

1. CONDUCTOR

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

2. INSULATION

Material: Halogen Free Crosslinked Polyethylene
Wall thickness
Nominal: 0.017"
Min Average: 0.015"
Minimum: 0.013"
Diameter: See Table 1
Color: Munsell Color Standard
Marking: RU AWM 3385 105C 300V VW-1 JUDD
WIRE CSA AWM I A/B 105C 300V FT1 XX AWG --
- LOW SMOKE HALOGEN FREE

XX – Denotes gauge size

3. PHYSICAL CHARACTERISTICS

Temperature rating: 105°C
Voltage rating: 300V
Weight: See Table 1

4. PERFORMANCE PROPERTIES

Mechanical

Tensile – UL 1581
Unaged 1500 psi, min
Aged (168 hrs @ 136°C) 70% retention, min
Elongation – UL 1581
Unaged 150%, min
Aged (168 hrs @ 136°C) 45% retention, min
Deformation – UL 758
1 hr @ 121°C See Table 1, 50% thickness decrease, max
Crush Resistance – UL 758 600 lb, min
Slow Compression – CSA C22.2 No. 210.2-M90
1 hr @ 23°C See Table 1

Thermal

Cold Bend – CSA C22.2 No. 210.2-M90
4 hrs @ -15°C
No Cracks, Pass Dielectric Strength
Heat Shock – CSA C22.2 No. 210.2-M90
1 hr @ 136°C
No Cracks, Pass Dielectric Strength

Flame

VW-1 (UL 758) 60 sec burn, max
FT-1 (CSA C22.2 No. 210.2-M90) 60 sec burn, max

PERFORMANCE PROPERTIES (cont'd)

Electrical

Dielectric Withstand I – UL 758
Unaged 60 sec, 60 Hz, 2000 V
Aged (168 hrs @ 136°C) Greater than 50% of average unaged breakdown voltage
Dielectric Withstand II – UL 758
Unaged 60 sec, 60 Hz, 2000 V
Aged (168 hrs @ 136°C) 60 sec, 60 Hz, 2000 V
Dielectric Withstand III – UL 758
Conditioned 24 hrs in water 60 sec, 60 Hz, 2000 V
Dielectric Strength – CSA C22.2 No. 210.2-M90
Post Cold Bend (Conditioned 1 hr in water) 60 sec, 60 Hz, 1000 V
Post Heat Shock (Conditioned 1 hr in water) 60 sec, 60 Hz, 1000 V
Spark Test 3000 V_{ac}

Environmental

Directive 2002/95/EC(RoHS) Complies

5. REFERENCE SPECIFICATION

UL Standard 758, AWM style 3385
CSA-C22.2 No. 210.2-M90 AWM I A/B
UL Standard 758
UL Standard 1581
The European Parliament and the Council of the European Union Directive 2002/95/EC



JUDD WIRE INC.
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Date	Rev	By	Appr'd	ECN
01/08/07	---	EJK	FJC	
Customer Approval:				

Description: HOOKUP, HALOGEN FREE XLPE, UL/CSA AWM, 105°C, 300V	
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Table 1

Conductor			Insulation				
Size AWG	Stranding	Diameter (in)	Diameter		Deformation (g)	Slow Compression (lbs)	Weight (lbs/kft)
			Nominal (in)	Tolerance (in)			
26	7/34	0.019	0.053	±0.004	250	202	2.25
26	19/38	0.019	0.053	±0.004	250	202	2.32
24	7/32	0.024	0.058	±0.004	250	247	3.00
24	19/36	0.025	0.059	±0.004	250	247	3.09
22	7/30	0.030	0.064	±0.004	250	292	4.03
22	19/34	0.030	0.064	±0.004	250	292	4.18
20	7/28	0.038	0.072	±0.004	250	337	5.58
20	19/32	0.038	0.072	±0.004	250	337	5.90
18	19/30	0.048	0.082	±0.004	250	337	8.46
16	19/0117	0.056	0.090	±0.004	250	337	10.9
16	26/30	0.055	0.089	±0.004	250	337	10.9
14	19/0147	0.069	0.104	±0.004	250	337	16.1
14	41/30	0.070	0.104	±0.004	250	337	16.0
12	19/0185	0.088	0.122	±0.004	250	337	24.6
12	65/30	0.091	0.125	±0.004	250	337	24.7
10	37/0167	0.117	0.151	±0.004	500	337	37.4
10	105/30	0.114	0.148	±0.004	500	337	37.9



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