

**1. CONDUCTOR**

Material: Silicone Blocked Tin Plated Copper  
 Construction: See Table 1  
 Diameter: See Table 1

**2. INSULATION**

Material: Crosslinked Fluoroelastomer, J5  
 Wall thickness  
 Minimum: 0.28mm  
 Minimum Average: 0.32mm  
 Nominal: 0.40mm  
 Diameter: See Table 1  
 Color: SAE Color Standard

**3. PHYSICAL CHARACTERISTICS**

Temperature rating: 150°C  
 Voltage rating: 60 V<sub>DC</sub>  
 Weight: See Table 1

**4. PERFORMANCE PROPERTIES**

**Mechanical**

**Tensile Strength**

Unaged 10.34 MPa, min  
 Aged (168 hrs @ 180°C) 80% retention, min

**Elongation**

Unaged 150%, min  
 Aged (168 hrs @ 180°C) 50% retention, min

**Crosslinking**

Core Not Visible

**Anticapillary Action**

**Test 1**

Fill a test tube to 25mm with ATF. From the sample, cut 6 specimens to 142mm with 10mm stripped and place in the tube. Apply a vacuum of 100mm Hg through the stopper for 1 hr. After outside of specimens are dry, slice off insulation for evidence of wicking up the conductor and/or inside surface of the insulation.

Fluid shall not travel up the conductor more than 20mm.

**Test 2**

Condition cable 48 hours at 165°C prior to performing Test 1.

**Test 3 (3.0mm<sup>2</sup> only)**

Condition cable 48 hours at 165°C prior to performing Test 1. Use diesel engine oil (CH4 or equivalent) and apply a vacuum of 220mm Hg

**PERFORMANCE PROPERTIES (cont'd)**

Strip Force (50mm Slug @ 50 mm/min) See Table 1  
 Abrasion (SAE J1128 – STS) 150mm  
 Pinch Resistance (SAE J1128 – STS) See Table 1  
 Shrinkage None Allowed

**Thermal**

Flame Resistance 70 sec burn, max  
 Accelerated Life in ATF  
 Place five 150mm samples in ATF (Dextron III) for 720 hrs at 150°C. OD shall not increase greater than 20%. Insulation shall not crack or deteriorate after 1X mandrel wrap. Pass Dielectric Test and 11N minimum pinch.

**Cold Bend**

No Cracks or Splits, Pass Dielectric Test

**Electrical**

Dielectric Test 1000V, 60 Hz, 60 Sec  
 Spark Test 2500V

**Chemical**

Ozone Resistance No Cracks

**Fluid Compatibility**

Engine Oil (IRM 902) 15%  
 Gasoline (Ref. Fuel C) 15%  
 Ethanol / Ref. Fuel C Mixture 15%  
 Diesel Fuel 15%  
 Power Steering (IRM 903) 30%  
 Auto Trans. (Dextron III) 25%  
 Engine Coolant 50/50 15%  
 Battery Acid (sp. Gr. ~ 1.26) 5%

**5. REFERENCE SPECIFICATION**

SAE J1128



**JUDD WIRE INC.**  
 124 Turnpike Road  
 Turners Falls, MA 01376  
 (413) 863-4357

Date	Rev	By	Appr'd	ECN
05/18/05	---	EJK	GBM	---
09/28/07	B	ARJP	GBM	06-179
11/12/07	C	EJK	GBM	07-309
Customer Approval:				

Description: <b>HOOKUP, XLFE, THIN WALL, SILICONE BLOCKED</b>	
Specification Number: <b>JW1067-05</b>	Page: 1 of 2

Table 1

CONDUCTOR				INSULATION				
Size (mm <sup>2</sup> )	Construction	Nominal Strand Diameter (mm)	Maximum DC Resistance @ 20°C(mΩ/M)	Nominal Diameter (mm)	Nominal Weight (kg/km)	Adhesion (N)		Minimum Average Pinch Resistance (kg)
						Min	Max	
0.35	7	0.250	56.6	1.55	5.95	10	55	TBD
0.50	7	0.306	32.2	1.72	7.99	10	65	2.5
0.50	19	0.190	32.2	1.72	8.45	10	65	2.5
0.80	19	0.230	24.9	2.04	12.5	7	75	3.6
1.00	19	0.297	15.3	2.17	15.6	TBD	TBD	TBD
2.00	19	0.361	9.76	2.59	23.0	TBD	TBD	TBD



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