

Teledyne Reynolds has developed a range of highly flexible cables that are particularly suitable to the aircraft environment. This technology is a direct result of our research into durable and flexible cable assemblies needed for Helmet Mounted Display (HMD) systems. These wires have a PFA insulation and high strand count silver plated copper conductor that enable the wire to have high tolerance to work in hardened environments. They have been designed to operate over a wide temperature range of -55° to 125°C at their rated voltages and at altitudes up to 70,000 feet (21,336 meters). Micro Flex™ is available as single wire, twisted pairs or as multi-core cable with or without shielding.

Teledyne Reynolds' unique capability to manufacture Micro Flex™ cable involves the use of special winding tooling to take advantage of the flexibility of the individual wire when laying up a cable bundle.



FEATURES	MICRO FLEX™ TESTING	TYPICAL APPLICATIONS
<ul style="list-style-type: none"> ◆ Flexible ◆ Standard designs up to 18 kVDC operation ◆ PFA insulation ◆ Small and lightweight ◆ Durable ◆ Reliable ◆ Non-combustible, low smoke rating ◆ -55° to 125°C temperature rating 	<p>The following tests have been performed to MIL-W-22759 Guidelines:</p> <ul style="list-style-type: none"> ◆ Wrap test ◆ Life cycle ◆ Low temperature (cold bend) ◆ Insulation resistance ◆ Bend test ◆ Thermal shock ◆ Blocking ◆ Dielectric test ◆ Humidity 	<ul style="list-style-type: none"> ◆ Helmet Mounted Display CRT cabling ◆ Helmet tracker cabling ◆ Ejection safe Quick Disconnect Connector cabling ◆ Transformer winding ◆ Communication cabling ◆ High vibration aircraft cabling ◆ Medical instrumentation cabling ◆ Flight line or automotive test equipment cabling ◆ Electrostatic chuck cabling

Product numbers and specs subject to change without notice. Products listed represent only a small selection of Teledyne Reynolds' products. Please visit www.teledynereynolds.com for the most up to date product information. Contact Teledyne Reynolds' Engineering to discuss custom designs.

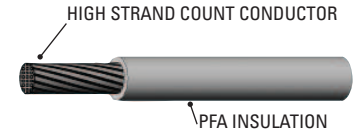
HIGH VOLTAGE MICRO FLEX™ WIRE AND CABLE

70,000 ft (21.3km)
-55° to 125° C

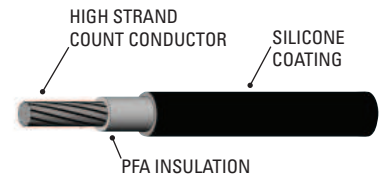
Micro Flex™ wire and cable is available uncoated or with a silicone rubber coating over the PFA insulation. The coated cable is processed with a silicone rubber coating continuously applied to the etched surface of the cable. The coated cable has characteristics similar to silicone rubber cable and a superior dielectric bond to silicone rubber potting or bonding material can be achieved.

HIGH VOLTAGE MICRO FLEX™ ATTRIBUTES

Part Number	Operating Voltage (kVDC)	Conductor		Plating	Conductor Diameter in/mm	Diameter over Insulation in/mm
		AWG	Strands			
178-5132	3	29	51/46	SPC	.012 / 0.33	.019 / 0.48
178-5135	5	29	51/46	SPC	.012 / 0.33	.025 / 0.64
178-5138	13.5	28	41/44	SPC	.014 / 0.37	.042 / 1.07
178-5141	18	24	41/40	SPC	.022 / 0.58	.050 / 1.27
178-5577	25	16	41/32	SPC	.059 / 1.50	.125 / 3.17



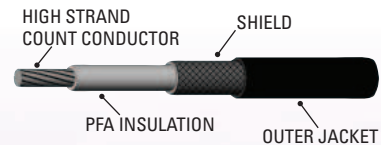
MICRO FLEX™



SILICONE COATED
MICRO FLEX™

SILICONE COATED HIGH VOLTAGE MICRO FLEX™ ATTRIBUTES

Part Number	Operating Voltage (kVDC)	Conductor		Plating	Conductor Diameter in/mm	Diameter over Silicone Coating in/mm
		AWG	Strands			
178-5134	3	29	51/46	SPC	.012 / 0.33	.029 / 0.79
178-5137	5	29	51/46	SPC	.012 / 0.33	.035 / 0.89
178-5140	13.5	28	41/44	SPC	.014 / 0.37	.052 / 1.32
178-5143	18	24	41/40	SPC	.022 / 0.58	.060 / 1.52



SHIELDED MICRO FLEX™

SHIELDED HIGH VOLTAGE MICRO FLEX™ ATTRIBUTES

Part Number	Operating Voltage (kVDC)	Conductor			Insulation		Shielding			Jacket		Imp. (Ohms)	Atten. dB/100 ft @ 400 MHz	Cap. pF/ft @ 1 kHz
		AWG	Strands	Plating	Material	Diameter in/mm	AWG	Plating	Diameter in/mm	Material	Diameter in/mm			
178-6653	6	22	65/40	SPC	PFA	.041 / 1.04	42	SPC	.053 / 1.35	PFA	.070 / 1.78	12	†	76.0

† Not applicable

Contact factory for color options and availability, or please specify color requested when ordering.

Note: Pre-conditioning of PFA wire or cable is recommended because PFA insulation will shrink when exposed to temperature cycling.

Pre-conditioning should be conducted in an air circulating oven at 204°C (400°F) for one hour. Pre-conditioning should only be performed on cut lengths prior to stripping and any termination procedure. No attempt should be made to condition wire or cable in bulk form or while spooled.

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