

Basic (1 layer) Insulation TCA1 with .0015" Self-Bonding Overcoat

Product Information

Temperature Rating: 155°C**Insulation:** Modified ETFE w/Proprietary Self-Bonding Overcoat**Compliances:** UL OBTJ2 File No. E206198

UL 60950-1 (Ed. 2), Annex U.

RoHS Compliant

Conductor: Tin Plated Copper, Solid or Stranded (ASTM B-33/ASTM B-286)

Bare Copper and other conductors available

Size Range: UL: 22 AWG – 40 AWG**Voltage:** UL: 600 V**Breakdown:** Approx. 2000 V**OD Tolerances:** 22 -24 AWG +0.0015"/-0.0005"
25-40 AWG +0.001"/-0.0005"

Insulation Information:

Insulation Type: Fluoropolymer**Dielectric Constant:** 2.6**Abrasion Resistance:** Excellent**Water Resistance:** Excellent**Thermal:** Continuous Operating Temperature, 150°C**Tensile Strength (psi):** 6500**UV Resistance:** Excellent**Underground Resistance:** Excellent**UL Flammability Rating:** V-0**Elongation (%):** 150-300**Chemical Resistance:** Excellent**Long Term Stability:** Excellent

ETFE is a Fluoropolymer compound with excellent electrical properties, heat resistance, chemical resistance, and abrasion resistance. Commonly used in winding wires, UL AWM wires, and medical applications

Self-Bonding Overcoat Information:

The Self-Bonding Overcoat is a proprietary material intended for bonding the product together and it should not be considered an additional layer of insulation nor should it be used for any additional electrical or mechanical properties

Insulated Wire Information:

Part Number	AWG	Conductor OD		Insulated Wire OD w/Self-Bonding Overcoat		
		Inches	MM	Inches	MM	
TCA1 22 AWG-SB-1.5	22	0.0253	0.643	0.0313	0.80	
TCA1 23 AWG-SB-1.5	23	0.0226	0.574	0.0286	0.73	
TCA1 24 AWG-SB-1.5	24	0.0201	0.511	0.0261	0.66	
TCA1 25 AWG-SB-1.5	25	0.0179	0.455	0.0239	0.61	
TCA1 26 AWG-SB-1.5	26	0.0159	0.404	0.0219	0.56	
TCA1 27 AWG-SB-1.5	27	0.0142	0.361	0.0202	0.51	
TCA1 28 AWG-SB-1.5	28	0.0126	0.320	0.0186	0.47	
TCA1 29 AWG-SB-1.5	29	0.0113	0.287	0.0173	0.44	
TCA1 30 AWG-SB-1.5	30	0.0100	0.254	0.0160	0.40	
TCA1 31 AWG-SB-1.5	31	0.0089	0.226	0.0149	0.38	
TCA1 32 AWG-SB-1.5	32	0.0080	0.203	0.0140	0.36	
TCA1 33 AWG-SB-1.5	33	0.0071	0.180	0.0131	0.33	
TCA1 34 AWG-SB-1.5	34	0.0063	0.160	0.0123	0.31	
TCA1 35 AWG-SB-1.5	35	0.0056	0.142	0.0116	0.29	
TCA1 36 AWG-SB-1.5	36	0.0050	0.127	0.0110	0.28	
TCA1 37 AWG-SB-1.5	37	0.0045	0.114	0.0105	0.27	
TCA1 38 AWG-SB-1.5	38	0.0040	0.102	0.0100	0.25	
TCA1 39 AWG-SB-1.5	39	0.0035	0.089	0.0095	0.24	
TCA1 40 AWG-SB-1.5	40	0.0031	0.079	0.0091	0.23	

Bare Core Wire Specifications:

DCR per 10' @ 20°C

AWG	Core Wire Diameter			DC Resistance		
	Min. Dia.	Nom. Dia.	Max. Dia.	Min. Res.*	Nom. Res.	Max. Res.
22	.0250	.0253	.0261	.1559	.1685	.1781
23	.0224	.0226	.0233	.1956	.2112	.2219
24	.0199	.0201	.0207	.2478	.2669	.2811
25	.0177	.0179	.0184	.3137	.3366	.3554
26	.0157	.0159	.0164	.3948	.4266	.4517
27	.0141	.0142	.0146	.4982	.5349	.5600
28	.0125	.0126	.0130	.6283	.6793	.7125
29	.0112	.0113	.0116	.7892	.8446	.8875
30	.0099	.0100	.0103	1.0009	1.0785	1.1359
31	.0088	.0089	.0092	1.2546	1.3616	1.4376
32	.0079	.0080	.0083	1.5414	1.6852	1.7838
33	.0070	.0071	.0074	1.9392	2.1395	2.2720
34	.0062	.0063	.0066	2.4378	2.7173	2.8962
35	.0055	.0056	.0059	3.0506	3.4391	3.6803
36	.0049	.0050	.0053	3.7803	4.3140	4.6368
37	.0044	.0045	.0048	4.6089	5.3259	5.7505
38	.0039	.0040	.0043	5.7431	6.7406	7.3195
39	.0034	.0035	.0038	7.3539	8.8041	9.6306
40	.0030	.0031	.0034	9.1860	11.2227	12.3700

*ASTM B33 sets no standard for minimum resistance. This is only an indicator to investigate other aspects such as tin-thickness and tin coverage.