



# Fiberglass vs. the Competition

The field is busy – but there's only one spot for number one. See how fiberglass conduit stacks up to the competition in crucial areas like weight, corrosion resistance and installation cost.

	EPOXY FIBERGLASS	PVC SCH 40	PVC SCH 80	GALVANIZED RIGID STEEL	PVC-COATED STEEL	ALUMINUM
<b>Cable Fault</b> Fiberglass conduit will not melt or weld the wire to the inside of the conduit under fault conditions as can happen with PVC, steel and aluminum conduit.	Not Affected	Melt/ Fuse	Melt/ Fuse	Weld	Weld	Weld
<b>Toxicity/Halogens</b> Fiberglass conduit does not release toxic halogens (i.e. chlorine and bromine) when burning.	No	Yes	Yes	No	Yes	No
<b>Weight Comparison</b> (SW IPS – lbs/per 100 ft) Fiberglass conduit offers the lowest weight and is still very rigid.	3/4" 17* 1" 19* 1-1/4" 23* 1-1/2" 33* 2" 38* 2-1/2" 46* 3" 60* 3-1/2" 65* 4" 72* 5" 120** 6" 142**	23 34 46 55 73 125 164 198 234 318 412	29 43 59 99 99 152 212 262 310 431 592	105 153 201 246 334 527 690 831 982 1344 1770	105 153 201 246 334 527 690 831 982 1344 1770	36 53 70 86 116 183 239 288 340 465 612
<b>Temperature Range (°F)</b> Fiberglass has an excellent wide temperature range.	-40° to +230°	+40° to +150°	+40° to +150°	N/A	N/A	N/A
<b>Handling in Low Temperatures</b> Fiberglass conduit has been shown to retain its properties at low temperatures allowing year-round installations.	Excellent	Brittle	Brittle	Excellent	Excellent	Excellent

	CURRENT NEC, PVC & RTC SPACING	CHAMPION FIBERGLASS UL LISTED SUPPORT SPANS			CHAMPION FIBERGLASS UL LISTED – XW SUPPORT SPANS	GRC, PVC-COATED & ALUMINUM SPACING
		SW	MW	HW		
<b>Support Spans</b> Champion Fiberglass support spans are UL Listed. Conduit listed for support spacing other than shown in NEC Table 355 shall be permitted to be installed in accordance with the UL listing.	3/4" 3 ft 1" 3 ft 1-1/4" 5 ft 1-1/2" 5 ft 2" 5 ft 2-1/2" 6 ft 3" 6 ft 4" 7 ft 5" 7 ft 6" 8 ft	10 ft 10 ft 10 ft 10 ft 12 ft 12 ft 12 ft 12 ft – –	– – – – – – – 13 ft 13 ft	– – – – – – 14 ft 14 ft 14 ft	10 ft 10 ft 15 ft 15 ft 15 ft 15 ft 17 ft 17 ft 17 ft 17 ft	10 ft 12 ft 14 ft 14 ft 16 ft 16 ft 20 ft 20 ft 20 ft 20 ft

UL designates Champion Fiberglass MW for 5" and 6" as SW.



## FEATURES & ADVANTAGES

	EPOXY FIBERGLASS	PVC SCH 40	PVC SCH 80	GALVANIZED RIGID STEEL	PVC- COATED STEEL	ALUMINUM
<b>Burn Through (Cable Pull)</b> Fiberglass conduit is an excellent material for avoiding "burn through" when pulling cable.	No	Yes	Yes	No	No	No
<b>Coefficient of Friction</b> Using PVC Jacketed Cable Fiberglass conduit offers one of the lowest coefficients of friction available today for conduit systems. It is completely resistant to any of the current pulling lubricants corrosive properties.	0.38	0.90	0.90	0.55	0.55	0.25
<b>Conductivity</b> Fiberglass conduit acts as an excellent insulator.	No	No	No	Yes	Yes	Yes
<b>UV Stable (Sunlight Resistance)</b> (Per UL 2515 & CSA C22.2 No. 211.3-96)	Good	Poor	Poor	Excellent	Poor	Excellent
<b>Coefficient of Thermal Expansion</b> (10-5 inch/inch/°F) *The coefficient is .7 for the steel and 3.5 for the PVC layer. Because of the broad difference between the two materials, adhesion is severely affected during temperature contraction and expansion.	1.5	3.4	3.4	0.65	3.4/0.65*	1.3
<b>Distance Between Expansion Joints (ft)</b>	200	50	50	200	200	50
<b>NECA Labor Installation Rates</b> (Normal installation man/hours per/100 ft) (REF: 2017-2018 NECA Manual of Labor Units) *Reduce labor units by 10% for 20-foot lengths	3/4" 5.5 1" 5.8 1-1/4" 6.0* 1-1/2" 6.4* 2" 6.8* 2-1/2" 7.1* 3" 7.5* 3-1/2" 7.9* 4" 8.3* 5" 8.6* 6" 9.0*	4.5 5.3 6.0 7.0 8.0 9.0 10.0 12.0 14.0 18.0 24.0	5.4 6.3 7.2 8.4 9.6 10.8 12.0 N/A 16.8 21.6 28.8	6.0 7.0 8.0 9.0 11.0 15.0 20.0 25.0 30.0 38.0 48.0	8.0 10.0 12.0 15.0 18.0 21.0 26.0 32.0 38.0 45.0 60.0	5.5 6.0 6.5 7.0 8.0 10.0 12.0 15.0 19.0 24.0 30.0
<b>Field Handling</b> Due to its light weight, ease of cutting and integral bell, fiberglass conduit is very easy to install.	Excellent	Good	Good	Very Poor	Very Poor	Poor
<b>Memory</b> Fiberglass conduit will retain its original shape after impact or compression.	Yes	No	No	No	No	No