

PEEK Insulated Wire

Engineered For Challenging Environments

Overview-

Zeus PEEK Insulated Wire is designed specifically for challenging environments with improved electrical, thermal and mechanical properties. The oil and gas, nuclear, automotive, electrical and aerospace industries can all benefit from using PEEK Insulated Wire.

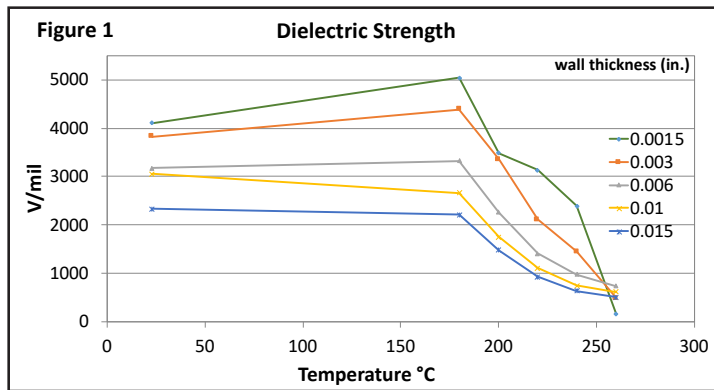


Figure 1: PEEK Insulated Wire dielectric strength vs. temperature. Per ASTM D149 method.

Table 1: Dielectric Strength (V / mil)

	PEEK	PEEK
Temperature (°C)	0.0015" wall	0.003" wall
22	4113	3830
180	5040	4393
200	3487	3357
220	3133	2107
240	2393	1443
260	153	483



DIELECTRIC STRENGTH



CHEMICAL RESISTANCE



ABRASION RESISTANCE



APPLICATIONS

- Electric motors
- Solenoids
- Transformers
- Electronics
- Wire and cable

CAPABILITIES AND SIZING

- Round: #3 - #40 AWG sizes
- Spool weights up to 200 Lbs
- Wall thickness range = .001" - .080"
- Stranded sizes and custom shapes available upon request
- Alloy: Copper (*customer alloys and plating available upon request*)

KEY PROPERTIES

- PEEK polymer is UL rated up to 260 °C (500 °F)
- Abrasion resistance
- Excellent dielectric strength
- Chemical resistance
- Halogen free
- Thermal conductivity .29 W/mK
- 100% AC spark tested during extrusion



PEEK Insulated Wire

ZEUS PEEK WIRE AWG # 18 0.0015" INSULATION THICKNESS

PROPERTIES	MEASUREMENT REFERENCE (NEMA)	NEMA ENAMEL SPEC	PEEK WIRE
Dielectric Breakdown (V)	Section 3.8.3	>5700	9940
Pin Hole (Faults/100 ft.)	Section 3.9	5	≤3
Thermoplastic Flow (°C)	Section 3.5	>500	354
Elongation (%)	Section 3.4	≥35	35.3

PEEK INSULATED WIRE

SIZE (AWG)	NOMINAL BARE COPPER DIAMETER	
	in.	mm
3	0.2294	5.8268
4	0.2043	5.1892
5	0.1819	4.6203
6	0.1620	4.1148
7	0.1443	3.6652
8	0.1285	3.2639
9	0.1144	2.9058
10	0.1019	2.5883
11	0.0907	2.3038
12	0.0808	2.0523
13	0.0720	1.8288
14	0.0641	1.6281
15	0.0571	1.4503
16	0.0508	1.2903
17	0.0453	1.1506
18	0.0403	1.0236
19	0.0359	0.9119
20	0.0320	0.8128
21	0.0285	0.7239
22	0.0253	0.6426
23	0.0226	0.5740
24	0.0201	0.5105
25	0.0179	0.4547
26	0.0159	0.4039
27	0.0142	0.3607
28	0.0126	0.3200
29	0.0113	0.2870
30	0.0100	0.2540
31	0.0089	0.2261
32	0.0080	0.2032
33	0.0071	0.1803
34	0.0063	0.1600
35	0.0056	0.1422
36	0.0050	0.1270
37	0.0045	0.1143
38	0.0040	0.1016
39	0.0035	0.0889
40	0.0031	0.0787

