

TECHNICAL DATA

ZYRAD® 500 - Flexible Cable



DESCRIPTION

Zyrad® 500 is a flexible cable with tin plated copper conductors and a modified crosslinked polyolefin insulation. Zyrad® 500 has excellent abrasion resistance, coupled with good flexibility and will withstand varnish bake temperatures of 190°C and short-term exposure up to 250°C.

Zyrad® 500 is UL and CSA approved at 600V, 150°C.



APPLICATIONS

Zyrad® 500 is employed as a coil lead and equipment wire in the following applications:

- Electric motors
- Generators
- Transformers
- Hostile environments
- Lighting
- Inductive loop
- Domestic appliances

TECHNICAL DATA

Physical:	
Insulation	Crosslinked polyolefin
Conductor	Stranded tin plated copper (TPC)
Operating temperature range	-65 to 150°C
Short-term temperature	250°C
Voltage rating	600 Vrms
UL style approvals	3288/3289
CSA approval	CL 1503
Room temperature UL abrasion	2400 cycles
Shore 'A' hardness	88
Shore 'D' hardness	34
Tensile strength:	
Room temperature	140 Kg/cm ²
Retention after 7 days at temperature	180°C - 100%
Retention after 90 days at temperature	158°C - 100%
Elongation:	
Room temperature	225%
Retention after 7 days at temperature	180°C - 100%
Retention after 90 days at temperature	158°C - 100%
Flame test, vertical:	
IEC 332-1	Passes
IEEE Std 383-1974	Passes
UL VW-1	Passes
Toxicity index (NES 713)	7.0
Gamma radiation resistance - total dose (Cobalt-60 at a rate of 0.8 Megarads/hour)	200 Megarads
Cold bend UL 758, 20:1 bend ratio	Passes -65°C
Electrical:	
Dielectric constant	2.55
Power factor	0.002
Dielectric breakdown strength	18,000 Vrms/mm

® Registered trademark

Statements, technical information and recommendations contained herein are based on tests we believe to be reliable but they are not to be construed in any manner as warranties expressed or implied. The user shall determine the suitability of the product for their intended use and the user assumes all risk and liability whatsoever in connection therewith.

DIMENSIONS

Conductor Area mm ²	Equivalent AWG Size	Conductor Stranding mm	Conductor Diameter mm	Insulation Thickness mm	Overall Diameter mm	Current* Rating amp (max)	Weight Kgs/Km
0.25	24	19/0.13	0.65	0.80	2.25	13	3.50
0.50	22	16/0.20	0.93	0.80	2.53	16	5.10
0.75	20	24/0.20	1.14	0.80	2.74	23	6.60
1.00	18	32/0.20	1.32	0.80	2.92	26	8.10
1.50	16	30/0.25	1.60	0.80	3.20	35	10.60
2.50	14	50/0.25	2.07	0.80	3.67	50	31.60
4.00	12	56/0.30	2.60	0.80	4.20	69	47.00
6.00	10	84/0.30	3.19	0.80	4.79	93	66.00
10.00	8	80/0.40	4.20	1.20	6.60	137	121.00
16.00	6	126/0.40	5.70	1.60	8.90	182	192.00
25.00	4	196/0.40	7.10	1.60	10.30	243	281.00
35.00	2	278/0.40	8.50	1.60	11.70	300	384.00
50.00	1	399/0.40	10.30	2.00	14.30	378	558.00
70.00	0	361/0.50	12.40	2.00	16.40	459	768.00
95.00	3/0	475/0.50	14.50	2.00	18.50	580	1004.00
120.00	4/0	608/0.50	16.00	2.00	20.00	700	1280.00

DERATING FACTORS

Where a number of conductors are bunched together, the following derating factor must be applied:

Number of Conductors	Derating Factor
2 - 3	0.70
4 - 6	0.56
7 - 24	0.45
25 - 42	0.39
43+	0.32

CURRENT RATINGS FOR SINGLE WIRES IN FREE AIR

