

(b) Described as 'plate glass polished, not further worked' for 1963.

(c) Not recorded separately for 1963.

(d) Described as 'scientific glassware (except tubing and rod)' for 1963.

(e) Cutting of glass merely to size was not specifically excluded for 1963, but for 1968 such work is included as a merchandising activity.

(f) This figure represents the total number of returns made for larger establishments in this industry which is less than the total number of establishments shown in Table 4 on account of combined returns covering more than one establishment.

TABLE 6 Sales of principal products of the industry by larger establishments classified to other industries, 1963 and 1968

Establishments employing 25 or more persons:
Analysis of returns received, United Kingdom

	1963	1968		
	Value	Value	Entries	Principle industries in which produced (a)
	£'000	£'000	Number	
Processed flat glass (excluding purchased flat glass cut to size but not further processed)				
Flat glass (clear, opal or coloured) bevelled, sand blasted, backed with other materials, drilled, painted or otherwise finished (excluding flat glass silvered or metallised)	55	249	*	151
Flat glass silvered or metallised, and glass mirrors unframed, framed or backed, but not further assembled	261	155	6	56,151
Shelves, finger plates, table tops, advertisement tablets and other processed flat glass	169	118	6	97,151
Glass containers including vacuum flasks but excluding domestic and scientific glassware	166	351	*	60,146,149
Glass bulbs for electronic valves and tubes or the like including cones, screens and necks sold separately, tubing for fluorescent lamps, globes, bowls, shades and other illuminating glassware	491	81	*	43,79,97
Scientific, medical and laboratory glassware (except tubing and rod)	257	189	5	28,70,78,149
Safety glass for road vehicles etc, toughened and laminated		440	6	82,149,151
Glass fibre and manufactures thereof	1,237	563	8	39,70,82,111
Other products (including multiple glazed units, glass tubing and rod, optical and spectacle glass, leaded lights etc)	765(b)	517	10	43,70,74,151
Total	3,401	2,663	..	

(a) The references given are to the list of industries at the front of this report.

(b) For 1963 includes work done for the trade or on commission.

TABLE 7 Sales of other than principal products by larger establishments in the industry, 1963 and 1968

Establishments employing 25 or more persons:
Analysis of returns received, United Kingdom

	Value	
	1963	1968
	£'000	£'000
Glass making machines and parts thereof and industrial plant		228
Gas chromatographs, measuring and other instruments and X ray apparatus		297
Windows, door frames and glazing bars of aluminium and other metals	3,673	327
Plastic bottles, caps, closures, components, domestic and catering goods and packaging		593
Other goods		623
Glazing work done on buildings and other building and civil engineering work done		
As main contractors		283
As sub-contractors	1,727	2,569
Services rendered to other organisations (a)	773	1,615
Goods merchanted or factored (that is goods sold without having been subjected to any manufacturing process)		
Purchased flat glass cut to size but not further processed	(b)	9,683
Other	10,146	12,032
Canteen takings	727	961
Total	17,047	29,212

(a) Amounts charged for hiring out plant, machinery or other goods, for providing transport, or for technical or other services rendered to other organisations.

(b) Not recorded separately for 1963.

TABLE 8 Production of certain principal products of the industry by larger establishments, 1963 and 1968

This table is not applicable to this industry.

TABLE 9 Purchases by larger establishments of selected principal products of the industry, 1968

This table is not applicable to this industry.

TABLE 10 Purchases by larger establishments in the industry, 1963 and 1968

Establishments employing 25 or more persons: Analysis of returns received, United Kingdom

	1963		1968	
	Quantity	Cost	Quantity	Cost
		£'000		£'000
Materials for use in production				
Sand	..	2,574	..	3,997
Limestone	..	578	..	1,046
Alumina whether in calcined, hydrated or other form and all feldspar and other alumina bearing materials	..	618	..	1,034
Inorganic chemicals (including inorganic gases) (a)				
Soda ash	..	5,289	..	6,770
Other sodium and potassium compounds	..	469	..	759
Borax and boric acid	..	438	..	550
Lead oxides	..	287	..	473
Other inorganic chemicals	..	1,159	..	1,740
Synthetic resins and plastics materials (excluding leathercloth and reinforced plastics)				
	Th.cwt.			
Polyvinyl chloride polymers and copolymers including the net resin content of latices, solutions and dispersions, plasticised moulding and extrusion compounds (b)	{ 5.3 ..	{ 59 26	{	{ 267 ..
			Th.cwt.	
Polystyrene (including copolymers) moulding and extrusion compounds			20.7	233
Phenolics and allied products: resins (the net resin content), solutions, emulsions, dispersions, moulding and extrusion compounds and aminoplastics (melamine and urea formaldehyde)	{ 45.4	{ 236	{ 20.7	{ 196
Thermosetting polyesters, including epoxide resins (the net resin content excluding filler) and resin glass fibre mixtures	{ 7.1 ..	{ 94 50	{ 4.8 ..	{ 77 162
Cullet	..	524	..	1,299
Glass tubing and rod	{ 73.6 ..	{ 490 209	{ 89.0 ..	{ 796 264
Plate, sheet and float glass purchased for further processing	..	9,093	..	14,717
Other glassware purchased for decorating	..	246	..	409
Refractory materials	..	1,139	..	1,228
	Th.gal.		Th.gal.	
Lubricating oils and greases	{ 712 ..	{ 159 42	{ 728 3.0 ..	{ 208 17 22
Replacement parts for firms' own machinery, plant and vehicles, and accessories and consumable tools bought as replacement				
Tyres and other spare parts for firms' own road goods vehicles	{ ..	{ 4,578	{ ..	{ 362
Other			..	5,523
All other materials for use in production	..	8,893	..	12,270

Continued on next page

TABLE 10 (continued)

	1963		1968	
	Quantity	Cost	Quantity	Cost
Packaging materials		£'000		£'000
Paper and board				
Boxes, cartons, drums and canisters (with or without metal ends) of paper and cardboard	..	3,722	..	2,715
Fibreboard packing cases			..	1,868
Wrapping and packing paper (including paper coated with plastics and any laminates incorporating paper but not metal)			..	390
Paper and board for converting into packaging materials	..	566	..	28
Other packaging materials of paper and paperboard (including moulded pulp units and labels) but excluding bags and multiwall paper sacks (c)			..	238
Timber				
Containers wholly or mainly of wood (including plywood boxes and drums), baskets and wickerwork crates	..	491	..	438
	Th.cu.ft.		Th.cu.ft.	
Timber (sawn or planed) for manufacture into packing cases, etc	1,728	780	1,060	529
Other wood products for packaging, including wood wool, but excluding plywood for manufacture into packing cases	..	123	..	242
All other packaging materials (including cellular foam)	..	366	..	380
Fuel and electricity (d)	Th.tons		Th.tons	
Coal	465	2,567	169	1,074
Coke (including screenings) and manufactured fuel	7.5	64	1.8	21
			..	9
	Th.gal.		Th.gal.	
Derv fuel and motor spirit for use in road vehicles	1,452	298	2,105	552
	..	44	..	60
Other liquid fuels (including creosote/pitch mixtures, etc, and liquefied petroleum gases)	148,152	5,472	211,508	8,598
			..	130(e)
Gas	Th.therms		Th.therms	
Coke oven gas	4,541	215	4,680	168
	..	67		
Other (including town gas)	43,643	2,465	41,873	2,290
			..	240
	Th.kWh		Th.kWh	
Electricity	850,518	4,065	1,068,524	5,764
	..	601	..	637
Total cost of materials and fuel		59,158		80,788
Goods purchased for merchanting		7,800		17,015
Canteen purchases		668		845
Total cost of purchases		67,625		98,648

(a) For 1963 described as 'Heavy chemicals (acids, alkalis, alcohols, other inorganic and organic chemicals, compressed gases, etc)'.
 (b) Emulsions were specifically included for 1963.
 (c) Bags were not specifically excluded for 1963.
 (d) Owing to the risk of disclosure of information relating to individual firms, total quantities of electricity generated in firms' own establishments in 1963 and 1968 cannot be given.
 (e) For 1968, may include a small amount of fuels not covered by specific headings.

TABLE 11 Transport costs and employment of larger establishments, 1963 and 1968

Establishments employing 25 or more persons:
 Analysis of returns received, United Kingdom

	Unit	1963	1968
Average number mainly employed on transport	No.	1,082	1,339
Transport costs			
Wages and salaries	£'000	923	1,609
Derv fuel and motor spirit	"	342	612
Tyres and other spare parts for road goods vehicles	"	..	362
Payments to other organisations for transport	"	6,127	6,759
	{ by road		
	{ by rail and other means excluding postal services		1,277
Costs of operating road goods vehicles			
Insurance	"	83	62
Vehicle licences	"	63	148
Depreciation	"	616	437
Payments to other organisations for repairs and maintenance	"	195	225
Total	"	8,348(a)	11,490

(a) Excluding tyres and other spare parts for road goods vehicles, not collected separately for 1963.

TABLE 12 Payments for certain services, etc by larger establishments, 1963 and 1968 (a)

Establishments employing 25 or more persons:
 Analysis of returns received, United Kingdom

	Amounts payable	
	1963	1968
Repairs and maintenance to	£'000	£'000
Buildings	303	499
Road goods vehicles	195	225
Plant, machinery and other capital equipment	922	2,351
Insurance, licensing and depreciation of road goods vehicles (b)	761	647
Rates, excluding water rates	1,339	2,051
Hire of plant and machinery	145	310
Postage, telephone, telegrams, cables and telex (c)	472	727
Total	4,138	6,809

(a) No deduction is made for these payments to arrive at the figures of net output given in this report.
 (b) For details see Table 11.
 (c) Excluding telex for 1963.

TABLE 13 Percentage analysis of twelve-month periods covered by returns from larger establishments, 1968

Establishments employing 25 or more persons:
Analysis of returns received, United Kingdom

Year ended	Percentage of total returns received	Percentage of total number employed
1968	Per cent.	Per cent.
April (a)	4.2	0.9
May	1.2	0.1
June	3.6	0.7
July	1.2	0.2
August	2.4	0.3
September	7.2	6.3
October	4.2	2.2
November	0.0	0.0
December	42.3	45.1
1969		
January	4.8	5.7
February	1.2	1.0
March	27.7	37.5
April (b)	0.0	0.0
	100	100

(a) From 6 April.

(b) To 5 April.