

Insulated Wire and Cable

1999

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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.

Summary of Findings

In 1999, the total value of manufactures' shipments of copper insulated wire and cable decreased by 1.9 percent to \$10,854.8 million from \$11,063.4 million in 1998. Copper magnet wire increased 8.5 percent from the 1998 level of \$1,064.5 million to \$1,155.4 million in 1999. Aluminum magnet wire decreased by 4.4 percent in 1999 to \$118.5 million from the 1998 level of \$124.0 million. In 1999, insulated optical fiber cable increased 25.6 percent to \$2,432.0 million from \$1,936.6 million in 1998. Optical cable also increased by 25.6 percent to \$1,499.2 million from the 1998 level of \$1,193.7 million.

Quantity of shipments of aluminum insulated wire and cable increased by 8.7 percent in 1999 to 465.7 million pounds from the 1998 level of 428.4 million pounds.

Current
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Address inquiries concerning these data to Primary Goods Industries Branch, Manufacturing and Construction Division (MCD), Washington, DC 20233-6900, or call Keith McKenzie, 301-457-4777.

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Table 1. Summary of Shipments of Copper Insulated Wire and Cable: 1999 and 1998
[Value in thousands of dollars]

Product code	Product description	1999	1998
	Insulated wire and cable	15,941,432	15,258,212
335929A	Electronic wire and cable	2,772,547	2,790,153
335929B	Telephone and telegraph wire and cable	2,168,001 r/	2,257,868
3359291	Power wire and cable	1,724,995	1,579,745
3359291	Portable power cable	31,359	35,918
335929C	Control and signal wire and cable	248,784	287,686
335929D	Building wire and cable	2,577,180	2,768,669
331419E	Apparatus wire and cordage	862,892 r/	851,781
335929E	Other insulated wire and cable	469,026 r/	491,574
331491G	Magnet wire	1,155,394	1,064,507
3359121	Insulated optical fiber cable	2,432,049	1,936,609
327215A2	Optical fiber	1,499,205 r/	1,193,702

r/Revised by 5 percent or more from previously published data.

Table 2. Shipments of Copper Insulated Wire and Cable: 1999 and 1998
[Shipments in thousands of pounds. Value in thousands of dollars]

		Shipments, including interplant transfers 1/					
		1999			1998		
Product code	Product description	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)	2,945,774	10,854,784	(NA)	2,999,956	11,063,394
335929A	Electronic wire and cable	92	259,889	2,772,547	91	240,453	2,790,153
	Coaxial cable, armored or unarmored:						
335929A100	Rigid	3	(D)	(D)	3	(D)	(D)
335929A120	Semi rigid	15	31,429	365,632	14	32,424	478,672
	Flexible:						
335929A130	135 C and over	13	3,150	62,069	13	3,661	66,174
335929A140	Under 135 C	28	34,384	444,639	26	27,581	447,352
335929A150	CATV/broadcast coaxial cable.....	9	(D)	(D)	8	(D)	(D)
335929A160	Antenna lead-in wire	8	1,395	8,021	8 r/	1,270 r/	8,557
	Hookup wire (single conductor, shielded and nonshielded):						
335929A170	135 C and over temperature rating.....	26 a/	18,520 b/	239,721	28	19,939	254,293
335929A180	Under 135 C temperature rating.....	38 a/	17,119 b/	98,369	41	18,333	98,929
	Multiconductor electronic wire and cable (shielded and nonshielded):						
335929A190	Flat and ribbon cable	23 a/	9,114	94,551	20	8,849 r/	87,835
	Other multiconductor electronic wire and cable:						
	Shielded:						
335929A1A0	135 C and over temperature rating	20	34,934	265,446	19	32,211	254,671
335929A1B0	Under 135 C temperature rating	34	37,671	271,720	34	32,414	272,373
	Nonshielded:						
335929A1C0	135 C and over temperature rating	13	8,401	96,879	15	13,414	150,570
335929A1D0	Under 135 C temperature rating	31	47,836 a/	308,631	30	37,940	214,289
335929B	Telephone and telegraph wire and cable	28	537,409	2,168,001	30	591,323	2,257,868
335929B110	Jumper and distributing frame wire	5	(D)	(D)	6	(D)	(D)
335929B120	Station wire and cable	14	11,089	41,483	14	21,640	165,026
335929B130	Telephone cord sets and cordage	8	2,636	21,870	6 r/	3,434 r/	15,758
335929B140	Inside wiring cable	17	100,506	652,591	19	89,448	587,816
335929B150	Drop and bridle and duct wire	4	55,942	185,025	4	60,110	202,270
335929B160	Rural and urban distribution wire and cable	3	(D)	(D)	4 r/	8,358 r/	57,228
335929B170	Polyethylene covered exchange area and toll cable (PIC and PULP insulated)	5	247,404	748,402	7	323,225	1,020,394
335929B180	Other telephone and telegraph wire and cable.....	8	(D)	(D)	9	(D)	(D)
3359291	Power wire and cable	32	312,551	1,724,995	31	285,796	1,579,745
3359291810	Paper insulated cable (all voltages, all types)	2	(D)	(D)	2	(D)	(D)
	Plastic and rubber insulated:						
	600 volts or less:						
3359291820	Portable welding cable	10	16,052 a/	38,851	9 r/	16,824 r/	41,124
3359291830	Underground distribution cable (UD, URD).....	9	8,104	304,672	10	8,554	301,594
3359291840	Thermoplastic insulated power cable	10	18,299 a/	48,119	11	18,413	44,835
	Thermoset insulated:						
3359291850	Armored, rubber and cross linked	10	9,177	24,994	8	10,986	32,528
3359291860	Unarmored, rubber	8	45,002	164,702	7	37,014	140,807
3359291870	Unarmored, cross linked	11 a/	13,698 a/	43,740	10	14,064	47,407
3359291880	Rubber (R, RH, RHH, RHW, USE, etc.)	4	(D)	(D)	4	(D)	(D)
3359291890	Weatherproof cable	4	1,820	6,126	4 r/	1,784 r/	6,833
	Service drop cable:						
33592918A0	Thermoset insulated 3/.....	4	(D)	(D)	4	(D)	(D)
33592918B0	Thermoplastic insulated 3/.....	3	(D)	(D)	3	(D)	(D)
	Over 600 volts:						
33592918C0	Underground distribution cable (UD, URD), all insulations (jacketed and unjacketed).....	10	85,709	567,094	8	64,434	390,849
33592918D0	Thermoplastic insulated power cable, excluding underground	4	6,869	37,364	4 r/	5,706 r/	33,201

Continued

Table 2. Shipments of Copper Insulated Wire and Cable: 1999 and 1998
[Shipments in thousands of pounds. Value in thousands of dollars]

		Shipments, including interplant transfers 1/				
Product code	Product description	1999		1998		Value of copper content
		No. of cos.	Copper content 2/	No. of cos.	Copper content 2/	
	Thermoset insulated power cable, excluding underground:					
	Over 600 volts to 15 kV:					
33592918E0	Armored, rubber and cross-linked ...	7	11,187	8	14,789	65,305
33592918F0	Unarmored, rubber	8	48,444	7	40,067	139,938
33592918G0	Unarmored, cross-linked	9	11,174	7	14,687	43,148
33592918H0	Over 15 kV (rubber and cross-linked) ..	5	6,218	5	5,557	36,567
33592918I0	Other power wire and cable	7 a/	7,578	10	14,290	108,353
3359291	Portable power cable	7	7,956	7	9,782	35,918
33592918J0	2 kV or less	6	5,858	6	(D)	(D)
	Over 2 kV:					
33592918K0	Portable cross-linked jacketed cable (mine shovel cable) 4/.....	2	(D)	2	(D)	(D)
33592918L0	Portable noncross-linked jacketed cable 4/....	4	(D)	3	(D)	(D)
335929C	Control and signal wire	27	48,430	28	58,892	287,686
335929C110	Signal wire and cable	16	25,174	17	29,768	161,835
	Control wire and cable, excluding elevator cable:					
335929C120	Thermoset insulated	9 a/	7,083 a/	9 a/	10,521 a/	56,133
335929C130	Thermoplastic insulated	18 a/	16,173 a/	18 a/	18,603 a/	69,718
335929D	Building wire and cable	28	1,421,136	27	1,446,621	2,768,669
	Building wire and cable having underwriters' labels:					
	Thermoset insulated:					
335929D110	Cross-linked polyethylene (XHHW)	14	47,328	13	47,940	129,534
335929D120	Cross-linked polyethylene (USE)	11	20,253	11	17,928	51,114
	Thermoplastic insulated:					
335929D130	Flame-retardant nylon (THHN, THWN)	18	788,111	17	817,785	1,363,331
335929D140	Moisture and heat resistant (TW, THW)	14	3,235	13	3,516	6,622
335929D150	Service entrance cable (SER, SEU, ASE)	9	10,567	9	8,973	120,536
	Nonmetallic branch-circuit and underground feeder:					
335929D160	Type NM-B	9	420,722	7	429,686	761,517
335929D170	Type UF and NMC (corrosion resistant) .	10	43,322	9	44,455	85,116
335929D180	Metallic armored cable (all AC types)	11	74,745	12	67,377	222,453
335929D190	Other building wire and cable	11 a/	12,853 a/	10	8,961	28,446
33141E	Apparatus wire and cordage 5/.....	49	236,774	48	229,623	851,781
	Flexible cordage:					
331491E110	Thermoset insulated	12	10,985	11	11,832	55,088
331491E120	Thermoplastic, including thermoplastic elastomers.....	17	30,384	16	30,948	56,042
331491E180	Extension cord sets	11	39,626	10 r/	37,961 r/	160,660
331491E190	Fixed power supply cords	18	19,113	19 r/	22,468 r/	153,088
331491E1A0	Detachable power supply cords	7 a/	12,436 a/	6	10,695	61,700
331491E1B0	Retractable power cords and other	10	855	10	1,068	14,497
	Apparatus wire:					
331491E130	Appliance fixture wire	22	37,554	21	32,998	96,318
	Appliance wiring material 14 gauge and larger, including motor lead and transformer lead wire:					
331491E140	Thermoset insulated 6/.....	4	(D)	4	(D)	(D)
331491E150	Thermoplastic insulated 6/.....	9	(D)	9	31,057	64,354
331491E160	Submersible pump cable	10	14,351	8	(D)	(D)
331491E170	Other apparatus wire and cordage, including toolwire	16	28,812	17	25,186	84,484
335929E	Other insulated wire and cable	41	121,629	41	137,466	491,574
	Automotive:					
335929E110	Bulk automotive primary wire	11	74,060	12	91,120	196,008

Continued

Table 2. Shipments of Copper Insulated Wire and Cable: 1999 and 1998
[Shipments in thousands of pounds. Value in thousands of dollars]

Product description		Shipments, including interplant transfers 1/					
		1999			1998		
Product code		No. of cos.	Copper content 2/	Value of copper content	No. of cos.	Copper content 2/	Value of copper content
335929E120	Bulk battery cable	9	13,009	31,049	8	15,367	33,553
335929E130	Bulk ignition wire	6	(D)	(D)	6	(D)	(D)
335929E140	Other automotive wire and cable	7 a/	13,288	71,641	7	10,304	62,102
Airframe, shipboard and ground support cable, excluding coaxial cable and ignition cable:							
335929E150	Airframe and missile, including ground support cable	10	3,437	35,190	11 r/	4,545 r/	44,902
335929E160	Shipboard cable	5	(D)	(D)	5	(D)	(D)
335929E170	Other insulated or covered wire and cable, n.e.c.	19	11,181	57,261	20 r/	11,426 r/	61,124

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 1999 totaled \$44,570 and for 1998 totaled \$48,390.

2/Aluminum content for 1999 totaled 465,683 thousand pounds and for 1998 totaled 428,393 thousand pounds. See Table 3 for additional details.

3/Product codes 33592918A0 and 33592918B0 have a combined total of 919 thousand pounds of copper content and 89,734 thousand dollars for value of shipments for 1999 and 846 thousand pounds of copper content and 98,069 thousand dollars for value of shipments for 1998.

4/Product codes 33592918K0 and 33592918L0 have a combined total of 2,098 thousand pounds of copper content and 11,151 thousand dollars for value of shipments for 1999.

5/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.

6/Product codes 331491E140 and 331491E150 have a combined total of 42,658 thousand pounds of copper content and 123,643 thousand dollars for value of shipments for 1999.

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. c/Over 50 percent of this item is estimated.

Table 3. Aluminum Shipments of Selected Insulated Wire and Cable: 1999 and 1998
[Quantity in thousands of pounds]

Product code	Product description	1999		1998	
		No. of cos.	Gross weight	No. of cos.	Gross weight
335929 pt.	Insulated wire (except magnet wire)	(NA)	465,683	(NA) r/	428,393
335929A	Electronic wire and cable	4	(D)	5	(D)
3359291	Power wire and cable	11	308,740	11	280,128
3359291830	Underground distribution cable, all insulations 600 volts or less	6	167,463	6	156,213
33592918A0	Service drop cable, thermoset insulated 1/.....	3	(D)	3	(D)
33592918B0	Service drop cable, thermoplastic insulated 1/.....	2	(D)	2	(D)
33592918C0	Underground distribution cable, all insulations-- over 600 volts	9	68,923	7	44,886
33592918F0	Thermoset insulated power cable, unarmored, rubber--over 600 volts to 15 kV.....	4	4,592	4	(D)
33592918G0	Thermoset insulated power cable, unarmored, cross-linked--over 600 volts to 15 kV	3	(D)	3	(D)
335929D1	Building wire and cable.....	7	80,533	7	75,520
335929D110	Thermoset insulated, cross-linked polyethylene (XHHW)	5	25,676	5	25,261
335929D150	Service entrance cable (SER, SEU, ASE).....	4	35,425	4	32,289
335929E1	Other insulated wire and cable.....	4	(D)	2	(D)

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

1/Product class 33592918A0 and 33592918B0 have a combined total of 52,216 thousand pounds for 1999 and 53,390 thousands pounds for 1998.

Table 4. Copper Shipments of Magnet Wire, Including Interplant Transfers: 1999 and 1998
[Gross weight in thousands of pounds. Value in thousands of dollars]

Product description		Shipments, including interplant transfers 1/					
		1999			1998		
Product code		No. of cos.	Gross weight 1/	Value	No. of cos.	Gross weight 1/	Value
331491G	Magnet wire	(NA)	793,581	1,155,394	(NA)	714,445	1,064,507
	Class 105 and below:						
331491G110	7 AWG and larger round, including all square and rectangle, film coated	5	8,732	11,656	5	8,553	12,234
331491G120	8 to 21 AWG, film coated	6	34,396	34,134	6	31,367	34,548
331491G130	22 to 32 AWG, film coated	6	1,934	3,292	7	3,270	4,481
331491G140	33 to 44 AWG, film coated	7	1,300	4,865	7	1,156	4,364
	Class 130 and 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	12	24,695	35,232	13	26,045	39,243
331491G170	22 to 32 AWG, film coated	16	85,253	138,219	17	75,945	132,789
331491G180	33 to 44 AWG, film coated	14	26,958	81,746	14	23,692	75,597
	Class 180 and higher:						
331491G190	7 AWG and larger round, including all square and rectangle, film coated	7	37,201	59,271	7	38,409	62,412
331491G1A0	8 to 21 AWG, film coated	13	342,578	390,223	13	304,848	359,696
331491G1B0	22 to 32 AWG, film coated	13	164,152	240,343	13	137,648	198,260
331491G1C0	33 to 44 AWG, film coated	10	7,455	33,919	11	7,820	33,504
331491G1I0	Miscellaneous film coated, n.e.c.	2	(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	11,849	26,324	6	11,406	24,716
	Nonfilm coated (tape):						
331491G1E0	Class 130 and below	4	15,113	21,942	5	13,343	18,261
331491G1G0	Class 155 and above	5	4,778	10,424	6	3,916	8,698
331491G1H0	Miscellaneous nonfilm coated, n.e.c.	2	(D)	(D)	1	(D)	(D)

D Withheld to avoid disclosing data for individual companies. NA Not available.
n.e.c. Not elsewhere classified.

1/Interplant transfers for 1999 totaled 20,024 thousand pounds and 1998 totaled 27,737 thousand pounds of copper.

Table 5. Aluminum Shipments of Magnet Wire, Including Interplant Transfers: 1999 and 1998
[Aluminum gross weight in thousands of pounds. Value in thousands of dollars]

Product code	Product description	Shipments, including interplant transfers 1/					
		No. of cos.	1999		No. of cos.	1998	
			Gross weight	Value		Gross weight	Value
331491G	Magnet wire	(NA)	66,173	118,546	(NA)	63,985	124,039
	Class 105 and below:						
331491G110	7 AWG and larger round, including all square and rectangle, film coated	4	(D)	(D)	4	(D)	(D)
331491G120	8 to 21 AWG, film coated	6	14,928	26,271	6	15,031	27,866
331491G130	22 to 32 AWG, film coated	2	(D)	(D)	3	(D)	(D)
331491G140	33 to 44 AWG, film coated	1	(D)	(D)	1	(D)	(D)
	Class 130 - 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	6	5,347	10,001	5	4,530	8,780
331491G170	22 to 32 AWG, film coated	7	2,107	4,893	6	2,269	5,833
331491G180	33 to 44 AWG, film coated	2	(D)	(D)	4	(D)	(D)
	Class 180 and above:						
331491G190	7 AWG and larger round, including all square and rectangle, film coated	5	2,189	4,942	5	2,033	4,462
331491G1A0	8 to 21 AWG, film coated	8	(D)	(D)	9	26,614	49,272
331491G1B0	22 to 32 AWG, film coated	8	3,750	9,845	6	5,048	14,182
331491G1C0	33 to 44 AWG, film coated	1	(D)	(D)	1	(D)	(D)
331491G1I0	Miscellaneous film coated, n.e.c.						
	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	2	(D)	(D)	3	(D)	(D)
331491G1G0	Class 155 and above	3	3,719	5,866	4	2,624	4,866
331491G1H0	Miscellaneous nonfilm coated, n.e.c.	-	-	-	-	-	-

- Represents zero. D Withheld to avoid disclosing data for individual companies. NA Not available. n.e.c. Not elsewhere classified.

1/Interplant transfers for 1999 totaled 6,757 thousand pounds of aluminum and for 1998 totaled 6,282 thousand pounds of aluminum.

Table 6. Value of Shipments of Fiber Optic Cable: 1999 and 1998
[Thousands of dollars]

Product code	Product description	1999		1998	
		No. of cos.	Value	No. of cos.	Value
33592101	Insulated optical fiber cable.....	34	2,432,049	32	1,936,609
33592101 pt.	Communication applications.....	22	2,401,662	22	1,905,350
	Single-mode stepped-index:				
3359210125	Dispersion shifted.....	9	692,076	10 r/	552,181
3359210128	Dispersion unshifted	16	1,554,189	15	1,156,913
3359210131	Multimode stepped index 1/.....	3	(D)	3	(D)
3359210134	Multimode graded index 1/.....	17	(D)	17	(D)
3359210434	Other applications.....	12	30,387	10	31,259

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

1/Product codes 3359210131 and 3359210134 have a combined total of 155,397 for shipments in 1999 and 196,256 in shipments for 1998.

Table 7. Value of Shipments of Optical Fiber: 1999 and 1998
[Thousands of dollars]

Product code	Product description	1999		1998	
		No. of cos.	Value	No. of cos.	Value
	Optical fiber for data and nondata transmission	22	1,499,205	24 r/	1,193,702
327215A235	Optical fiber used for data transmission.....	14	1,415,298	15	1,141,063
327215A238	Optical fiber used for nondata transmission.....	9	83,907	11 r/	52,639

r/Revised by 5 percent or more from previously published data.