

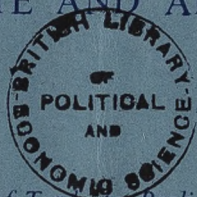
BOARD OF TRADE

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*The Report on the  
Census of Production  
for 1954*

Volume 2: Industry Q

GLUE, GUM, PASTE AND ALLIED INDUSTRIES



*Presented by the Board of Trade to Parliament in pursuance of the  
Statistics of Trade Act, 1947 (10 & 11 Geo. 6 Ch. 39, Sec. 7)*

LONDON: HER MAJESTY'S STATIONERY OFFICE

1957

PRICE 1s 6d NET

# The Report on the Census of Production for 1954

## VOLUME 2, INDUSTRY Q

### GLUE, GUM, PASTE AND ALLIED INDUSTRIES

THIS REPORT relates to establishments engaged wholly or mainly in the manufacture of gelatine, glue, gum, paste, shellac, size, etc., including preliminary processes such as scraping, crushing of bones, and sorting and grinding of gums.

These industries correspond to minimum list heading 39(4) in the Standard Industrial Classification.

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IMPORTANT NOTES and definitions appear on the next page. In interpreting the data in the tables, it is essential to bear these in mind.

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The following notes describe terms in general use in the tables of the report. More detailed explanations of the terms used and a description of the scope and method of taking the census are given in the separate booklet entitled 'The Report on the Census of Production for 1954 - Introductory Notes' (price 1s. 6d. net).

**Industrial Classification:** Establishments are classified to industries according to the nature of their output and, as far as possible, in conformity with the Standard Industrial Classification. Certain products are identified as the principal products of individual industries, the principal products for a given industry being of a similar nature or commonly associated in production. The principle of classification normally followed is that an establishment is classified to an industry if its output of the principal products of that industry accounted for a greater proportion of the value of its output than did its output of the principal products of any other industry.

**Specialist producers** normally comprise those establishments 50 per cent. or more of whose total output by value is accounted for by the characteristic products of the specialist group.

**Intermediate products:** For some industries figures are given showing the total quantities made during the year of intermediate products, i.e., products which may be further processed in the establishments in which they are produced.

**Larger establishments:** The information given in the report relates mainly to 'larger establishments', i.e., establishments of firms employing on the average more than 10 persons. In most cases an establishment comprises the whole of the premises under the same ownership or management at a particular address (e.g., a mine or factory). Offices, warehouses, laboratories and other ancillary places of business situated apart from the producing works are not regarded as separate establishments and are included in the return for the works.

**Small firms** are those employing on the average 10 or fewer persons.

The estimates for the industry as a whole given in Table 1 are normally obtained by increasing the other items shown in the same proportion as total employment.

**Gross output (production)** is the total value of goods made and other work done during the year; it is obtained by adjusting the value of sales and work done during the year for changes in the value of stocks of products on hand for sale and work in progress.

**Net output** is the amount left after deducting from the value of gross output the aggregate of the cost of materials and fuel used, the amount paid for work given out and, for 1951 and 1954, any transport payments made. This represents the value added to materials by the process of production, and constitutes the fund from which wages, salaries, rents, rates and taxes, advertising and other selling expenses and all other similar charges have to be met, as well as depreciation and profits.

**Sales** means sales during the year of goods made in the establishment covered by the return or made on commission for it, whether produced in the year or not. The value of sales is the net selling value, i.e., the amount charged to customers, whether on an ex-works or delivered basis, and net of any trade discounts, agents' commissions, allowances for returnable cases, purchase tax, etc. For goods charged on a delivered basis to customers overseas, firms were required to give the f.o.b. value.

**Materials and fuel:** The total cost of materials and fuel purchased includes all purchases during the year of materials for use in production, and of fuel (includ-

ing oil, gas and electricity) for all purposes: packing materials, including the full cost of returnable cases when first purchased; workshop and office materials; water charges; materials for repairs to buildings, plant and vehicles when carried out by firms' own work-people included in their returns; consumable tools; and parts for machinery purchased as replacements. Purchases of goods for merchandising are excluded. The cost of materials and fuel used, given in Table 2, is obtained by adjusting purchases for changes during the year in the value of stocks.

**Stocks:** Firms were required to give stocks of materials and fuel, products on hand for sale, and work in progress, at income tax values.

**Customs and Excise Duty** paid on materials purchased is normally included in the cost of materials. Finished goods are similarly valued as they were sold, duty-paid or duty-free. The net amount of any duty paid is deducted in arriving at net output.

**Employment:** Total employment includes working proprietors, administrative, technical and clerical employees, and operatives, but excludes outworkers, canteen employees and persons engaged in merchandising or any other activity not covered by a firm's return, who are shown separately as excluded employees. Employees are persons on the pay-roll (i.e., persons whose National Insurance cards were held by employers), whether employed full-time or part-time.

**Working proprietors** are proprietors of businesses other than limited companies, together with members of their families who worked in the business without receiving fixed wages or salaries. Any persons working less than half the normal hours are excluded. For Northern Ireland directors of limited companies (other than those paid by fee only) are also included.

**Administrative, technical and clerical employees** include directors, other than those paid by fee only (except in Northern Ireland); managers, superintendents and works foremen; research, experimental, development, technical and design employees (other than operatives); draughtsmen and tracers; travellers; and office (including works office) employees.

**Operatives** include all other classes of employees, i.e., broadly speaking, all manual workers.

**Outworkers** are persons employed by the firm who work on materials supplied by the firm in their own homes.

**Wages and salaries** include all overtime payments, bonuses and commissions without any deductions for income tax, insurances, contributory pensions etc. They exclude payments to working proprietors.

**Capital expenditure** includes expenditure on new building work, and on plant, machinery and vehicles, charged to capital account during the year, including any transport and installation costs involved. It includes expenditure in respect of establishments in Great Britain which had not begun production before the end of the year (which has not previously been included in the Census of Production reports for individual industries).

**Symbols used:**

.. for not available

- for nil or negligible (less than half the final digit shown).

Where figures are rounded, e.g., given to the nearest £ thousand, there may be apparent slight discrepancies between the sums of constituent items and the totals shown. In some cases, figures have been combined with others of a similar nature where publication of separate details might disclose information relating to an individual undertaking.

TABLE 1

Industry summary: Estimates for the industry as a whole

	United Kingdom			Scotland 1954	Wales 1954 (a)
	1948	1951	1954		
Gross output (production)	£ million 11.0	£ million 16.5	£ million 17.2	£ million 0.33	£ million ..
Net output	3.9	5.7	6.4	0.15	..
Total stocks and work in progress					
At beginning of year	1.5	1.9	2.7	0.16	..
Change during year	+ 0.2	+ 0.5	-	-	..
Capital expenditure less disposals (b)	0.5	0.5	0.5	-	..
Wages and salaries	1.8	2.4	2.7	0.08	..
Total employment (including working proprietors)	Thousands 5.2	Thousands 5.7	Thousands 5.3	Thousands 0.20	Thousands ..

(a) Owing to the risk of disclosure of information relating to individual firms, separate particulars cannot be given.

(b) Capital expenditure on new building work, plant, machinery and vehicles (including (except in 1948) that incurred in Great Britain for establishments not yet in production), less amounts received for plant, machinery and vehicles disposed of.

## Summary of returns received

TABLE 2

	Unit	Great Britain 1948	United Kingdom	
			1951	1954
<b>FIRMS EMPLOYING ON AVERAGE MORE THAN 10 PERSONS</b>				
Number of establishments	No.	62	64	62
Total value of sales and work done	£'000	10,483	15,639	16,531
Products on hand for sale	"	522	784	1,525
and work in progress	"	133	36	133
Gross output (production) (a)	"	10,456	15,676	16,398
Purchases of materials and fuel	"	6,854	10,151	9,830
Stocks of materials and fuel	"	877	1,037	1,034
Cost of materials and fuel used	"	87	407	89
Payment for work done on materials given out	"	6,767	9,745	9,741
Payment for transport (b)	"	10	4	1
Net output	"	161	467	566
Average number of employees	No.	3,679	5,460	6,090
Total employment (d)	"	3,841	4,052	3,846
Net output per person employed (d)	"	1,148(c)	1,407	1,187
Wages and salaries	£'000	4,991	5,462	5,034
Capital expenditure	"	737	1,000	1,210
New building work (e)	"	1,185	1,454	1,725
Plant and machinery	"	577	851	862
Vehicles	"	78	96	101
	"	378	317	299
	"	7	10	10
	"	30	90	90
	"	2	11	16
<b>FIRMS EMPLOYING ON AVERAGE 10 OR FEWER PERSONS</b>				
Number of returns	No.	37	46(f)	46
Total employment, including working proprietors	"	213	264(f)	228

(a) For the year 1948 gross output excludes payments for transport services outwards on finished goods sold. For subsequent years gross output includes payments to other firms and undertakings and to firms' own separate transport organisations for transport services.

(b) Payments to other firms and undertakings and to firms' own separate transport organisations. For the year 1948 payments cover only transport outwards of finished goods sold. For subsequent years they cover payments for transport of both finished goods sold and materials and fuel purchased.

(c) Number in week ended September 25, 1948.

(d) Including working proprietors.

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

(f) Excluding Northern Ireland, no information about small firms was collected in Northern Ireland for 1951.

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## GLUE, GUM, PASTE AND ALLIED INDUSTRIES

Analysis by size, 1954

Larger establishments in the United Kingdom

TABLE 3

Average number employed (a)	Estab-lish-ments	Gross output	Net output	Employees		Wages and salaries		Capital expenditure (b)	Net output per person employed (a)
				Operatives	Others	Operatives	Others		
11 - 24	11	788	245	145	53	63	36	15	1,238
25 - 49	21	1,846	679	527	217	206	153	52	911
50 - 99	14	2,750	1,014	673	219	270	167	94	1,137
100 - 199	9	4,116	1,623	990	335	454	199	114	1,225
200 - 499	7	6,898	2,530	1,511	363	733	306	215	1,350
Total	62	16,398	6,090	3,846	1,187	1,725	862	490	1,210

(a) Including working proprietors.

(b) Capital expenditure on new building work and on acquisition of plant, machinery and vehicles, excluding expenditure for establishments not yet in production.

Analysis according to specialisation within the industry, 1954

Larger establishments in the United Kingdom

TABLE 4

	Unit	Specialist producers of		Remainder of the industry	Total
		Gelatine, glue and size (animal)	Vegetable and other adhesives		
Number of establishments	No.	28	22	12	62
Total value of sales and work done	£'000	9,227	5,198	2,106	16,531
Sales of characteristic products	"	7,018	4,540		
Products on hand for sale	"	1,225	142	159	1,525
and work in progress	"	-	36	35	133
Gross output (production)	"	9,022	5,235	2,141	16,398
Purchases of materials and fuel	"	5,146	3,479	1,206	9,830
Stocks of materials and fuel	"	483	425	126	1,034
at beginning of year	"	52	12	25	89
change during year	"	5,094	3,467	1,180	9,741
Cost of materials and fuel used	"	-	-	-	1
Payment for work done on materials given out	"	354	143	69	566
Payment for transport	"				
Net output	"	3,574	1,625	891	6,090
Average number of employees	No.	2,473	802	571	3,846
operatives	"	562	409	216	1,187
others	"	3,035	1,212	787	5,034
Total employment (a)	"	1,178	1,341	1,132	1,210
Net output per person employed (a)	£	1,115	351	259	1,725
Wages and salaries	£'000	404	322	136	862
of operatives	"				
of others	"				
Capital expenditure	"				
New building work (b)	"	38	49	13	101
Plant and machinery	"	193	56	49	299
acquisitions (b)	"	4	4	1	10
disposals	"	40	27	23	90
acquisitions (b)	"	6	6	4	16
disposals	"				

(a) Including working proprietors.

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

## GLUE, GUM, PASTE AND ALLIED INDUSTRIES

Sales of the principal products of the industry, including sales of these products by establishments classified to other industries

Larger establishments in the United Kingdom

TABLE 5

	1951		1954		Entries
	Quantity	Value	Quantity	Value	
	Th. tons	£'000	Th. tons	£'000	Number
Gelatine, glue and size (animal)					
Gelatine (including pharmaceutical and photographic)	10.2	4,023 (a)	10.8	3,794	20
Bona glue and size, dried, or undried in terms of commercial dry weight	14.0	1,761	12.7	1,685	20
Hide glue and technical gelatine, dried, or undried in terms of commercial dry weight	12.0	2,149 (b)	11.9	1,954	18
Liquid glue	2.9	407	3.1	433	16
Other adhesives					
Casein glue	1.8	303	1.6	219	8
Vegetable adhesives for all purposes	43.7	3,229	40.6	3,023	26
Synthetic resin glue	..	83	..	..	..
Other adhesives	8.1	954	11.2	1,153	9
	..	166	13.0	1,044	32
			..	257	..
Vegetable gums, not adhesive, used as finishing materials in textile industries		(c)	2.5	379	5
			..	54	..
Bleached shellac	0.7	267	0.5	152	..
	..	75	..	158	..
Bone by-products	7.6	220	8.4	303	11
Waste products	..	42	..	20	14
Work done for the trade or on commission (d)	..	49	..	82	5
Total		13,729		14,711	
Sales in other industries (see Table 6)		1,097		1,474	
Principal products of this industry sold by establishments in the industry		12,632		13,237	60

(a) Described as edible gelatine (including pharmaceutical) and photographic gelatine.

(b) Including an unrecorded quantity of purchased gelatine sold in blended form.

(c) Not separately recorded.

(d) Amount charged.

GLUE, GUM, PASTE AND ALLIED INDUSTRIES  
Sales of principal products of the industry by establishments  
classified to other industries  
Larger establishments in the United Kingdom

TABLE 6

	1954			Principal industries in which produced (a)
	Quantity	Value	Entries	
	Th. tons	£'000	Number	
Gelatine (including pharmaceutical and photographic) bone glue and size, and hide glue and technical gelatine, dried or undried in terms of commercial dry weight	1.0	274	7	2/E, 2/F, 2/L, 2/O
Liquid glue and casein glue	0.5	85	..	2/I, 2/L, 9/E
Vegetable adhesives for all purposes	8.2	627	7	(b)
Other adhesives	2.6	187	15	(b)
	..	118		
Vegetable gums, not adhesive used as finishing materials in textile industries, bleached shellac and bone by-products	1.1	128	..	2/E, 2/I, 6/D
	..	54		
<b>Total</b>		<b>1,474</b>	<b>..</b>	

(a) The volume number and industry references given are to the industries shown in the list at the back of this report.

(b) Production is widely distributed among other industries.

Sales in the industry of other than principal products  
Larger establishments in the United Kingdom

TABLE 7

	1954	
	Quantity	Value
	Th. tons	£'000
Animal (except marine animal) oils, fats and greases		
Tallow	1.5	95
Other animal oils, fats and greases		
Unrefined	12.4	749
Refined	4.9	357
Fertilisers	13.2	286
	..	260
Feeding stuffs for animals, poultry, etc.	34.3	830
Other goods	..	717
<b>Total</b>		<b>3,294</b>

TABLE 8 - Total make of intermediate products  
Larger establishments in the United Kingdom  
This table is not appropriate to these industries.

GLUE, GUM, PASTE AND ALLIED INDUSTRIES  
Purchases of materials and fuel, 1954  
Larger establishments in the United Kingdom

TABLE 9

	Quantity	Cost
	Th. tons	£'000
<b>Materials</b>		
Bones and bone pieces, raw or degreased	120.1	1,932
Glue and gelatine stock, hide cuttings and leather and skin waste		
Wet	78.6	463
Dry	13.7	249
	..	54
Gelatine	3.1	487
Osseine	3.3	357
Starch and Dextrine	30.7	1,579
Natural gums and resins	.6	109
Packing materials		
Of paper and board	..	134
Other	..	395
Replacement parts for plant, machinery and vehicles and consumable tools bought as replacements	..	310
All other purchased materials	..	2,770
<b>Fuel and electricity</b>		
Coal	133.9	490
Coke	19.8	71
Liquid fuels (including creosote/pitch mixtures)		
For use in internal combustion engines	Th. gal.	
Motor spirit (petrol) for use in road vehicles and derv. fuel	317.5	64
Other	27.2	2
For burning in furnaces, boilers, kilns, etc.	799.5	32
	..	14
	Th. therms	
Gas purchased from Gas Boards and other sources	434.8	23
Electricity purchased from Electricity Boards and other sources (a)	Th. kWh.	
	36,654	168
All other purchased fuel		129
<b>Total cost</b>		<b>9,830</b>

(a) The total quantity of electricity generated in firms' own establishments in these industries in 1954 was 8913 Th. kWh.

## GLUE, GUM, PASTE AND ALLIED INDUSTRIES

Average number of employees, and wages, salaries and superannuation payments

Larger establishments in the United Kingdom (a)

TABLE 10

	1951	1954
	Number	Number
Average number of employees		
Operatives	4,052	3,846
Administrative, technical and clerical employees	1,407	1,187
Total	5,459	5,033
	£'000	£'000
Wages and salaries paid to		
Operatives	1,454	1,725
Administrative, technical and clerical employees	851	862
Total	2,304	2,587
	£	£
Wages and salaries per head		
Operatives	359	449
Administrative, technical and clerical employees	605	726
		£'000
Superannuation and other pension funds for employees and dependents (b)		
Employers' contributions	..	41
		Number
Employees covered	..	1,665
		£'000
Pension, etc. payments to former employees and dependents (b)	..	9

(a) The following persons, not included in the table, were also employed by larger establishments in this industry ("other workers" includes, for example, employees engaged in merchanting):-

	United Kingdom	
	1951	1954
	Number	Number
Canteen workers		
Male	3	2
Female	34	32
Total	37	34
Other workers		
Male	22	8
Female	13	5
Total	35	13
Total excluded employees	72	47

(b) The figures given relate to larger establishments in Great Britain only.

## Employment in a specified week (a)

Larger establishments in the United Kingdom

TABLE 11

	1951			1954		
	Males	Females	Total	Males	Females	Total
Working proprietors	2	1	3	1	-	1
Operatives	3,254	785	4,039	3,141	722	3,863
Administrative, technical and clerical employees	920	491	1,411	735	441	1,176
Total employees	4,174	1,276	5,450	3,876	1,163	5,039

(a) Week ended September 22, 1951, or October 30, 1954.

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