

1. CONDUCTOR

Material: Bare or Tin Plated Copper
 Construction: See Table 1
 Diameter: See Table 1

2. INSULATION

Material: Crosslinked Fluoroelastomer, J7
 Wall thickness
 Minimum: See Table 2
 Nominal: See Table 2
 Diameter: See Table 2
 Color standard: SAE
 Marking: None

3. PHYSICAL CHARACTERISTICS

Temperature rating: 150°C
 Voltage Rating: 60 V
 Weight: See Table 2

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.

Pinch Resistance See Table 2

Abrasion Resistance See Table 2

Shrinkage None Allowed

Adhesion (50 mm Slug @ 50 mm/min)
 See Table 2

Electrical

Dielectric Strength 1000 V, 60 Hz, 60 s

Spark Test 2500 V_{ac}

Conductor (ASTM B3/B33)

DC Resistance See Table 1

Thermal

Long-term Aging (3000 hr @ 150 °C)

No Cracks, Pass Dielectric Strength

Flame Resistance 30 s Burn, max.

Cold Bend (3 hr @ -40° C)

No Cracks or Splits, Pass Dielectric Test

Accelerated Life in ATF

Place five 150mm samples in ATF (Dexron VI) for 720 hr at 150° C. OD shall not increase greater than 20%. Insulation shall not crack or deteriorate after 1X mandrel wrap. Pass Dielectric Test. Pinch Resistance shall be greater than 11 N.

PERFORMANCE PROPERTIES (Cont'd)

Chemical

Ozone Resistance (192 hr @ 65°C 100 ppm)
 No Cracks or Splits
 Fluid Compatibility O.D. Change, max.
 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%

5. PROCEDURAL REFERENCE SPECIFICATIONS

SAE J1128 TXL
 ASTM B-3
 ASTM B-33



JUDD WIRE INC.
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Date	Rev	By	Appr'd	ECN
04/20/10	---	EJK	RTB	---
07/05/17	F	RTB	MJM	19-1984
02/14/20	G	MJM	RTB	20-2008
Customer Approval:				

Description: HOOKUP, XLFE, TXL, J7, 150° C	
Specification Number: JW1342-10	Page: 1 of 2

Table 1 - Conductor

ISO Conductor Size (mm ²)	Construction (Strands/ Diameter, mm, max.)	Nominal Diameter (mm)	Max. DC Resistance @ 20°C (mΩ/m)	
			BC	TPC
0.35	7 / 0.26	0.75	52.0	60.2
0.35	19 / 0.16	0.76	48.6	52.2
0.50	7 / 0.308	0.92	33.7	35.7
0.50	19 / 0.19	0.91	36.7	36.2
0.80	19 / 0.23	1.12	22.7	22.5
1.00	19 / 0.28	1.37	15.7	15.8
1.50	19/0.31	1.49	12.7	13.0
2.50	37 / 0.28	2.00	7.60	7.82
5.00	105 / 0.27	2.90	3.94	3.80

Table 2

Conductor		Insulation									
ISO Conductor Size (mm ²)	Construction (Strands/ Diameter, mm, max.)	Wall Thickness (mm)		Diameter (mm)	Nominal Weight (kg/km)		Adhesion (N)		Pinch Resistance, Min. Avg (kg)	Sandpaper Abrasion	
		Min.	Nom.		BC	TPC	Min.	Max.		Mass (kg)	Min. Length (mm)
0.35	7 / 0.26	0.28	0.40	1.56 ± 0.13	5.90	5.90	10	55	1.7	0.22	250
0.35	19 / 0.16	0.28	0.40	1.56 ± 0.13	6.29	6.29	10	55	1.7	0.22	250
0.50	7 / 0.308	0.28	0.40	1.72 ± 0.13	7.92	7.88	10	65	2.5	0.45	150
0.50	19 / 0.19	0.28	0.40	1.72 ± 0.13	7.87	8.09	10	65	2.5	0.45	150
0.80	19 / 0.23	0.28	0.40	2.04 ± 0.13	11.7	11.5	13	75	3.6	0.45	150
1.00	19 / 0.28	0.28	0.40	2.17 ± 0.13	15.1	15.5	13	75	4.2	0.45	150
1.50 ^{NOTE 1}	19/0.31	0.28	0.40	2.32 ± 0.13	11.6	13.4	13	75	4.2	0.45	150
2.50 ^{NOTE 1}	37 / 0.28	0.28	0.40	2.85 ± 0.13	28.0	28.0	13	75	4.2	0.45	150
5.00	105 / 0.27	0.35	0.50	3.77 ± 0.13	57.8	58.4	20	110	5.2	0.45	150

NOTE 1: ISO Conductor Sizes 1.50 mm² and 2.50 mm² are not defined in SAE J1128 as approximate to AWG conductors. Values for Pinch and Sandpaper Abrasion are extrapolated from the AWG conductor approximation for ISO Conductor Sizes 1.0 mm², 2.0 mm², and 3.0 mm².



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**HOOKUP, XLFE,
 TXL, J7, 150° C**

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Rev:

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