

If not shown, please enter your 11-digit Census File Number from the address label on page 1

Census File Number

Item 17. CONSUMPTION OF SELECTED MATERIALS DURING 1997

INSTRUCTIONS

1. General - The materials, parts, and supplies listed below are those commonly consumed in the manufacture, processing, or assembly of the products listed in item 18B. Please review the entire list and report separately each item consumed. Leave blank if you do not consume the item. If you use materials, parts, and supplies which are not listed, describe and report them in the "Cost of all other materials . . ." line at the end of this section. If you consumed less than \$25,000 of a listed material, include the value with "Cost of all other materials . . ." Census material code 970099 8.

Report materials, parts, and supplies purchased, transferred from other plants of your company, or withdrawn from inventory.

If quantities are requested, please use the unit of measure specified.

If the information as requested cannot be taken directly from your book records, REASONABLE ESTIMATES ARE ACCEPTABLE.

2. Valuation of Materials Consumed - The value of the materials, etc., consumed should be based on the delivered cost; i.e., the amount paid or payable after discounts and including freight and other direct charges incurred in acquiring the materials.

Materials received from other plants within your company should be reported at their full economic value (the value assigned by the shipping plant, plus the cost of freight and other handling charges).

If purchases or transfers do not differ significantly from the amounts actually put into production, you may report the cost of purchases or transfers. However, if consumption differs significantly from the amounts purchased or transferred, these amounts should be adjusted for changes in the materials and supplies inventories by adding the beginning inventory to the amount purchased or transferred and subtracting ending inventory.

3. Contract Work - Include as materials consumed those you purchased for use by others making products for you under contract. Amounts paid to the companies doing the contract work should be reported in item 10, line e, and should include freight in and out. On the other hand, materials owned by others but used at this establishment in making products for others under contract or on commission should be excluded.

4. Resales - Cost for products bought and sold or transferred from other establishments of your company and sold without further manufacture, processing, or assembly should be reported in item 10, line b, not in item 17 below. The value of these products shipped by this establishment should be reported in item 18B under Census product code 99989 00 6, "Resales."

5. Produced and Consumed - Industrial Chemicals - Report the quantities produced and used in manufacturing other products made in this establishment in item 19. Note that the materials used to produce these items should be reported in item 17.

Line No.	Materials, parts, and supplies  (A)	Census material code  (B)	Unit of measure for quantities  (C-1)	Basis  (C-2)	Consumption of purchased materials and of materials received from other establishments of your company			
					Quantity  (D)	Cost, including delivery cost (freight-in) (E)		
						574 Millions	Thou- sands	Dollars
1	ACIDS (Except spent acids)	281944 9	Short tons	100% HCl		\$		
2	Hydrochloric acid	281946 4		100% HF				
3	Nitric acid	287311 5		100% HNO <sub>3</sub>				
4	Sulfuric acid	281931 6		100% H <sub>2</sub> SO <sub>4</sub>				
5	Ammonia, synthetic anhydrous	287312 3		100% NH <sub>3</sub>				
6	Chlorine	281211 3		100% Cl				
7	Sodium hydroxide (caustic soda)	281238 6		100% NaOH				
8	All other industrial inorganic chemicals	280099 3						
9	Acetylene and other industrial gases, compressed and liquefied, including argon, carbon dioxide, nitrogen, nitrous oxide, etc.	281301 2						
10	Alcohol, ethyl (pure and denatured)	286952 7						
11	Other alcohols, including amyl, butyl, methyl, and propyl	286957 6						
12	Toluene and xylene	286519 4	Thousand pounds	100%				
13	Phenol	286513 7						
14	Ortho and para-xylene	286590 5						
15	Benzol (benzene)	286552 5		100% C <sub>6</sub> H <sub>6</sub>				
16	Tar, crude	286553 3	Short tons					

CONTINUE WITH ITEM 17 ON PAGE 6

Item 17. CONSUMPTION OF SELECTED MATERIALS DURING 1997 – Continued								
Line No.	Materials, parts, and supplies  (A)	Census material code  571 (B)	Unit of measure for quantities  (C-1)	Basis  (C-2)	Consumption of purchased materials and of materials received from other establishments of your company			
					Quantity  573 (D)	Cost, including delivery cost (freight-in)  (E)		
						574 Millions	Thou-sands	Dollars
17	Other cyclic crudes and intermediates	286505 3	↑ Thousand pounds ↓			\$		
18	Acetone (natural and synthetic)	286970 9						
19	Other synthetic organic chemicals, n.e.c.	286099 7						
20	HYDRO-CARBONS USED AS RAW MATERIALS OR FEEDSTOCKS (Do not include fuel or energy reported in item 10c)	Natural gas	131152 1	Million cubic feet				
21		Ethane	2911A1 3	↑ Thousand pounds ↓				
22		Ethylene	2911A2 1					
23		Propane	2911A3 9					
24		Propylene	2911A4 7					
25		Butane and iso-butane	2911A5 4					
26		Butylene and iso-butylene	2911A6 2					
27		Other	190012 5					
28	Sulfur	147901 3	Long tons					
29	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc., but excluding plastics sheets, rods, and other shapes	282104 9	Thousand pounds					
30	Agricultural products (crude) including flowers, grains, seeds, herbs, etc.	019101 5						
31	Parts and attachments for machinery and equipment	355911 9						
32	Paperboard containers, boxes, and corrugated paperboard	265001 8						
33	Metal containers	340001 7						
34	Cost of all other materials and components, parts, containers, and supplies consumed . . . Describe the three principal materials, etc., included in this value.	970099 8						
35	<b>TOTAL</b> Sum of lines 1-34 should equal item 10, line a					\$		

Item 18A – Not applicable to this report

CONTINUE WITH ITEM 18B ON PAGE 7

If not shown, please enter your 11-digit Census File Number from the address label on page 1

Census File Number

Item 18B. PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1997

INSTRUCTIONS

1. General – The manufactured products and services listed below are generally made in your industry. If you make products that are not listed, describe and report them in the "All other products made in this establishment" section at the end of item 18B. PLEASE DO NOT COMBINE PRODUCT LINES.

If the information as requested cannot be taken directly from your book records, REASONABLE ESTIMATES ARE ACCEPTABLE.

2. Valuation of Products – Report the value of the products shipped and services performed at the net selling value, f.o.b. plant to the customer; i.e., after discounts and allowances, and exclusive of freight charges and excise taxes.

If you transfer products to other establishments within your company, you should assign the full economic value to the transferred products; i.e., include all direct costs of production and a reasonable proportion of all other costs and profits.

3. Contract Work – Report PRODUCTS MADE BY OTHERS FOR YOU FROM YOUR MATERIALS on the specific lines as if they were made in this establishment. On the other hand, do not report on the specific product lines PRODUCTS THAT YOU MADE FROM MATERIALS OWNED BY OTHERS. Report only the amount that you received for "commission or contract receipts" under Census product code 93000 00 8.

4. Resales – Do not report on the specific product lines those PRODUCTS BOUGHT AND SOLD OR TRANSFERRED FROM OTHER ESTABLISHMENTS OF YOUR COMPANY AND SOLD WITHOUT FURTHER MANUFACTURE. Report only a value under Census product code 99989 00 6, "Resales."

5. Detailed Data Reported Elsewhere – Items denoted by an asterisk (\*) require totals for groups of products covered in the Current Industrial Reports (CIR). If you report on the CIR form the sum of the detailed CIR products should equal the total reported on this census form.

NOTE – Only CIR totals are requested; do not duplicate detail reported on the CIR surveys.

Line No.	Products and services  (A)		Census product code  (B)	Products shipped and other receipts, including interplant transfers		
				Value, f.o.b. plant (E)		
				584 Millions	Thou- sands	Dollars
1	Tar, tar crudes, and tar pitches		28655 00 9	\$		
2	Cyclic (coal tar) intermediates		28651 00 8			
3	Synthetic organic dyes		28652 00 6			
4	Synthetic organic pigments, lakes, and toners		28653 00 4			
5	ALIPHATICS MADE FROM PURCHASED REFINERY PRODUCTS (28691)	Chemical raw material	28691 32 7			
6		Other uses	28691 33 5			
7	AROMATICIS MADE FROM PURCHASED REFINERY PRODUCTS (28656)	Chemical raw material	28656 58 5			
8		Other uses	28656 59 3			
9	Pesticides and other synthetic organic agricultural chemicals, except preparations (Report preparations on lines 54–63)		28694 00 8			
10	Synthetic Organic Chemicals, N.E.C. (28693)	FLAVOR AND PERFUME MATERIALS	Chemical compounds for use as flavor and perfume materials, unmixed	28693 13 3		
11			Chemical compounds for use as flavor and perfume materials, mixed	28693 15 8		
12		Rubber processing chemicals		28693 31 5		
13		Plasticizers		28693 51 3		
14		Other synthetic organic chemicals, n.e.c.		28693 99 2		
15	Miscellaneous end-use chemicals and chemical products, excluding urea		28696 00 3			

CONTINUE WITH ITEM 18B ON PAGE 8

**Item 18B. PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1997 – Continued**

Line No.	Products and services * Item corresponds to products reported on Current Industrial Reports (CIR)		Census product code	Products shipped and other receipts, including interplant transfers			
				Value, f.o.b. plant (E)			
				584	Thou-	Dollars	
(A)		(B)	Millions	sands			
16	MISCELLANEOUS CYCLIC AND ACYCLIC CHEMICALS AND CHEMICAL PRODUCTS (28697)	Fluorocarbon gases	28697 11 8	\$			
17		Carbon bisulfide (disulfide)	28697 13 4				
18		Fatty acid esters	28697 15 9				
19		Other	28697 19 1				
20	Other Industrial Organic Chemicals (28698)	Flavor oil mixtures and blends	28698 31 4				
21		Reagent and high purity grades of organic chemicals refined from purchased technical grades	28698 37 1				
22		NATURAL ORGANIC CHEMICALS, N.E.C.	Derivatives of fatty substances, including salts, alcohols and esters, except plasticizers and surface active agents	28698 53 8			
23			Other natural organic chemicals, n.e.c.	28698 55 3			
24		Other industrial organic chemicals, n.e.c. – <i>Specify by kind</i>		28698 98 3			
25	Ethyl Alcohol (28692)	MANUFACTURED BY THE WET MILL PROCESS	Pure (natural)	28692 10 1			
26			Fuel ethanol	28692 15 0			
27			Other denatured (special or complete), including natural and synthetic, for uses other than rubbing	28692 19 2			
28		MANUFACTURED BY OTHER PROCESSES (Dry mill/distillation)	Pure (natural)	28692 20 0			
29			Fuel ethanol	28692 25 9			
30			Other denatured (special or complete), including natural and synthetic, for uses other than rubbing	28692 29 1			
31	Distillers' dried grains, dark and light, and dried solubles		20851 65 5				
32	Rubbing alcohol		28346 00 5				
33	Thermoplastic resins and plastics materials		28213 00 7				
34	Thermosetting resins and plastics materials		28214 00 5				
35	Synthetic rubber (vulcanizable elastomers), including thermoplastic elastomers – <i>Specify kind</i>						
			28220 00 2				
36	Urea (Also corresponds to sum of item codes 3184 to 3189 on CIR MA28B, Inorganic Fertilizer Materials)*		28732 00 6				
37	SYNTHETIC ORGANIC MEDICINAL CHEMICALS	Antibiotics, in bulk (nonpreparations)	28331 10 6				
38		Other bulk synthetic organic medicinal chemicals	28331 20 5				
39	Surfactants (bulk surface active agents)		28430 85 8				

CONTINUE WITH ITEM 18B ON PAGE 9

If not shown, please enter your 11-digit Census File Number from the address label on page 1

Census File Number

ITEM 18B - PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1997 - Continued

Line No.	Products and services *Item corresponds to products reported on Current Industrial Reports (CIR)			Census product code	Products shipped and other receipts, including interplant transfers		
					Value, f.o.b. plant (E)		
	(A)	(B)	584 Millions	Thou- sands	Dollars		
40	ALKALIES AND CHLORINE	Chlorine (compressed or liquefied)(Corresponds to item codes 2111 and 2115 on CIR MA28A, Inorganic Chemicals)*	28121 00 2	\$			
41		Sodium hydroxide (caustic soda) (Corresponds to the sum of item codes 2362 to 2368 on CIR MA28A, Inorganic Chemicals)*	28123 00 8				
42	INDUSTRIAL INORGANIC CHEMICALS	Synthetic ammonia, nitric acid, and ammonium compounds (Corresponds to the sum of item codes 3111-3143 and 3151-3168 on CIR MA28B, Inorganic Fertilizer Materials and Related Products)*	28731 00 8				
43		Sulfuric acid (Corresponds to the sum of item codes 9311-9331 on CIR MA28B, Inorganic Fertilizer Materials and Related Products)*	28193 00 1				
44		Phosphoric acid (Corresponds to the sum of item codes 3473-3474 on CIR MA28B, Inorganic Fertilizer Materials and Related Products)*	28741 00 7				
45		Other inorganic acids (Corresponds to the sum of item codes 3411-3497 on CIR MA28A, Inorganic Chemicals)*	28194 00 9				
46		Potassium and sodium compounds, except bleaches, alkalis, and alum (Corresponds to item codes 3225 and 3703-3788 on CIR MA28A, Inorganic Chemicals)*	28197 00 2				
47		Chemical catalytic preparations (Corresponds to item code 3811 on CIR MA28A, Inorganic Chemicals)*	28198 00 0				
48		Other inorganic chemicals, except aluminum oxide, activated and reactivated carbon and inorganic dyes (Corresponds to item codes 3235, 3891-4998, and 8999 on CIR MA28A, Inorganic Chemicals)* - <i>Specify kind</i>	28199 97 4				
49	INDUSTRIAL GASES (Elemental, compressed, and liquefied)	Acetylene (Corresponds to the sum of item codes 2106-2108 on CIR MA28C, Industrial Gases)*	28132 00 9				
50		Carbon dioxide (Corresponds to the sum of item codes 3110-3140 on CIR MA28C, Industrial Gases)*	28133 00 7				
51		Nitrogen (Corresponds to the sum of item codes 4314-4331 on CIR MA28C, Industrial Gases)*	28135 00 2				
52		Oxygen (Corresponds to the sum of item codes 4414-4443 on CIR MA28C, Industrial Gases)*	28136 00 0				
53		Other industrial gases, including argon, hydrogen, and carbon monoxide (Corresponds to the sum of item codes 4101-4209 and 4513-4713 on CIR MA28C, Industrial Gases)*	28137 00 8				
54	Pesticidal Preparations (Formulations) (Primarily for lawn, garden, agricultural and commercial use)	INSECTICIDAL PREPARATIONS	Agricultural and commercial	Organo-phosphate compounds	2879A 13 5		
55				Other - <i>Specify kind</i>	2879A 17 6		
56		Lawn and garden	Agricultural and commercial	Organo-phosphate compounds	2879C 13 1		
57				Other - <i>Specify kind</i>	2879C 17 2		
58		HERBICIDAL PREPARATIONS	Agricultural and commercial	Phenoxy compounds	2879A 21 8		
59				Other - <i>Specify kind</i>	2879A 29 1		
60			Lawn and garden	Agricultural and commercial	Phenoxy compounds	2879C 21 4	
61					Other - <i>Specify kind</i>	2879C 29 7	
62		SOIL FUMIGANTS	Agricultural and commercial		2879A 41 6		
63				Lawn and garden	2879C 41 2		
64		Antifreeze preparations			28995 34 8		
65		Chemical preparations, n.e.c. - <i>Specify kind</i>			28995 00 9		

Item 18B. PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1997 – Continued									
Line No.	Products and services  (A)			Census product code  (B)	Products shipped and other receipts, including interplant transfers				
					Value, f.o.b. plant (E)				
				581	584	Millions	Thou-sands	Dollars	
66	Lubricating and similar oils, including hydraulic fluids, quenching and cutting oils, transformer oils, and liquid rust preventatives			29920 21 2	\$				
67	ALL OTHER PRODUCTS MADE IN THIS ESTABLISHMENT	<i>Describe and report separately each product with a sales value of \$50,000 or more which cannot be assigned to one of the lines above. Specify unit of measure for quantity. For all remaining products, write "Other" and report a single total value.</i>			18				
68					26				
69					34				
70					RECEIPTS FOR CONTRACT WORK	Receipts for work done for others on their materials . . . . . <i>Describe below products worked on and kind of work.</i>			93000 00 8
71	MISCELLANEOUS RECEIPTS	Sales of scrap, refuse, sold electricity, and other miscellaneous receipts (including receipts for repair work, etc.)			99980 00 5				
72	RESALES	Sales of products bought and sold without further manufacture, processing, or assembly in this establishment. The cost of such items should be reported in item 10, line b.			99989 00 6				
73	<b>TOTAL value of shipments and other receipts</b> Sum of lines 1-72, column (E)			77000 00 8	\$				

**Items 19-21 – Not applicable to this report**

**REMARKS** – Please use this space for any explanations that may be essential in understanding your reported data.

**Item 22. CERTIFICATION** – This report is substantially accurate and has been prepared in accordance with instructions.

Name of person to contact regarding this report ( <i>Print or type</i> )			Telephone	Area code	Number	Extension
667	1		2			
Name of company			Address ( <i>Number and street, city, State, ZIP Code</i> )			
Period covered	FROM: Month	Day	Year	TO: Month	Day	Year
	666	1		2		
Signature of authorized person			Title			Date