

1. CONDUCTOR

Material: See Table 1
 Blocking Agent: Silicon
 Construction: See Table 1
 Diameter: See Table 1

2. INSULATION

Material: Crosslinked Polyolefin
 Wall Thickness
 Minimum: See Table 1
 Nominal: See Table 1
 Diameter: See Table 1
 Color Standard: SAE or JUDD

3. PHYSICAL CHARACTERISTICS

Temperature Rating: 125 °C
 Voltage Rating: 60 V_{dc}
 Weight: See Table 1

**4. PERFORMANCE PROPERTIES
 INSULATION – SAE J1128 TXL**

Mechanical

Tensile Strength
 Unaged 10 MPa, min.
 Aged (168 hr @ 155 °C) 80% retention, min.
 Elongation
 Unaged 150%, min.
 Aged (168 hr @ 155 °C) 50% retention, min.
 Crosslinking Core Not Visible
 Abrasion See Table 1
 Pinch Resistance See Table 1
 Shrinkage None Allowed

Thermal

Flame Resistance 30 seconds burn, max.
 Cold Bend
 No Cracks or Splits, Pass Dielectric Test

Electrical

Dielectric Test 1000 V, 60 Hz, 60 s
 Spark Test 2500 V_{ac}
 Conductor DC Resistance See Table 1

PERFORMANCE PROPERTIES (Cont'd)

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. (Dexron VI)	25%
Engine Coolant 50/50	15%
Battery Acid (Sp. Gr. ~ 1.26)	5%

Anticapillary Action

Fill 6 test tubes to 25 mm with ATF. From the sample, cut 6 specimens to 142 mm with 10 mm stripped on each end and place a specimen in each tube with the stripped end submerged. Connect one end of each specimen to the vacuum and apply a vacuum of 100 mm Hg to each specimen for 1 hr. (See Figure 1). Remove each specimen and allow it to dry. After the outside of the 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 20 mm.

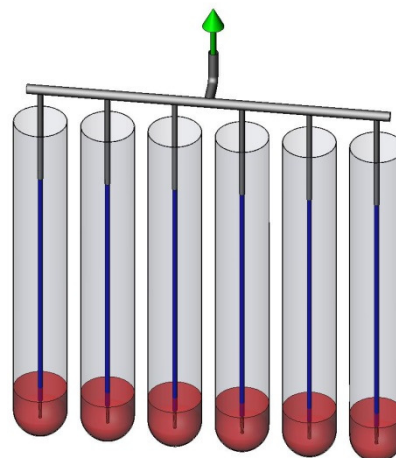


Figure 1: Anticapillary Test Set-up

5. PROCEDURAL REFERENCE SPECIFICATIONS

SAE J1128 (TXL)
 ASTM B3
 ASTM B33



JUDD WIRE INC.
 124 Turnpike Road
 Turners Falls, MA 01376
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Date	Rev	By	Appr'd	ECN	Description:	Specification Number:	Page:
08/20/08	---	EJK	ARJP	---	HOOKUP, SILBLK, XLPO, TXL, 125°C, 60V	JW1243-08	1 of 2
05/25/17	G	CMS	CHU	17-1814			
12/18/19	H	MJM	CMS	19-2001			
Customer Approval:							

Table 1

CONDUCTOR					INSULATION								
Size (AWG)	Material	Stranding (# / AWG)	Diameter		DCR		Wall Thickness		Diameter (mm)	Min. Sandpaper Abrasion		Pinch Resistance	Weight
			Nom. (mm)	Max. (mΩ/m)	Min. (mm)	Nom. (mm)	Weight (kg)	Length (mm)		Min. (kg)	Nom. (kg/km)		
14	SBB	19 / 27	1.70	9.19	0.28	0.40	2.58 ± 0.10		0.22	450	3.8	21.9	
16	SBT	19 / 29	1.40	15.3	0.28	0.40	2.20 ± 0.15		0.22	400	3.1	14.8	
16	SBB	19 / 29	1.40	15.3	0.28	0.40	2.20 ± 0.15		0.22	400	3.1	14.9	
18	SBB	19 / 30	1.25	19.6	0.28	0.40	2.05 ± 0.15		0.22	350	2.5	11.9	
20	SBB	19 / 32	0.97	34.8	0.28	0.40	1.78 ± 0.10		0.22	300	2.0	8.25	
20	SBT	7 / 28	0.97	32.2	0.28	0.40	1.78 ± 0.10		0.22	300	2.0	7.81	
20	SBB	7 / 28	0.96	31.6	0.28	0.40	1.78 ± 0.10		0.22	300	2.0	7.63	
22	SBB	7 / 30	0.78	52.0	0.28	0.40	1.55 ± 0.10		0.22	250	1.7	5.38	



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