

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_{dc}
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_{ac}
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: HOOKUP, GXL, XLPO, 135°C, 60V	
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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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