

TECHNICAL DATA

ULTRASHIELD® PLUS ROUND - High Temperature Enamelled Copper Wire

APPLICATIONS

Applications where resistance to higher voltage spikes are present, including inverter controlled electric motors, wind turbine generators, transformers & high voltage rectifiers.

PROPERTIES

Temperature class	200°C
Enamel - Base coat	Modified Polyester
Enamel - Top coat	Polyamide-imide
Diameters	9 - 30 AWG (2.906 - 0.2540mm)
Colours	Natural
Solderability	Non solderable
THERMAL PROPERTIES	
Cut through:	
Required performance, NEMA MW 1000	300°C
Tested performance	390°C
Heat shock, adhesion & flexibility:	
Required performance, NEMA MW 1000	20%, 3xD, no cracks
Tested performance	No base coat or top coat cracks
Thermal aging:	
Required performance, NEMA MW 1000	200°C
Tested performance	215°C
PHYSICAL PROPERTIES	
Abrasion resistance, unidirectional:	
Required performance, NEMA MW 1000	1150g average
Tested performance	1966g average
Abrasion resistance, repeated scrape	250 strokes average
Coefficient of friction, dry lube	0.02 - 0.06
Elongation:	
Required performance, NEMA MW 1000	32% minimum
Tested performance	38%
Springback:	
Required performance, NEMA MW 1000	58° maximum
Tested performance	48°
ELECTRICAL PROPERTIES	
Dielectric breakdown voltage @ 25°C:	
Required performance, NEMA MW 1000	5,700 volts minimum
Tested performance	12,900 volts
Rated temperature:	
Required performance, NEMA MW 1000	4,275 volts minimum
Tested performance	10,982 volts
Continuity:	
Required performance, NEMA MW 1000	5 faults/100ft maximum
Tested performance	≤ 1 fault/100ft

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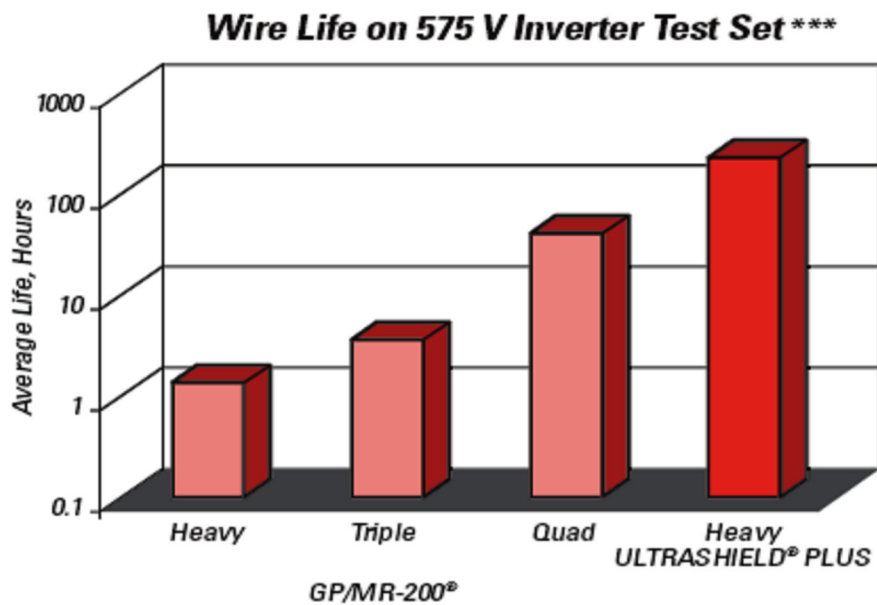
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CHEMICALS PROPERTIES

Solubility:	
Required performance, NEMA MW 1000	580g scrape, minimum
Tested performance	Pass
Freon extraction (R-22):	
Required performance, NEMA MW 1000	0.25% maximum
Tested performance	0.02% maximum
Dielectric breakdown voltage:	
Required performance, NEMA MW 1000	5,700 volts minimum
Tested performance	11,686 volts

APPROVALS

NEMA MW 1000	Section MW 35C & MW 73C as applicable
UL Approval	UL File E32638



*** 18 AWG twisted pairs tested @ 150°C, with a 575 volt drive & motor (phase-to-phase). GP/MR-200® wire is equivalent to standard Polyester 200 wire.