

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Report materials, parts, and supplies purchased, transferred from other plants of your company, or withdrawn from inventory.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

Line No.	Materials, parts, and supplies  (A)		Census material code  (B)	Consumption of purchased materials and of materials received from other establishments of your company		
				Cost, including delivery cost (freight-in) (E)		
			571	574	Thou-	sands
1	Fabricated metal products, including forgings		340004 1	\$		
2	Castings (rough and semifinished)		330091 0			
3	Shapes and Forms (Except castings, forgings, and fabricated metal products)	STEEL	Bars and bar shapes	331072 9		
4			Sheet and strip	331022 4		
5			Wire and wire products	331027 3		
6			All other steel shapes and forms	331035 6		
7		COPPER AND COPPER-BASE ALLOY	Rod, bar, and bar shapes	335103 8		
8			Plate, sheet, and strip (including military cups and discs)	335143 4		
9	All other copper and copper-base alloy shapes and forms		335110 3			
10	ALUMINUM AND ALUMINUM-BASE ALLOY	Extruded shapes (including extruded rod, bar, pipe, tube, etc.)	335405 7			
11		All other (wire, rolled rod and bar, powder, welded tubing, etc.)	335020 4			
12	All other nonferrous shapes and forms		335099 8			
13	Plastics products consumed in the form of sheets, rods, tubes, film, and other shapes		308007 4			
14	Paperboard containers, boxes, and corrugated paperboard		265001 8			

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Item 17. CONSUMPTION OF SELECTED MATERIALS DURING 1997 - Continued

Line No.	Materials, parts, and supplies  (A)	Census material code  571 (B)	Consumption of purchased materials and of materials received from other establishments of your company		
			Cost, including delivery cost (freight-in) (E)		
			574 Millions	Thousands	Dollars
15	Special dies, tools, die sets, jigs, and fixtures (except cutting tools for machine tools)	354430 1	\$		
16	Cost of all other materials and components, parts, containers, and supplies consumed . . . <i>Describe the principal materials, etc., included in this value.</i>	970099 8			
17	TOTAL Sum of lines 1-16 should equal item 10, line a		\$		

Item 18A. SELECTED METALWORKING AND RELATED OPERATIONS PERFORMED IN THIS ESTABLISHMENT DURING 1997

591 3207 8

Mark (X) appropriate box

Yes	No
592 1 <input type="checkbox"/>	2 <input type="checkbox"/>

Were any of the operations listed below performed in this establishment in 1997? . . . . .

*If "Yes," indicate in column (C) by marking appropriately, which of the specified operations were performed in this establishment during 1997. Where "YES" is marked, show in column (D) the approximate number of production workers on all shifts usually engaged in the specified operation.*

Line No.	Operation  (A)	Census code  591 (B)	Was this operation performed in this establishment during 1997? (C)		Number of production workers (on all shifts) usually employed when operated (estimate if necessary) (D)
			592 Yes	No	
			593		
1	Electroplating and other plating	018	1 <input type="checkbox"/>	2 <input type="checkbox"/>	
2	Galvanizing and other hot dip coating	026	1 <input type="checkbox"/>	2 <input type="checkbox"/>	
3	Heat treating of metals for production purposes	034	1 <input type="checkbox"/>	2 <input type="checkbox"/>	
4	Precision turned products (on screw machines, turning centers, and CNC equipment)	042	1 <input type="checkbox"/>	2 <input type="checkbox"/>	
5	Machine shop	059	1 <input type="checkbox"/>	2 <input type="checkbox"/>	
6	Tool and die shop (if separate from machine shop) for jigs, fixtures, dies, and other special tooling	067	1 <input type="checkbox"/>	2 <input type="checkbox"/>	
7	Pattern shop (foundry patterns only - metal, wood, etc.)	075	1 <input type="checkbox"/>	2 <input type="checkbox"/>	
8	Sheet metal work, aluminum or steel	083	1 <input type="checkbox"/>	2 <input type="checkbox"/>	
9	Stamping and blanking of metals	091	1 <input type="checkbox"/>	2 <input type="checkbox"/>	
10	Painting, lacquering, and enameling on metals	109	1 <input type="checkbox"/>	2 <input type="checkbox"/>	
11	Welding of steel plate for manufacturing production	117	1 <input type="checkbox"/>	2 <input type="checkbox"/>	
12	Welding repair shop	125	1 <input type="checkbox"/>	2 <input type="checkbox"/>	

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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 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 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."

Line No.	Products and services (A)		Census product code (B)	Products shipped and other receipts			
				Value, f.o.b. plant (E)			
			581	584	Millions	Thousands	Dollars
1	Metal fasteners for aircraft (including aerospace: meeting specifications for flying vehicles), such as: (a) bolts, 161 KSI tensile or more; (b) bolts, less than 161 KSI tensile; (c) locknuts; (d) other nuts; (e) rivets; (f) pins; (g) screws; (h) washers – <i>Specify</i>		34527 00 2	\$			
2	OTHER METAL FASTENERS	Screws, bolts, and other externally threaded, such as: (a) tapping or wood screws; (b) cap, set, machine, lag, flange, or self-locking screws; (c) hex bolts; (d) mine roof bolts; (e) other bolts; or (f) other – <i>Specify</i>	34524 00 9				
3		Internally threaded, such as: (a) hex nuts; (b) square nuts; or (c) other – <i>Specify</i>	34525 00 6				
4		Nonthreaded, such as: (a) washers; (b) rivets, tubular, split (including rivet caps) and blind; (c) rivets, solid; or (d) other – <i>Specify</i>	34526 00 4				
5		Other metal products made by cold-heading processes (or warm- or hot-heading processes [on fastener machines]) – <i>Specify whether end use is: (a) automotive; (b) aircraft; (c) for household appliances (including radio and television); (d) other; or (e) unknown – Specify</i>	34528 00 0				
6	PRECISION TURNED PRODUCTS AND TURNED PARTS (Nonstandard items made from rod, bar, or tube stock on screw machine turning centers and CNC equipment producing turned parts on basis of end product in which to be incorporated)	Automotive (34511)	34511 00 6				
7		Aircraft	34512 31 9				
8		Ordnance	34512 39 2				
9		Household appliances, including radio and television	34512 42 6				
10		Electric and electronic equipment, except household appliances	34512 52 5				
11		Medical equipment and supplies	34512 57 4				
12		Machinery	34512 62 4				
13		All other end uses – <i>Specify major end uses</i>	34512 98 8				
14	PUMPS AND PUMPING EQUIPMENT	For gasoline service station use	35860 00 6				
15		For other use (except fluid power pumps, vacuum pumps, concrete pumps, and pumps for motor vehicles; report those on lines 41-46) (corresponds to the sum of item codes 1098-1995 as reported on CIR form MA35P, Pumps [except hydraulic] and Compressors, for 1997)	35610 00 5				

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			
					Value, f.o.b. plant (E)			
				581	584	Thousands	Dollars	
16	Fluid power valves, hose fittings, assemblies, and parts (corresponds to the sum of item codes 1201-2277 as reported on CIR form MA35N, Fluid Power Products, for 1997)			34920 00 9	\$			
17	Industrial valves, except fluid power valves			34910 00 0				
18	Fabricated pipe and pipe fittings made from purchased pipe - <i>Specify type of metal</i>			34980 00 3				
19	Other metal valves and pipe fittings (except garden hose products and plumbers' brass goods; report those on lines 41-46)			34940 00 7				
20	Dies and interchangeable cutting tools, except metal-cutting, for machines and power-driven handtools			34235 00 2				
21	Cutting tools, machine tool accessories, and machinists' precision measuring devices, for machine tools and for other metalworking machinery			35450 00 6				
22	Industrial molds and mold boxes (except ingot molds; report those on lines 41-46)			35442 00 3				
23	Special dies and tools, die sets, jigs, and fixtures			35441 00 5				
24	Fabricated steel plate work (boiler shop products), including weldments, heat exchangers, tanks, vessels, and gas cylinders			34430 00 1				
25	Sheet metal work			34440 00 8				
26	JOB STAMPINGS	Automotive		34650 00 2				
27		Other		34692 00 4				
28	Flexible metal hose and tubing - <i>Specify kind of metal</i>			35994 00 3				
29	Hardware, not elsewhere classified - <i>Specify kind and use</i>			34290 00 7				
30	Electroplating, plating, polishing, and anodizing (performed on metals)			34710 00 4				
31	Etching, engraving, coating, and allied services (performed on metals)			34790 00 6				
32	Receipts for machine shop job work and job order repairs			35995 00 0				
33	Fabricated Plastics Products NOT Made On Turning Centers (Excluding pipe, bottles, plumbing fixtures, foam products, laminates, unsupported shapes, and custom compounding of purchased resins and color concentrates; report those on lines 41-46)	FOR TRANSPORTATION, BUILDING OR CONSTRUCTION, ELECTRICAL OR ELECTRONIC, OR FURNITURE COMPONENTS OR FURNISHING APPLICATIONS	Reinforced or fiberglass products	3089A 00 6				
34			Not reinforced or fiberglass	For transportation - <i>Specify whether motor vehicle, aircraft/aerospace, or other</i>	30891 00 6			
35				For building or construction (except hardware; report hardware on line 40)	30898 00 1			
36				For electrical or electronic applications	30892 00 4			
37				For furniture components or furnishings	30897 00 3			
38				For industrial machinery	30893 00 2			
39				Plastics dinnerware, tableware, kitchenware, or oven/microwave ware (except cups; report those on line 40)	30895 00 7			
40				Other plastics products - <i>Specify kind</i>	30890 00 1			

CONTINUE WITH ITEM 18B ON PAGE 9

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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		
			Value, f.o.b. plant (E)		
			584	Thou-	Dollars
			Millions	sands	
41	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	\$		
42		26			
43		34			
44		42			
45		59			
46		67			
47		CONTRACT WORK  Receipts for work done for others on their own materials . . . . . Describe below products worked on and kind of work.	93000 00 8		
48	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			
49	MISCELLANEOUS RECEIPTS  Sales of scrap and refuse	99980 13 8			
50	Other miscellaneous receipts (including receipts for repair work, etc.)	99980 98 9			
51	TOTAL value of shipments and other receipts Sum of lines 1-50, 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	