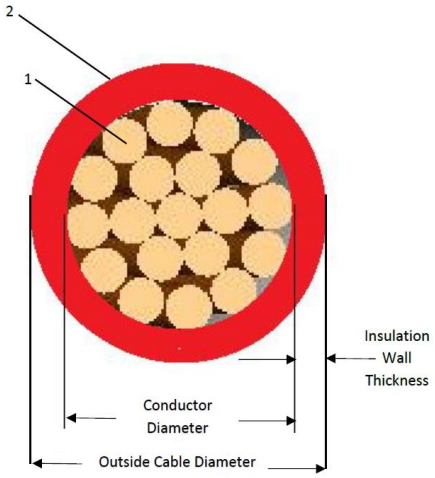
1. CONDUCTOR
Material: Annealed Bare Copper with Silicone Compound Blocking Agent
Designation: SBB
SAE Conductor Sizes: See Table 1
Construction: See Table 1
Diameter: See Table 1

2. INSULATION
Material: Ethylene Tetrafluoroethylene (ETFE)
Extrusion Type: Pressure
Outside Cable Diameter: See Table 1
Wall thickness: 0.40 mm, nom.
Color: Customer Specified

3. PHYSICAL CHARACTERISTICS
Temperature rating: 150 °C
Voltage rating: 60 V_{DC}
Weight: See Table 1

4. PERFORMANCE PROPERTIES (SAE J1128)

Mechanical	
Tensile Strength	
Un-aged (24 hr @ 190 °C)	10 MPa, min.
Aged (168 hr @ 190 °C)	80% retention, min.
Elongation	
Un-aged (24 hr @ 190 °C)	150%, min.
Aged (168 hr @ 190 °C)	50% retention, min.
Dielectric	1000 V, 60 Hz, 60 s
Insulation Faults (Spark Test)	2000 V_{ac}
Cold Bend (3 hr @ -40 °C)	No Cracks or Splits, Pass Dielectric
Fluid Compatibility	Pass Dielectric
	Outside Cable Diameter 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%
Resistance to Ozone	No Cracks or Splits
Resistance to Pinch	5.9 kg, min.
Strip Force (50 mm Slug @ 500 mm/min)	20 N, min
Resistance to Sandpaper Abrasion (180J Grit Al_2O_3, 0.45 kg mass)	304 mm, min. avg.



ADDITIONAL PERFORMANCE PROPERTIES
Direct Current Resistance (DCR) See Table 1
Anticapillary Test
Test 1
Fill 6 test tubes to 25 mm with distilled water. 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 15 mm.
Test 2 (Initial Qualification Only)
Condition the cable 48 hours @ 160 °C prior to performing Test 1.

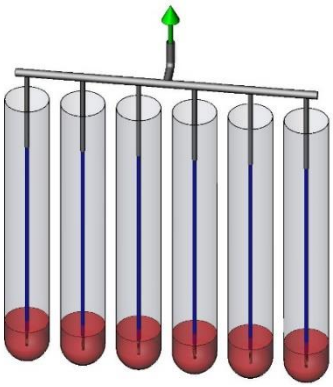


Figure 1: Anticapillary Test Set-up

5. PROCEDURAL REFERENCE SPECIFICATION
SAE J1128

6. PRODUCT REFERENCE SPECIFICATION
SAE J1128

7. Judd Part Numbers: See Table 2

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

Date	Rev	By	Appr'd	ECN
10/23/06	---	GBM	FJC	---
12/22/15	H	CMS	RMB	15-1652
05/03/23	J	RTB	CMB	23-2157

Customer Approval:

Description:
HOOKUP, SILICONE BLOCKED CONDUCTOR, ETFE, SAE 150 °C, 60 V, ANTICAPILLARY

Specification Number:
JW1137-06

Table 1

Conductor					Insulation	
SAE Conductor Size	ISO Conductor Size [b]	Construction	Nominal Diameter	DCR @ 20 °C	Outside Cable Diameter	Nominal Weight
			Nom.	Max.		
	(Reference)	(Strands/ AWG Size)	(mm)	(mΩ/m)	(mm)	(kg/km)
18 [a]	0.80	19/30	1.22	18.2	2.06 ± 0.10	12.4
16	1.00	19/29	1.35	14.6	2.16 ± 0.10	15.5
14	2.00	19/27	1.78	9.19	2.59 ± 0.13	22.8

a: Nominal SAE Conductor Size
b: The ISO Conductor size is a reference based on the Circular Mil Area of the SAE conductor and the proximate Cross-Sectional Area of an ISO conductor. The values are not the same.

Table 2

WIRE SIZE (AWG/mm^2) – 18/0.80	
H10601	WHT
H14684	BLK
H14685	DBL
H14686	VIO
H14687	RED
H18457	ORG
WIRE SIZE (AWG/mm^2) – 16/1.00	
H05769	BLK
H05613	LGN
H05770	DGN
H05614	LBL
H05771	RED
H05772	RED (SPECIAL)
H05494	WHT
H14683	YEL
H15243	BRN
H15244	GRY
H15245	ORG
H15246	VIO
WIRE SIZE (AWG/mm^2) – 14/2.00	
H05495	WHT
H14682	DBL
H18460	ORG