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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Report materials, parts, and supplies purchased, transferred from other plants of your company, or withdrawn from inventory.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 e, 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** – Forgings, foundries, and screw machine products – 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	Census material code	Consumption of purchased materials and of materials received from other establishments of your company		
			Cost, including delivery cost (freight-in)		
			<b>(E)</b>		
	<b>(A)</b>	<b>(B)</b>	574	Thou-	Dollars
			Millions	sands	
1	COMPONENTS FOR ELECTRONIC CIRCUITRY (Except tubes)				
	Printed circuit boards	367201 1	\$		
2	Printed circuit assemblies, loaded boards, or modules (printed circuit boards with inserted electronic components)	367981 8			
3	Semiconductors, including transistors, diodes, rectifiers, and integrated circuits	367408 2			
4	Capacitors	367501 4			
5	Resistors	367601 2			
6	Other components and accessories, n.e.c., not listed elsewhere – <i>Specify kind</i>	367990 9			
7	Current-carrying wiring devices	364300 4			
8	Electric transmission, distribution, and control equipment	360101 0			
9	Electronic computing equipment	357001 7			
10	Electrical instrument mechanisms and meter movements (including instrument relays)	382501 5			
11	Electrical measuring instruments and parts, not listed elsewhere	382591 6			
12	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc., but excluding sheets, rods, tubes, and shapes	282104 9			
13	Fabricated plastics products (except gaskets, hoses, and belting)	308004 1			

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**Item 17. CONSUMPTION OF SELECTED MATERIALS DURING 1997 – Continued**

Line No.	Materials, parts, and supplies  <b>(A)</b>		Census material code  <b>(B)</b>	Consumption of purchased materials and of materials received from other establishments of your company		
				Cost, including delivery cost (freight-in) <b>(E)</b>		
				574 Millions	Thou- sands	Dollars
<b>14</b>	FABRICATED METAL PRODUCTS (Except forgings)	Sheet metal products (except stampings)	344401 5	\$		
<b>15</b>		Metal stampings	346901 2			
<b>16</b>		Other fabricated metal products	340041 3			
<b>17</b>	Forgings		346000 3			
<b>18</b>	Castings (rough and semifinished)		330091 0			
<b>19</b>	Metal shapes and forms (except castings, forgings, and fabricated metal products)		330090 2			
<b>20</b>	Glass and glass products (excluding windows and mirrors)		320101 9			
<b>21</b>	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			
<b>22</b>	<b>TOTAL</b> Sum of lines 1-21 should equal item 10, line a			\$		

**Item 18A – Not applicable to this report**

**CONTINUE WITH ITEM 18B ON PAGE 7**

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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."

**5. Detailed Data Reported Elsewhere** – Items denoted by an asterisk (\*) require totals for groups of products covered in the more frequent Current Industrial Reports (CIR). If you report on the CIR forms, the sum of the detailed CIR products should equal the total reported on this census form. The Current Industrial Reports related to this report are as follows:

- a. MA35R, Computers and Office and Accounting Machines
- b. MA36A, Switchgear, Switchboard Apparatus, Relays, and Industrial Controls
- c. MA36K, Wiring Devices and Supplies
- d. MA36P, Communications Equipment, Including Telephone, Telegraph, and Other Electronic Systems and Equipment
- e. MA36Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components
- f. MA38R, Electromedical Equipment and Irradiation Equipment (Including X-Ray)
- g. MA38B, Selected Instruments and Related Products

**NOTE:** Only CIR totals are requested; do not duplicate detail reported on the CIR.

Line No.	Products and services *Item corresponds to products reported on Current Industrial Reports  (A)		Census product code  581 (B-1)	Corresponds to the sum of products reported for 1997 on –		Products shipped and other receipts		
				CIR form (B-2)	Item codes (B-3)	Value, f.o.b. plant (E)		
						584 Millions	Thousands	Dollars
1	Laboratory and scientific apparatus*		38210 10 0	↑ MA38B ↓	4520–4538 4541–4548	\$		
2	Laboratory furniture and parts sold separately*		38210 20 9		4539–4540			
3	Controls for monitoring residential and commercial environments and appliance regulating controls (38220)*		38220 00 0		4570–4609			
4	Process control instruments (38230)*		38230 00 9		4612–4897			
5	FLUID METERS AND COUNTING DEVICES	Integrating and totalizing meters for gas and liquids (38242)*	38242 00 4		5390–5425			
6		Counting devices (excluding motor vehicle instruments) (38243)*	38243 00 2		5504–5525			
7		Motor vehicle instruments (38244)*	38244 00 0		5531–5547			
8	Automatic regulating and control valves – power operated valves designed for modulating (throttling) service (excluding power operated on/off valves)*		34918 00 3		4001–4049			
9	INSTRUMENTS TO MEASURE ELECTRICITY	Integrating instruments, electrical (38251)*	38251 00 5		5610–5631			
10		Portable instrument transformers*	38252 10 2					
11		Test equipment for testing electrical, radio and communication circuits, and motors (except portable instrument transformers) *	38252 20 1		5701–5849			
12		Other instruments to measure electricity (38253)*	38253 00 1		6001–6053			
13	Analytical and scientific instruments (except optical) (38260)*		38260 00 6		8001–8196			
14	Sighting, tracking, and fire-control equipment, optical-type (38271)*		38271 00 3		8379–8391			
15	Binoculars and astronomical instruments*		38274 10 6		8211–8215			
16	Other optical instruments and lenses (except sighting, tracking, and fire-control)*		38274 20 5		8221–8245			

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  <b>(A)</b>		Census product code  <b>(B-1)</b>	Corresponds to the sum of products reported for 1997 on -		Products shipped and other receipts		
				CIR form <b>(B-2)</b>	Item code <b>(B-3)</b>	Value, f.o.b. plant <b>(E)</b>		
						584 Millions	Thou- sands	Dollars
17	MEASURING AND CONTROLLING DEVICES, N.E.C.	Aircraft engine instruments (except flight) <b>(38291)*</b>	38291 00 1	MA38B	6101-6119	\$		
18		Physical properties testing and inspection equipment and kinematic testing and measuring equipment <b>(38292)*</b>	38292 00 9		6201-6218			
19		Nuclear radiation, detection, and monitoring instruments <b>(38294)*</b>	38294 00 5		7001-7039			
20		Medical thermometers*	38295 10 1		6613			
21		Commercial, geophysical, meteorological, and general purpose instruments and equipment (except medical thermometers)*	38295 20 0		6601-6611 6615-6655			
22		Surveying and drafting instruments and apparatus, including photogrammetric equipment <b>(38296)*</b>	38296 00 0		4551-4561			
23		Aeronautical, nautical, and navigational instruments, not sending or receiving radio signals (except engine instruments) <b>(38121)*</b>	38121 00 0		4420-4518			
24	Search, detection, navigation, and guidance systems and equipment <b>(38122)*</b>	38122 00 8	4202-4382					
25	Switches for electrical circuitry (including vehicular switches) <b>(36433)*</b>	36433 00 1	MA36K	3109-3137				
26	Relays for electronic circuitry, industrial control, overload, and switchgear type <b>(36251)*</b>	36251 00 7	MA36A	5400-5496				
27	Specific-purpose industrial controls <b>(36252)*</b>	36252 00 5		6101-6355				
28	General-purpose industrial controls <b>(36253)*</b>	36253 00 3		6402-6509				
29	Parts for industrial controls and motor control accessories <b>(36254)*</b>	36254 00 1		6703, 6705				
30	PRINTED CIRCUIT WIRING BOARDS OR ASSEMBLIES (Report contract work receipts for work done by you for others on their own materials on lines 52 and 53)	Printed circuit (wiring) boards <b>(36720)*</b>	36720 00 1	MA36Q	See paragraphs 4 or 5, "Comparability", of CIR Instruction Manuals			
31		Printed circuit assemblies, loaded boards, or modules (printed circuit boards with inserted electronic components) <b>(36798)*</b>	36798 00 7					
32	Crystals, filters, piezoelectric, and other related devices <b>(36791)*</b>	36791 00 2						
33	Microwave components and devices, except antennae, tubes, and semiconductors <b>(36793)*</b>	36793 00 8						
34	Transducers, electrical/electronic input or output, n.e.c. <b>(36795)*</b>	36795 00 3						
35	Switches, mechanical, for electronic circuitry <b>(36796)*</b>	36796 00 1						
36	Electronic trainers, simulators, teaching machines and teaching aids <b>(36991)*</b>	36991 00 8	MA36P					
37	Communication systems and equipment (excluding broadcast), including microwave and mobile communications equipment <b>(36631)*</b>	36631 00 0						
38	Irradiation (ionizing radiation) equipment, including x-ray, beta ray, gamma ray, and nuclear (medical, dental, industrial, and scientific) <b>(38440)*</b>		38440 00 4	MA38R	8002-8026, 8102, 8202-8214			
39		Electromedical equipment, including diagnostic, therapeutic, and patient monitoring (excluding ionizing radiation equipment) <b>(38450)*</b>			38450 00 3	8030-8080, 8106-8139, 8222-8242		

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

Line No.	Products and services  <b>(A)</b>	Census product code  <b>(B-1)</b>	Corresponds to the sum of products reported for 1997 on –		Products shipped and other receipts		
			CIR form <b>(B-2)</b>	Item code <b>(B-3)</b>	Value, f.o.b. plant <b>(E)</b>		
					584 Millions	Thou- sands	Dollars
40	Computers (excluding word processors, peripherals, and parts)*	35710 00 3	↑ MA35R ↓	↑ See paragraph 4, "Comparability", of CIR Instruction Manual ↓	\$		
41	Computer storage equipment, auxiliary <b>(35721)*</b>	35721 00 0					
42	Computer terminals (excluding point-of-sale and funds-transfer devices) <b>(35751)*</b>	35751 00 7					
43	Computer peripheral equipment, n.e.c. <b>(35771)*</b>	35771 00 5					
44	Magnetic and optical recording media (unrecorded) <b>(36950)*</b>	36950 00 4					
45	Diagnostic substances, in vitro (clinical chemistry products)	28351 00 5					
46 47 48 49 50 51	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. For all remaining products, write "Other" and report a single total value.</i>	18					
		26					
		34					
		42					
		59					
		67					
52	CONTRACT WORK Printed circuit (wiring) boards	93000 31 3					
53	Printed circuit assemblies, loaded boards, or modules (printed circuit boards with inserted electronic components)	93000 32 1					
54	Receipts for work done for others on their own materials . . . . . <i>Describe below products worked on and kind of work.</i>	93000 00 8					
55	MISCELLANEOUS RECEIPTS Receipts for repair work (maintenance)	99980 61 7					
56	Sales of scrap, refuse, and other miscellaneous receipts	99980 98 9					
57	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					
58	<b>TOTAL value of shipments and other receipts</b> Sum of lines 1–57, column (E)	77000 00 8			\$		

CONTINUE WITH ITEM 19 ON PAGE 10

**Item 19. SELECTED PRODUCTS PRODUCED IN THIS ESTABLISHMENT AND USED IN MANUFACTURING OTHER PRODUCTS MADE IN THIS ESTABLISHMENT**

**INSTRUCTIONS**

- 1. Report below the quantity of each listed item produced in this establishment and used in manufacturing other products made in this establishment.
- 2. Purchases or receipts of the items specified below should be reported only in item 17.
- 3. Materials used to produce the items specified below should be reported in item 17.
- 4. Quantities produced for sale as such and not for incorporation in other products should be reported in item 18B.
- 5. Report quantities in the unit of measure specified in column (D).

Line No.	Item <b>(A)</b>	Census code		Was this operation performed at this establishment during 1997? <b>(C)</b>		Unit of measure for quantities <b>(D)</b>	Quantities produced in this establishment and used in manufacturing other products made in this establishment <b>(E)</b>
		591 <b>(B)</b>	592	Yes	No		
1	Ferrous foundries	1001 7		1 <input type="checkbox"/>	2 <input type="checkbox"/>	Short tons	
2	NONFERROUS FOUNDRIES (Except die-casting)	Aluminum	1002 5	1 <input type="checkbox"/>	2 <input type="checkbox"/>	Thousand pounds	
3		Copper	1003 3	1 <input type="checkbox"/>	2 <input type="checkbox"/>		
4		Zinc	1004 1	1 <input type="checkbox"/>	2 <input type="checkbox"/>		
5		Other	1005 8	1 <input type="checkbox"/>	2 <input type="checkbox"/>		
6	Nonferrous die-casting foundries	1006 6		1 <input type="checkbox"/>	2 <input type="checkbox"/>		
7	Precision turned products (on screw machines, turning centers, and CNC equipment)	1007 4		1 <input type="checkbox"/>	2 <input type="checkbox"/>		

**Items 20 and 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	