

Series 75 Flexible Metal-Core EMI/RFI Conduit Conduit Material Properties



Conduit Material Choices, Material Properties, and Military Specifications

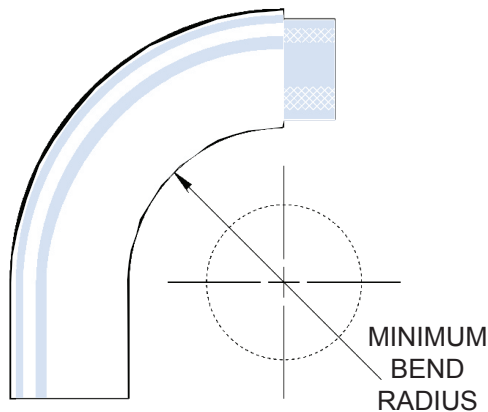
Glenair Code	Material	Properties	Applicable Military Specifications
B	Brass, Per A-A-52440 Type I, Grade B	Optimal EMI shielding when combined with bronze overbraid. Generally specified with bronze overbraid and jacket.	<ul style="list-style-type: none"> ■ IAW A-A-52440 (Covering shielded, electrical, flexible, metal conduit for use as protection of wiring in military vehicles from mechanical injury and, when properly installed and grounded, to prevent radiation that may cause interference with radio and other electronic equipment.) ■ MIL-C-13909 (Superseded by IAW-A-A-52440 above)
C	Stainless Steel AISI 316	Specified for high-temperature, corrosion, and crush resistance. Nominal shielding value. Typically braided with stainless steel braid for additional pull strength and durability. Available with or without a jacket.	<ul style="list-style-type: none"> ■ MIL-PRF-24758 (Covering the performance requirements for weatherproof flexible conduit systems for use primarily in exposed areas on U.S. Navy ships, to shield against electromagnetic (EM) radiation from own-ship transmitters and emissions external to the ship, electromagnetic pulse (EMP) events, and to minimize corrosion while being field repairable to reduce maintenance.)
N	Nickel Iron Alloy Type 4 ANSI/ASTM-A-753	80% Nickel, 20% Iron. Optimal low-frequency shielding material. Typically braided with stainless steel braid for additional pull strength and durability. Available with or without a jacket.	<ul style="list-style-type: none"> ■ MIL-DTL-28840 (Covering Connectors, Electrical, Circular, Threaded, High Shock, High Density, Shipboard, Metal Conduit, for EMI Shielding)

Conduit Resistance and Conduit Pull Force

Dash No.	Nominal I.D.	Percent Crush	Pull Force	
			Pounds	Newtons
08	.250 (6.4)	2.6	250	1112
12	.375 (9.5)	2.8	500	2224
16	.500 (12.7)	4.7	600	2669
20	.625 (15.9)	4.4	650	2891
24	.750 (19.1)	5.7	700	3114
32	1.000 (25.4)	5.0	750	3336
40	1.250 (31.8)	3.6	1500	6672
48	1.500 (38.1)	3.0	2000	8896
56	1.750 (44.5)	3.0	2000	8896
64	2.000 (50.8)	3.0	2000	8896
80	2.500 (63.5)	3.0	2000	8896
96	3.000 (76.2)	3.0	2000	8896

Crush resistance values are expressed as a "percent crush" with a force of 480 pounds (2138 Nm) applied to brass conduit with bronze braid and Neoprene jacket using a 4 inch width compression plate. The "percent crush" for double- and triple-braided conduit configurations are less due to additional braided coverings.

Pull-force values listed indicate the axial load at which the conduit braid separated at a point between the conduit end-fittings. No separation of the terminated end-fittings occurred at these force levels. Double- and triple-braided conduit configurations have a higher pull force due to additional braided coverings. (Note: These values are for factory installed fittings.)



Minimum Bend Radius: Brass conduit, single braid, neoprene jacket			
Dash No.	A Dia	B Dia Max	Minimum Bend Radius
08	.250 (6.4)	.625 (15.9)	1.750 (44.5)
12	.375 (9.5)	.750 (19.1)	2.000 (50.8)
16	.500 (12.7)	.875 (22.2)	2.500 (63.5)
20	.625 (15.9)	1.000 (25.4)	3.000 (76.2)
24	.750 (19.1)	1.141 (29.0)	3.750 (95.3)
32	1.000 (25.4)	1.500 (38.1)	5.000 (127.0)
40	1.250 (31.8)	1.750 (44.5)	6.250 (158.8)
48	1.500 (38.1)	2.000 (50.8)	7.750 (196.9)
56	1.750 (44.5)	2.250 (57.2)	8.500 (215.9)
64	2.000 (50.8)	2.531 (64.3)	10.000 (254.6)
80	2.500 (63.5)	3.031 (77.0)	12.500 (317.5)
96	3.000 (76.2)	3.560 (90.4)	15.000 (381.0)