

FLEX NORYL™ RESIN WCD895

REGION ASIA

DESCRIPTION

Non-halogenated flame retardant Flexible NORYL extrusion grade intended for evaluation in wire cable jacket. Excellent flame retardant performance with robust tensile strength, tensile elongation, heat deformation, capable of VW-1 performance and 80C temperature rating as defined by UL 1581. Processing typically conducted on standard extrusion equipment. UL 1581 tests conducted on 2.0mm wire with 0.12mm X 20 stranded copper conductor.

TYPICAL PROPERTY VALUES

Revision 20181012

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, brk, Type I, 50 mm/min	18	MPa	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	180	%	ASTM D 638
Flexural Modulus, 12.5 mm/min, 100 mm span	80	MPa	ASTM D 790
Hardness, Shore A, 30S reading	89	-	ASTM D 2240
Tensile Stress, break, 50 mm/min	18	MPa	ISO 527
Tensile Strain, break, 50 mm/min	210	%	ISO 527
Flexural Modulus, 12.5 mm/min	70	MPa	ISO 178
PHYSICAL			
Specific Gravity	1.03	-	ASTM D 792
Melt Flow Rate, 250°C/10.0 kgf	17	g/10 min	ASTM D 1238
ELECTRICAL			
Volume Resistivity	4.7E+15	Ohm-cm	IEC 60093
Comparative Tracking Index	600	V	IEC 60112
FLAME CHARACTERISTICS			
Glow Wire Flammability Index 960°C, passes at	3	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 3.0 mm	775	°C	IEC 60695-2-13
WIRE AND CABLE - UL 1581 TESTED ON 2.0MM WIRE WITH 0.12MMX20 STRANDED COPPER			
Tensile strength @ break	27	MPa	UL 1581
Tensile elongation @ break	240	%	UL 1581
Tensile elongation @ break after 7days @113°C	200	%	UL 1581
Tensile strength @ break after 7days @136°C	27	MPa	UL 1581
UL temperature rating	80	°C	UL 1581
Heat Deformation at 100°C/250g	4	%	UL 1581
VW-1	Pass	-	UL 1581
WIRE COATING EXTRUSION			
Drying Temperature	75 – 85	°C	
Drying Time	5 – 7	hrs	
Drying Time (Cumulative)	12	hrs	
Maximum Moisture Content	0.02	%	
Extruder Length/Diameter Ratio (L/D)	22:1 to 26:1	-	
Screw Speed	15 – 85	rpm	
Feed Zone Temperature	180 – 220	°C	

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Middle Zone Temperatures	220 – 250	°C	
Head Zone Temperature	220 – 250	°C	
Neck Temperature	220 – 250	°C	
Cross-head Temperature	220 – 250	°C	
Die Temperature	220 – 250	°C	
Melt Temperature	220 – 250	°C	
Conductor Pre-heat Temperature	25 – 120	°C	
Screen Pack	150 – 100	-	
Cooling Water Air Gap	100 – 200	mm	
Water Bath Temperature	15 – 60	°C	

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