

**1. CONDUCTOR**

Material: See Table 1  
 Construction: See Table 1  
 Diameter: See Table 1

**2. INSULATION**

Material: Crosslinked Polyolefin  
 Wall Thickness: See Table 1  
 Diameter: See Table 1  
 Color Standard: Judd or SAE  
 Marking: None

**3. PHYSICAL CHARACTERISTICS**

Temperature Rating: 135 °C  
 Voltage Rating: 60 V<sub>dc</sub>  
 Weight: See Table 1

**4. PERFORMANCE PROPERTIES  
INSULATION – SAE J1128 GXL****Mechanical**

Tensile Strength	
Unaged	10 MPa, min.
Aged (168 hr @ 165 °C)	80% retention, min.
Elongation	
Unaged	150%, min.
Aged (168 hr @ 165 °C)	50% retention, min.
Crosslinking	Core Not Visible
Pinch Resistance	See Table 1
Abrasion Resistance	See Table 1
Shrinkage	None Allowed

**PERFORMANCE PROPERTIES (Cont'd)****Electrical**

Dielectric Strength	1000 V, 60 Hz, 60 s
Spark Test	3000 V <sub>ac</sub>
Conductor	ASTM B-3 / B-33
DC Resistance	See Table 1

**Thermal**

Flame Resistance	30 s Burn, max. 50 mm unburnt insulation, min.
Cold Bend (3 hr @ -40 °C)	No Cracks or Splits, Pass Dielectric Test

**Chemical**

Ozone Resistance	No Cracks
Fluid Compatibility	Pass Dielectric Strength Test 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 SPECIFICATION  
SAE J1128 (GXL)**

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

Date	Rev	By	Appr'd	ECN
03/30/10	---	ARJP	EJK	---
01/21/16	J	CHU	RMB	16-1657
09/22/17	K	RTB	CMS	17-1855
Customer Approval:				

Description: <b>HOOKUP, GXL, XLPO, 135°C, 60V</b>	
Specification Number: <b>JW1335-10</b>	Page: 1 of 2

Table 1

CONDUCTOR					INSULATION						
Size	Material	Stranding	Diameter	DCR @ 20 °C	Wall Thickness		Diameter	Abrasion Resistance		Pinch Resistance	Weight
			Nom.	Max.	Min.	Nom.		Min. Avg.		Min.	Nom.
AWG		# / AWG	(mm)	(mΩ/m)	(mm)	(mm)	(mm)	Weight (kg)	Length (mm)	(kg)	(kg/km)
20	BC	19/32	0.97	34.8	0.41	0.58	2.13 ± 0.12	0.45	400	3.6	9.71
20	TPC	7/28	0.97	34.1	0.41	0.58	2.13 ± 0.12	0.45	400	3.6	9.18
20	BC	7/28	0.92	33.9	0.41	0.58	2.13 ± 0.12	0.45	400	3.6	9.26
18	BC	19/30	1.22	22.2	0.41	0.58	2.38 ± 0.12	0.45	410	4.1	13.1
18	BC	41/34	1.17	21.8	0.41	0.58	2.38 ± 0.12	0.45	410	4.1	12.3
18	TPC	19/30	1.22	25.4	0.41	0.58	2.38 ± 0.12	0.45	410	4.1	13.1
16	BC	19/29	1.33	15.7	0.41	0.58	2.49 ± 0.13	0.45	420	4.7	15.6
16	BC	65/34	1.37	13.7	0.41	0.58	2.49 ± 0.13	0.45	420	4.7	17.1
16	TPC	19/29	1.45	14.3	0.41	0.58	2.49 ± 0.13	0.45	420	4.7	16.5
14	BC	19/27	1.72	9.29	0.41	0.58	3.00 ± 0.15	0.45	430	5.6	24.4
14	TPC	19/27	1.78	10.0	0.41	0.58	3.00 ± 0.15	0.45	430	5.6	24.4
12	BC	19/25	2.16	6.30	0.46	0.66	3.60 ± 0.15	1.40	280	7.2	36.8
10	BC	19/23	2.68	3.72	0.55	0.79	4.40 ± 0.15	1.40	400	9.0	56.4
8	TPC	133/29	3.83	2.52	0.66	0.94	5.72 ± 0.25	1.40	500	11	91.0
8	BC	19/21	3.38	2.34	0.66	0.94	5.72 ± 0.25	1.40	500	11	92.5



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