## If not shown, please enter your 11-digit Census File Number

## NSTRUCTIONS

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 9700998.

Report materials, parts, and supplies purchased, transferred from other plants of your company, or withdrawn from inventory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 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). 0

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 estrblishment in making products for others und $O$ tact $r$ on
commission should bo 1 d . C
 and soll ly Nist $n$ nly below. The value of these products shipped by this establishment should be reported in item 18B under Census product code 9998900 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.

| $\begin{aligned} & \dot{0} \\ & 2 \\ & \stackrel{0}{3} \\ & \underset{J}{3} \end{aligned}$ | Materials, parts, and supplies(A) |  | Census material code | Consumption of purchased materials and of materials received from other establishments of your company |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Cost, including delivery cost (freight-in) <br> (E) |
|  |  |  | $574$ <br> Millions | $\mid$ \| Thou- | <br> \| sands | Dollars |
| 1 | FABRICATED METAL PRODUCTS (Except forgings) | Sheet metal products (except stampings) |  | 3444015 | \$ | I |
| 2 |  | Bolts, nuts, screws, washers, rivets, and screw machine products |  | 3450012 |  | $\begin{array}{ll} 1 & 1 \\ 1 & 1 \end{array}$ |
| 3 |  | Metal stampings | 3469012 |  | $\begin{array}{ll} 1 & 1 \\ 1 & 1 \\ 1 & 1 \\ \hline \end{array}$ |
| 4 |  | All other fabricated metal products | 3400637 |  | $\begin{array}{ll} 1 \\ 1 & 1 \end{array}$ |
| 5 | Forgings |  | 3460003 |  | 1 |
| 6 | Castings (rough and semifinished) |  | 3300910 |  | $\begin{array}{ll}1 & 1 \\ 1 & 1 \\ 1 & 1\end{array}$ |
| 7 | SHAPES AND FORMS (Except castings and forgings) | Steel | 3310026 |  | $\begin{array}{ll}1 & 1 \\ 1 & 1 \\ 1 & 1\end{array}$ |
|  |  | Copper and copper-base alloy | 3351053 |  | 1 |
| 9 |  | Aluminum and aluminum-base alloy | 3350014 |  | 1 1 |
| 10 |  | Other nonferrous shapes and forms | 3350998 |  | $\begin{array}{ll}1 & 1 \\ 1 & 1 \\ 1\end{array}$ |
| 11 | COMPONENTS FOR ELECTRONIC CIRCUITRY, EXCEPT TUBES | Printed circuit boards | 3672011 |  | 1 |
| 12 |  | Printed circuit assemblies, loaded boards or modules (printed circuit boards with inserted electronic components) | 3679818 |  | $\begin{array}{ll}1 & 1 \\ 1 & 1 \\ 1 & 1 \\ 1 & 1\end{array}$ |
| 13 |  | Semiconductors, including transistors, diodes, rectifiers, and integrated circuits | 3674082 |  | $1 \quad 1$ |
| 14 |  | Capacitors | 3675014 |  | $1 \begin{array}{ll}1 \\ 1 \\ 1 \\ 1\end{array}$ |
| 5 |  | Resistors | 3676012 |  | $1 \begin{array}{ll}1 \\ 1 & 1\end{array}$ |
| 16 |  | Other components and accessories, n.e.c. | 3679909 |  | $1$ |

Item 17. CONSUMPTION OF SELECTED MATERIALS DURING 1997 - Continued


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 93000008.
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 9998900 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. MA33L, Insulated Wire and Cable
b. MA35R, Computers and Office and Accounting Machines
c. MA36K, Wiring Devices and Supplies
d. MA36P, Communication Equipment, Including Telephone, Telegraph, and Other Electronic Systems and Equipment
e. MA36Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components
f. MA38B, Selected Instruments and Related Products

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

|  | Products and services <br> *Item corresponds to products reported on Current Industrial Reports |  |  | $\substack{\text { Census } \\ \text { product } \\ \text { code }}$  <br> 581  <br> (B-1)  | Corresponds to the sum of products reported for 1997 on - |  | Products shipped and other receipts <br> Value, f.o.b. plant <br> (E) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | $\begin{aligned} & \text { Codes } \\ & \text { (B-3) } \end{aligned}$ | $584$ <br> Millions | $\qquad$ |
| 1 | Electronic teaching machines, teaching aids, trainers, and simulators, including kits (36991)* |  |  |  | 36991008 | MA36P | 4416-4418 | \$ | 1 |
| 2 | Laser <br> Systems and Equipment (Except communication) (36992) | Search and detection equipment |  | 36992113 |  |  |  | $\begin{array}{ll} \hline 1 & 1 \\ 1 & 1 \end{array}$ |
| 3 |  | Analytical and scientific instruments, except optical |  | 36992139 |  |  |  | 1 |
| 4 |  | Sighting and tracking equipment |  | 36992212 |  |  |  | $1$ |
| 5 |  | Commercial, geophysical, and meterological instruments |  | 36992238 |  |  |  | $1 \begin{array}{ll}1 \\ 1 & 1 \\ 1 & 1\end{array}$ |
| 6 |  | Surveying and drafting equipment |  | 36992253 |  |  |  | $\begin{array}{ll} 1 & 1 \\ 1 & 1 \end{array}$ |
| 7 |  | INDUSTRIAL | Welding equipment | 36992915 |  |  |  | $1 \begin{array}{ll}1 \\ 1 & 1 \\ 1 & 1\end{array}$ |
| 8 |  |  | Boring and drilling equipment | 36992311 |  |  |  | 1 |
| 9 |  |  | Gear cutting machines | 36992337 |  |  |  | $\begin{array}{ll} 1 & 1 \\ i & 1 \end{array}$ |
| 10 |  |  | Textile printing equipment | 36992410 |  |  |  | i |
| 11 |  |  | Printing presses | 36992436 |  |  |  | $\begin{array}{ll} 1 & 1 \\ 1 & 1 \\ 1 \end{array}$ |
| 12 |  |  | Etching and engraving equipment | 36992451 |  |  |  |  |
| 13 |  |  | Photographic equipment | 36992519 |  |  |  | I |
| 14 |  |  | Holographic equipment | 36992535 |  |  |  | , |
| 15 |  |  | Quality control equipment | 36992550 |  |  |  | $\begin{array}{ll} \hline 1 & 1 \\ 1 & 1 \end{array}$ |
| 16 |  | MEDICAL | Electromedical | 36992618 |  |  |  |  |
| 17 | (Continued on next page) |  | Dental | 36992659 |  |  |  | 1 |

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


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

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


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).

| $\begin{aligned} & \dot{2} \\ & 0 \\ & \dot{1} \end{aligned}$ | Item <br> (A) |  |  |  | Was this operation performed at this establishment during 1997? |  | Unit of measure for quantities <br> (D) | Quantities produced in this establishment and used in manufacturing other products made in this establishment |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Yes | No | 593 | (E) |  |
| 1 | Ferrous foundries |  |  |  |  | 10017 | $1 \square$ | $2 \square$ | Short tons |  |  |
| 2 | NONFERROUS FOUNDRIES (Except die-casting) | Aluminum |  | 10025 | $1 \square$ | $2 \square$ | Thousand pounds |  |  |
|  |  | Copper |  | 10033 | $1 \square$ | $2 \square$ |  |  |  |
| 4 |  | Zinc |  | 10041 | $1 \square$ | $2 \square$ |  |  |  |
| 5 |  | Other |  | 10058 | $1 \square$ | $2 \square$ |  |  |  |
| 6 | Nonferrous die-casting foundries |  |  | 10066 | $1 \square$ | $2 \square$ |  |  |  |
| 7 | Precision turned products (on screw machines, turning centers, and CNC equipment) |  |  | 10074 | $1 \square$ | $2 \square$ |  |  |  |

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.


