

# Insulated Wire and Cable

1998

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Information about the scope of the survey, methodology, explanation of terms and historical notes for this survey may be found in the introduction of the 1997 Manufacturing Profiles, issued August 1999.

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NOTE: Data are now published on the new North American Industry Classification System (NAICS)

basis and therefore are not always comparable to the old Standard Industrial Classification (SIC) code. For further information on NAICS, see [www.census.gov/epcd/www/naics.html](http://www.census.gov/epcd/www/naics.html).

## Summary of Findings

In 1998, the total value of manufactures' shipments of copper insulated wire and cable decreased by 2 percent to \$11,067 million from \$11,254 million in 1997. Copper magnet wire decreased 7 percent from the 1997 level of \$1,149 million from \$1,065 million in 1998. Aluminum magnet wire decreased by 4 percent in 1998 to \$124 million from the 1997 level of \$129 million. In 1998 insulated optical fiber cable decreased by less than 1 percent to \$1,849 million from the \$1,853 million in 1997. Optical fiber also decreased by 7 percent to \$1,135 million from the 1997 level of \$1,210 million.

Quantity of shipments of aluminum insulated wire and cable increased by 3 percent in 1998 to 697 million pounds, from the 1997 level of 679 million pounds.

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**Table 1. Summary of Shipments of Copper Insulated Wire and Cable: 1998 and 1997**  
 [Value in thousands of dollars]

| Product code | Product description                            | 1998              | 1997              |
|--------------|--|-------------------|-------------------|
|              | <b>Insulated wire and cable . . . . .</b>      | <b>15,116,149</b> | <b>15,466,387</b> |
| 335929A--    | Electronic wire and cable . . . . .            | 2,759,645         | 2,797,940         |
| 335929B--    | Telephone and telegraph wire and cable . . . . | 2,443,154         | 2,252,492         |
| 3359291--    | Power wire and cable . . . . .                 | 1,579,745         | 1,562,245         |
| 3359291--    | Portable power cable . . . . .                 | 35,918            | 54,118            |
| 335929C--    | Control and signal wire and cable . . . . .    | 287,686           | 286,077           |
| 335929D--    | Building wire and cable . . . . .              | 2,768,669         | 2,947,944         |
| 331419E--    | Apparatus wire and cordage . . . . .           | 792,501           | 810,489           |
| 335929E--    | Other insulated wire and cable . . . . .       | 400,130           | 543,192           |
| 331491G--    | Magnet wire . . . . .                          | 1,064,507         | 1,149,415         |
| 3359121--    | Insulated optical fiber cable . . . . .        | 1,849,026         | 1,852,803         |
| 327215A2--   | Optical fiber . . . . .                        | 1,135,168         | 1,209,672         |

Table 2. Shipments of Copper Insulated Wire and Cable: 1998 and 1997  
 [Shipments in thousands of pounds. Value in thousands of dollars]

|                     |   | Shipments, including interplant transfers 1/ |                         |             |                   |                         |            |
|---------------------|---|--|-------------------------|-------------|-------------------|-------------------------|------------|
| Product description |   | 1998   |                         |             | 1997              |                         |            |
| Product code        | No. of cos.   | Copper content 2/                            | Value of copper content | No. of cos. | Copper content 2/ | Value of copper content |            |
| 335929-- pt.        | Insulated wire and cable (except magnet wire and optical wire) . . . . .                      | (NA)   | 2,993,641               | 11,067,448  | (NA)              | 2,853,324               | 11,254,497 |
| 335929A --          | Electronic wire and cable . . . . .   | 86   | 240,456                 | 2,759,645   | 86                | 241,601                 | 2,797,940  |
|                     | Coaxial cable, armored or unarmored:  |  |                         |             |                   |                         |            |
| 335929A100          | Rigid . . . . .   | 3  | (D)                     | (D)         | 4                 | (D)                     | (D)        |
| 335929A120          | Semi rigid . . . . .  | 14   | 32,164 a/               | 460,321     | 14                | 31,339                  | 479,532    |
|                     | Flexible:   |  |                         |             |                   |                         |            |
| 335929A130          | 135 C and over . . . . .  | 13   | 3,661                   | 66,174      | 14                | r/ 3,738 a/             | 66,739     |
| 335929A140          | Under 135 C . . . . .   | 27   | 27,389 a/               | 439,279     | 28                | a/ 27,635 a/            | 419,666    |
| 335929A150          | CATV/broadcast coaxial cable. . . . .   | 8  | (D)                     | (D)         | 8                 | (D)                     | (D)        |
| 335929A160          | Antenna lead-in wire . . . . .  | 9  | (D)                     | (D)         | 7                 | (D)                     | (D)        |
|                     | Hookup wire (single conductor, shielded and nonshielded):                                     |  |                         |             |                   |                         |            |
| 335929A170          | 135 C and over temperature rating . . . . .   | 28   | 19,939                  | 254,293     | 26                | 19,502 r/               | 267,872    |
| 335929A180          | Under 135 C temperature rating . . . . .  | 42   | 18,265                  | 98,904      | 40                | a r/ 21,320 a/          | 105,490    |
|                     | Multiconductor electronic wire and cable (shielded and nonshielded):                          |  |                         |             |                   |                         |            |
| 335929A190          | Flat and ribbon cable . . . . .   | 22   | 8,849                   | 109,230     | 23                | 8,299                   | 97,032     |
|                     | Other multiconductor electronic wire and cable:   |  |                         |             |                   |                         |            |
|                     | Shielded:   |  |                         |             |                   |                         |            |
| 335929A1A0          | 135 C and over temperature rating . . . . .   | 19   | 32,211                  | 254,671     | 19                | 32,835                  | 263,992    |
| 335929A1B0          | Under 135 C temperature rating . . . . .  | 35   | 32,499                  | 273,645     | 33                | 33,151                  | 277,797    |
|                     | Nonshielded:  |  |                         |             |                   |                         |            |
| 335929A1C0          | 135 C and over temperature rating . . . . .   | 15   | 13,414                  | 150,570     | 13                | 11,379                  | 129,372    |
| 335929A1D0          | Under 135 C temperature rating . . . . .  | 31   | 37,976                  | 215,169     | 31                | r/ 38,432 r/            | 222,882    |
| 335929B--           | Telephone and telegraph wire and cable . . . . .  | 31   | 591,952                 | 2,443,154   | 30                | 522,926                 | 2,252,492  |
| 335929B110          | Jumper and distributing frame wire . . . . .  | 6  | (D)                     | (D)         | 7                 | (D)                     | (D)        |
| 335929B120          | Station wire and cable . . . . .  | 14   | 22,269                  | 168,312     | 16                | 19,769                  | 157,322    |
| 335929B130          | Telephone cord sets and cordage . . . . .   | 6  | (D)                     | (D)         | 5                 | (D)                     | (D)        |
| 335929B140          | Inside wiring cable . . . . .   | 19   | 89,448                  | 587,816     | 19                | r/ 84,497               | 488,563    |
| 335929B150          | Drop and bridle and duct wire . . . . .   | 4  | 60,110                  | 202,270     | 4                 | 55,049                  | 218,508    |
| 335929B160          | Rural and urban distribution wire and cable . . . . .   | 4  | (D)                     | (D)         | 4                 | (D)                     | (D)        |
| 335929B170          | Polyethylene covered exchange area and toll cable (PIC and PULP insulated) . . . . .          | 7  | 323,225 a/              | 1,020,394   | 7                 | 283,302                 | 1,004,244  |
| 335929B180          | Other telephone and telegraph wire and cable . . . . .  | 7  | (D)                     | (D)         | 9                 | (D)                     | (D)        |
| 335929I--           | Power wire and cable . . . . .  | 25   | 285,836                 | 1,579,745   | 24                | 267,491                 | 1,562,245  |
| 335929I810          | Paper insulated cable (all voltages, all types) . . . . .                                     | 2  | (D)                     | (D)         | 2                 | (D)                     | (D)        |
|                     | Plastic and rubber insulated:   |  |                         |             |                   |                         |            |
|                     | 600 volts or less:  |  |                         |             |                   |                         |            |
| 335929I820          | Portable welding cable . . . . .  | 8  | (D)                     | (D)         | 7                 | (D)                     | (D)        |
| 335929I830          | Underground distribution cable (UD, URD) . . . . .  | 9  | 8,554                   | 301,594     | 9                 | 7,560                   | 298,219    |
| 335929I840          | Thermoplastic insulated power cable . . . . .   | 11   | 18,413                  | 44,835      | 11                | 16,589                  | 47,606     |
|                     | Thermoset insulated:  |  |                         |             |                   |                         |            |
| 335929I850          | Armored, rubber and cross linked . . . . .  | 8  | 10,986                  | 32,528      | 6                 | 9,674                   | 28,606     |
| 335929I860          | Unarmored, rubber . . . . .   | 6  | 37,014                  | 140,807     | 6                 | 34,712                  | 136,482    |
| 335929I870          | Unarmored, cross linked . . . . .   | 9  | 14,064                  | 47,407      | 8                 | 11,230                  | 34,528     |
| 335929I880          | Rubber (R, RH, RHH, RHW, USE, etc.) . . . . .   | 4  | (D)                     | (D)         | 2                 | (D)                     | (D)        |
| 335929I890          | Weatherproof cable . . . . .  | 4  | (D)                     | (D)         | 5                 | (D)                     | (D)        |
|                     | Service drop cable:   |  |                         |             |                   |                         |            |
| 335929I8A0          | Thermoset insulated . . . . .   | 4  | (D)                     | (D)         | 4                 | (D)                     | (D)        |
| 335929I8B0          | Thermoplastic insulated. . . . .  | 3  | (D)                     | (D)         | 3                 | (D)                     | (D)        |
|                     | Over 600 volts:   |  |                         |             |                   |                         |            |
| 335929I8C0          | Underground distribution cable (UD, URD), all insulations (jacketed and unjacketed) . . . . . | 7  | 64,434                  | 390,849     | 7                 | 55,664                  | 376,563    |
| 335929I8D0          | Thermoplastic insulated power cable, excluding underground. . . . .                           | 4  | (D)                     | (D)         | 5                 | (D)                     | (D)        |
|                     | Thermoset insulated power cable, excluding underground:                                       |  |                         |             |                   |                         |            |

Table 2. Shipments of Copper Insulated Wire and Cable: 1998 and 1997  
 [Shipments in thousands of pounds. Value in thousands of dollars]

|  |   | Shipments, including interplant transfers 1/ |                   |                         |             |                   |                         |  |
|--|---|--|-------------------|-------------------------|-------------|-------------------|-------------------------|--|
| Product code   | Product description   | No. of cos.                                  | 1998              |                         | 1997        |                   | Value of copper content |  |
|  |   |  | Copper content 2/ | Value of copper content | No. of cos. | Copper content 2/ |                         |  |
| Over 600 volts to 15 kV:   |   |  |                   |                         |             |                   |                         |  |
| 33592918E0   | Armored, rubber and cross-linked . . .                            | 8  | 14,789            | 65,305                  | 6           | 13,242            | 58,222                  |  |
| 33592918F0   | Unarmored, rubber . . . . .                                       | 7  | 40,067            | 139,938                 | 7           | 48,897            | 160,618                 |  |
| 33592918G0   | Unarmored, cross-linked . . . . .                                 | 7  | 14,687            | 43,148                  | 7           | 16,792            | 55,710                  |  |
| 33592918H0   | Over 15 kv (rubber and cross-linked) . . .                        | 4  | 5,557             | 36,567                  | 5           | 5,028             | 34,817                  |  |
| 33592918I0   | Other power wire and cable . . . . .                              | 9  | 14,290            | 108,353                 | 8           | 13,341            | 99,987                  |  |
| 3359291--  | Portable power cable . . . . .                                    | 7  | 9,782             | 35,918                  | 7           | r/ 14,800         | r/ 54,118               |  |
| 33592918J0   | 2 kV or less . . . . .  | 6  | (D)               | (D)                     | 6           | (D)               | (D)                     |  |
| Over 2 kV:   |   |  |                   |                         |             |                   |                         |  |
| 33592918K0   | Portable cross-linked jacketed cable (mine shovel cable). . . . . | 2  | (D)               | (D)                     | 3           | (D)               | (D)                     |  |
| 33592918L0   | Portable noncross-linked jacketed cable . . . . .                 | 3  | (D)               | (D)                     | 3           | (D)               | (D)                     |  |
| 335929C--  | Control and signal wire . . . . .                                 | 28   | 58,892            | 287,686                 | 28          | r/ 55,504         | 286,077                 |  |
| 335929C110   | Signal wire and cable . . . . .                                   | 17   | 29,768            | 161,835                 | 17          | r/ 28,729         | 161,705                 |  |
| Control wire and cable, excluding elevator cable:  |   |  |                   |                         |             |                   |                         |  |
| 335929C120   | Thermoset insulated . . . . .                                     | 9  | b/ 10,521         | a/ 56,133               | 9           | a/ 9,518          | a/ 51,286               |  |
| 335929C130   | Thermoplastic insulated . . . . .                                 | 18   | a/ 18,603         | a/ 69,718               | 18          | a/ 17,257         | a/ 73,086               |  |
| 335929D--  | Building wire and cable . . . . .                                 | 24   | 1,446,621         | 2,768,669               | 24          | 1,393,168         | 2,947,944               |  |
| Building wire and cable having underwriters' labels:   |   |  |                   |                         |             |                   |                         |  |
| Thermoset insulated:   |   |  |                   |                         |             |                   |                         |  |
| 335929D110   | Cross-linked polyethylene (XHFW) . . . . .                        | 11   | 47,940            | 129,534                 | 11          | 43,102            | 129,196                 |  |
| 335929D120   | Cross-linked polyethylene (USE) . . . . .                         | 12   | 17,928            | 51,114                  | 12          | 17,521            | 57,480                  |  |
| Thermoplastic insulated:   |   |  |                   |                         |             |                   |                         |  |
| 335929D130   | Flame-retardant nylon (THHN, THWN) . . . . .                      | 16   | 817,785           | 1,363,331               | 17          | 813,441           | 1,538,579               |  |
| 335929D140   | Moisture and heat resistant (TW, THW) . . . . .                   | 12   | 3,516             | 6,622                   | 12          | 3,979             | 8,479                   |  |
| 335929D150   | Service entrance cable (SER, SEU, ASE) . . . . .                  | 8  | a/ 8,973          | 120,536                 | 8           | 8,212             | 109,570                 |  |
| Nonmetallic branch-circuit and underground feeder:   |   |  |                   |                         |             |                   |                         |  |
| 335929D160   | Type NM-B . . . . .   | 6  | 429,686           | 761,517                 | 6           | 395,131           | 784,940                 |  |
| 335929D170   | Type UF and NMC (corrosion resistant) . . . . .                   | 8  | 44,455            | 85,116                  | 8           | 42,810            | 91,183                  |  |
| 335929D180   | Metallic armored cable (all AC types) . . . . .                   | 12   | 67,377            | 222,453                 | 11          | r/ 59,385         | r/ 198,721              |  |
| 335929D190   | Other building wire and cable . . . . .                           | 9  | 8,961             | 28,446                  | 10          | a/ 9,587          | 29,796                  |  |
| 33141E--   | Apparatus wire and cordage 3/ . . . . .                           | 45   | 218,480           | 792,501                 | 45          | 211,217           | 810,489                 |  |
| Flexible cordage:  |   |  |                   |                         |             |                   |                         |  |
| 331491E110   | Thermoset insulated . . . . .                                     | 10   | 11,832            | 55,088                  | 10          | 13,894            | 65,953                  |  |
| 331491E120   | Thermoplastic, including thermoplastic elastomers. . . . .        | 15   | 29,925            | 50,264                  | 16          | 31,255            | 64,074                  |  |
| 331491E180   | Extension cord sets . . . . .                                     | 9  | 31,396            | 125,289                 | 9           | 26,441            | 113,930                 |  |
| 331491E190   | Fixed power supply cords . . . . .                                | 18   | 19,014            | 135,226                 | 18          | 20,515            | 143,825                 |  |
| 331491E1A0   | Detachable power supply cords . . . . .                           | 6  | 10,695            | 61,700                  | 6           | 9,098             | 52,948                  |  |
| 331491E1B0   | Retractable power cords and other . . . . .                       | 10   | 1,068             | 14,497                  | 9           | r/ 1,052          | 14,515                  |  |
| Apparatus wire:  |   |  |                   |                         |             |                   |                         |  |
| 331491E130   | Appliance fixture wire . . . . .                                  | 20   | 32,998            | 96,318                  | 19          | 32,815            | 102,036                 |  |
| Appliance wiring material 14 gauge and larger, including motor lead and transformer lead wire: |   |  |                   |                         |             |                   |                         |  |
| 331491E140   | Thermoset insulated . . . . .                                     | 4  | (D)               | (D)                     | 4           | (D)               | (D)                     |  |
| 331491E150   | Thermoplastic insulated . . . . .                                 | 9  | 31,057            | 64,354                  | 9           | 34,477            | 78,086                  |  |
| 331491E160   | Submersible pump cable . . . . .                                  | 7  | (D)               | (D)                     | 7           | (D)               | (D)                     |  |
| 331491E170   | Other apparatus wire and cordage, including toolwire. . . . .     | 16   | 25,085            | 84,215                  | 16          | 21,577            | 78,536                  |  |
| 335929E--  | Other insulated wire and cable . . . . .                          | 40   | 141,622           | 400,130                 | 42          | 146,617           | 543,192                 |  |
| Automotive:  |   |  |                   |                         |             |                   |                         |  |
| 335929E110   | Bulk automotive primary wire . . . . .                            | 11   | 91,120            | 196,008                 | 11          | r/ 94,765         | 207,336                 |  |
| 335929E120   | Bulk battery cable . . . . .                                      | 7  | 15,367            | 33,553                  | 7           | 14,582            | 36,002                  |  |
| 335929E130   | Bulk ignition wire . . . . .                                      | 6  | (D)               | (D)                     | 7           | (D)               | (D)                     |  |
| 335929E140   | Other automotive wire and cable . . . . .                         | 7  | 10,304            | 62,102                  | 6           | 9,628             | 60,842                  |  |

Table 2. Shipments of Copper Insulated Wire and Cable: 1998 and 1997  
 [Shipments in thousands of pounds. Value in thousands of dollars]

| Product code | Product description   | Shipments, including interplant transfers 1/ |                   |                         |             |                   |                         |
|--------------|---|--|-------------------|-------------------------|-------------|-------------------|-------------------------|
|              |   | 1998   |                   | 1997                    |             |                   |                         |
|              |   | No. of cos.                                  | Copper content 2/ | Value of copper content | No. of cos. | Copper content 2/ | Value of copper content |
| 335929E150   | Airframe, shipboard and ground support cable, excluding coaxial cable and ignition cable: Airframe and missile, including ground support cable. . . . . | 10   | (D)               | (D)                     | 11          | (D)               | (D)                     |
| 335929E160   | Shipboard cable . . . . .   | 5  | (D)               | (D)                     | 5           | (D)               | (D)                     |
| 335929E170   | Other insulated or covered wire and cable, n.e.c. .   | 20   | 15,582            | 99,296                  | 21          | r/ 18,471         | 106,154                 |

D Withheld to avoid disclosing data for individual companies. NA Not available. n.e.c. Not elsewhere classified. pt. Part.  
 r/Revised by 5 percent or more from previously published data.

1/Interplant transfers for 1998 totaled \$48,390 and for 1997 totaled \$45,119.

2/Aluminum content for 1998 totaled 427,747 thousand pounds and for 1997 totaled 416,239 thousand pounds. See Table 3 for additional details.

3/Data include the following: (a) all known establishments which insulate wire and cable and then fabricate it into finished products, NAICS product class 33141E and (b) establishments from NAICS product class 334290, that manufacture wire, cord, and flexible cord sets from purchased insulated wire.

Note: The data presented in this table are for copper content insulated wire and cable. See Table 3 for aluminum content information. Percent of estimation of each item is indicated as follows: a/10 to 25 percent of this item is estimated. b/26 to 50 percent of this item is estimated.

**Table 3. Aluminum Shipments of Selected Insulated Wire and Cable: 1998 and 1997**  
[Quantity in thousands of pounds]

| Product code | Product description  | 1998        |              | 1997        |              |
|--------------|--|-------------|--------------|-------------|--------------|
|              |  | No. of cos. | Gross weight | No. of cos. | Gross weight |
| 335929--pt.  | Insulated wire (except magnet wire) . . . . .  | (NA)        | 696,776      | (NA)        | 679,445      |
| 335929A--    | Electronic wire and cable. . . . .   | 5           | 72,472       | 5           | 78,783       |
| 3359291--    | Power wire and cable. . . . .  | 11          | 279,498      | 9           | r/ 274,485   |
| 3359291830   | Underground distribution cable, all insulations<br>600 volts or less. . . . .                  | 6           | 156,213      | 5           | 152,037      |
| 33592918A0   | Service drop cable, thermoset insulated. . . . .   | 3           | 35,705       | 3           | 34,826       |
| 33592918B0   | Service drop cable, thermoplastic insulated. . . . .   | 2           | (D)          | 2           | (D)          |
| 33592918C0   | Underground distribution cable, all insulations--<br>over 600 volts. . . . .                   | 8           | 44,886       | 7           | r/ 42,279    |
| 33592918F0   | Thermoset insulated power cable, unarmored,<br>rubber--over 600 volts to 15 kV. . . . .        | 4           | (D)          | 6           | (D)          |
| 33592918G0   | Thermoset insulated power cable, unarmored,<br>cross-linked--over 600 volts to 15 kV . . . . . | 3           | (D)          | 3           | (D)          |
| 335929D1--   | Building wire and cable. . . . .   | 7           | 75,698       | 6           | 62,940       |
| 335929D120   | Thermoset insulated, cross-linked polyethylene<br>(USE) . . . . .                              | 4           | (D)          | 4           | (D)          |
| 335929E1--   | Other insulated wire and cable. . . . .  | 2           | (D)          | 2           | (D)          |

D Withheld to avoid disclosing data for individual companies.  
r/Revised by 5 percent or more from previously published data.

NA Not available.

pt. Part.

Table 4. Copper Shipments of Magnet Wire, Including Interplant Transfers: 1998 and 1997  
 [Gross weight in thousands of pounds. Value in thousands of dollars]

| Product code | Product description   | Shipments, including interplant transfers 1/ |                 |           |             |                 |              |
|--------------|---|--|-----------------|-----------|-------------|-----------------|--------------|
|              |   | 1998   |                 |           | 1997        |                 |              |
|              |   | No. of cos.                                  | Gross weight 1/ | Value     | No. of cos. | Gross weight 1/ | Value        |
| 331491G--    | Magnet wire. . . . .  | (NA)   | 742,182         | 1,064,507 | (NA)        | 733,753         | r/ 1,149,415 |
|              | Class 105 and below:  |  |                 |           |             |                 |              |
| 331491G110   | 7 AWG and larger round, including all square and rectangle, film coated . . . . . | 5  | 8,553           | 12,234    | 6           | 7,180           | 11,081       |
| 331491G120   | 8 to 21 AWG, film coated. . . . .   | 6  | 31,367          | 34,548    | 5           | 32,089          | 37,939       |
| 331491G130   | 22 to 32 AWG, film coated. . . . .  | 7  | 3,270           | 4,481     | 6           | 9,105           | 13,502       |
| 331491G140   | 33 to 44 AWG, film coated. . . . .  | 7  | (D)             | (D)       | 6           | (D)             | (D)          |
|              | Classes 130 to 155:   |  |                 |           |             |                 |              |
| 331491G150   | 7 AWG and larger round, including all square and rectangle, film coated . . . . . | 1  | (D)             | (D)       | 1           | (D)             | (D)          |
| 331491G160   | 8 to 21 AWG, film coated. . . . .   | 13   | 30,308          | 39,243    | 11          | r/31,250        | 45,065       |
| 331491G170   | 22 to 32 AWG, film coated. . . . .  | 17   | 83,530          | 132,789   | 14          | r/95,471        | 155,298      |
| 331491G180   | 33 to 44 AWG, film coated. . . . .  | 14   | 23,848          | 75,597    | 12          | 22,356          | 72,186       |
|              | Class 180 and above:  |  |                 |           |             |                 |              |
| 331491G190   | 7 AWG and larger round, including all square and rectangle, film coated . . . . . | 7  | 38,856          | 62,412    | 7           | 38,951          | 72,001       |
| 331491G1A0   | 8 to 21 AWG, film coated. . . . .   | 14   | 305,632         | 359,696   | 11          | 292,226         | 389,303      |
| 331491G1B0   | 22 to 32 AWG, film coated. . . . .  | 13   | 137,758         | 198,260   | 10          | 125,994         | 207,357      |
| 331491G1C0   | 33 to 44 AWG, film coated. . . . .  | 11   | (D)             | (D)       | 9           | (D)             | (D)          |
| 331491G1I0   | Miscellaneous film coated, n.e.c. . . . .   | 1  | (D)             | (D)       | 1           | (D)             | (D)          |
|              | Nonfilm coated (fibrous):   |  |                 |           |             |                 |              |
| 331491G1D0   | Class 130 and below. . . . .  | 3  | (D)             | (D)       | 3           | (D)             | (D)          |
| 331491G1F0   | Class 155 and above. . . . .  | 6  | 11,406          | 24,716    | 6           | 11,387          | 25,609       |
|              | Nonfilm coated (tape):  |  |                 |           |             |                 |              |
| 331491G1E0   | Class 130 and below. . . . .  | 5  | 13,343          | 18,261    | 5           | 13,746          | 20,258       |
| 331491G1G0   | Class 155 and above. . . . .  | 6  | 3,916           | 8,698     | 6           | 3,664           | 10,030       |
| 331491G1H0   | Miscellaneous nonfilm coated, n.e.c. . . . .                                      | 1  | (D)             | (D)       | 1           | (D)             | (D)          |

D Withheld to avoid disclosing data for individual companies. NA Not available.  
 n.e.c. Not elsewhere classified. r/Revised by 5 percent or more from previously published data.

1/Interplant transfers for 1998 totaled 26,930 thousand pounds and 1997 totaled 40,548 thousand pounds of copper.

Table 5. Aluminum Shipments of Magnet Wire, Including Interplant Transfers: 1998 and 1997  
 [Aluminum gross weight in thousands of pounds. Value in thousands of dollars]

| Product code | Product description   | No. of cos. | Shipments, including interplant transfers 1/ |         |             |              |         |
|--------------|---|-------------|--|---------|-------------|--------------|---------|
|              |   |             | 1998   |         | 1997        |              |         |
|              |   |             | Gross weight                                 | Value   | No. of cos. | Gross weight | Value   |
| 331491G--    | Magnet wire. . . . .  | 14          | 70,266                                       | 124,040 | 10          | r/ 69,280    | 128,565 |
|              | Class 105 and below:  |             |  |         |             |              |         |
| 331491G110   | 7 AWG and larger round, including all square and rectangle, film coated . . . . . | 4           | (D)  | (D)     | 3           | (D)          | (D)     |
| 331491G120   | 8 to 21 AWG, film coated. . . . .   | 6           | 15,031                                       | 27,866  | 5           | 14,751       | 28,150  |
| 331491G130   | 22 to 32 AWG, film coated. . . . .  | 3           | (D)  | (D)     | 3           | (D)          | (D)     |
| 331491G140   | 33 to 44 AWG, film coated. . . . .  | 1           | (D)  | (D)     | 1           | (D)          | (D)     |
|              | Classes 130 to 155:   |             |  |         |             |              |         |
| 331491G150   | 7 AWG and larger round, including all square and rectangle, film coated . . . . . | 1           | (D)  | (D)     | 1           | (D)          | (D)     |
| 331491G160   | 8 to 21 AWG, film coated. . . . .   | 5           | 6,231  | 8,780   | 5           | 5,722        | 7,741   |
| 331491G170   | 22 to 32 AWG, film coated. . . . .  | 6           | 2,479  | 5,833   | 6           | 2,711        | 6,523   |
| 331491G180   | 33 to 44 AWG, film coated. . . . .  | 4           | (D)  | (D)     | 4           | (D)          | (D)     |
|              | Class 180 and above:  |             |  |         |             |              |         |
| 331491G190   | 7 AWG and larger round, including all square and rectangle, film coated . . . . . | 5           | 2,876  | 4,462   | 5           | 2,747        | 4,425   |
| 331491G1A0   | 8 to 21 AWG, film coated. . . . .   | 9           | 27,217                                       | 49,272  | 7           | 25,764       | 49,992  |
| 331491G1B0   | 22 to 32 AWG, film coated. . . . .  | 6           | 5,048  | 14,182  | 5           | 5,042        | 15,181  |
| 331491G1C0   | 33 to 44 AWG, film coated. . . . .  | 3           | (D)  | (D)     | 2           | (D)          | (D)     |
| 331491G1I0   | Miscellaneous film coated, n.e.c. . . . .   | 1           | (D)  | (D)     | 1           | (D)          | (D)     |
|              | Nonfilm coated (fibrous):   |             |  |         |             |              |         |
| 331491G1D0   | Class 130 and below. . . . .  | -           | -  | -       | -           | -            | -       |
| 331491G1F0   | Class 155 and above. . . . .  | 1           | (D)  | (D)     | 1           | (D)          | (D)     |
|              | Nonfilm coated (tape):  |             |  |         |             |              |         |
| 331491G1E0   | Class 130 and below. . . . .  | 3           | (D)  | (D)     | 3           | (D)          | (D)     |
| 331491G1G0   | Class 155 and above. . . . .  | 4           | 2,624  | 4,866   | 4           | 2,698        | 5,333   |
| 331491G1H0   | Miscellaneous nonfilm coated, n.e.c. . . . .                                      | -           | -  | -       | -           | -            | -       |

- Represents zero. D Withheld to avoid disclosing data for individual companies. n.e.c. Not elsewhere classified.  
 r/Revised by 5 percent or more from previously published data.

1/Interplant transfers for 1998 totaled 6,282 thousand pounds of aluminum and for 1997 totaled 6,143 thousand pounds of aluminum.



**Table 6. Value of Shipments of Fiber Optic Cable: 1998 and 1997**  
 [Thousands of dollars]

| Product code | Product description                | 1998        |           | 1997        |           |
|--------------|------------------------------------|-------------|-----------|-------------|-----------|
|              |                                    | No. of cos. | Value     | No. of cos. | Value     |
| 33592101--   | Insulated optical fiber cable..... | 37          | 1,849,026 | 38          | 1,852,803 |
| 33592101 pt. | Communication applications.....    | 25          | 1,817,767 | 26          | 1,815,635 |
|              | Single-mode stepped-index:         |             |           |             |           |
| 3359210125   | Dispersion shifted.....            | 11          | (D)       | 9           | (D)       |
| 3359210128   | Dispersion unshifted .....         | 14          | 1,146,193 | 15          | 1,174,250 |
| 3359210131   | Multimode stepped index.....       | 5           | (D)       | 6           | (D)       |
| 3359210134   | Multimode graded index .....       | 19          | 195,907   | 19          | 200,925   |
| 3359210434   | Other applications.....            | 15          | 31,259    | 16          | 37,168    |

D Withheld to avoid disclosing data for individual companies.      pt. Part.

**Table 7. Value of Shipments of Optical Fiber: 1998 and 1997**  
 [Thousands of dollars]

| Product code | Product description                                   | 1998        |           | 1997        |           |
|--------------|---|-------------|-----------|-------------|-----------|
|              |   | No. of cos. | Value     | No. of cos. | Value     |
|              | Optical fiber for data and nondata transmission ..... | 25          | 1,135,168 | 26          | 1,209,672 |
| 327215A235   | Optical fiber used for data transmission.....         | 16          | 1,087,030 | 17          | 1,162,257 |
| 327215A238   | Optical fiber used for nondata transmission.....      | 14          | 48,138    | 14          | 47,415    |