

FLEX NORYL™ RESIN WCD883AU

REGION ASIA

DESCRIPTION

Flexible and non-halogenated flame retardant extrusion grade intended for evaluation in applications such as jacket of HD 21.14 flexible cables. Flame retardant performance capable of meeting EN 50265-2-1 requirement.

TYPICAL PROPERTY VALUES

Revision 20181012

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, brk, Type I, 50 mm/min	14	MPa	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	260	%	ASTM D 638
Flexural Modulus, 12.5 mm/min, 100 mm span	30	MPa	ASTM D 790
Hardness, Shore A, 30S reading	<87	-	ASTM D 2240
Tensile Stress, break, 50 mm/min	15	MPa	ISO 527
Tensile Strain, break, 50 mm/min	235	%	ISO 527
Flexural Modulus, 12.5 mm/min	40	MPa	ISO 178
PHYSICAL			
Specific Gravity	1.17	-	ASTM D 792
Melt Flow Rate, 250°C/10.0 kgf	4	g/10 min	ASTM D 1238
Water Absorption, 23°C/24hrs	0.02	%	ISO 62-1
ELECTRICAL			
Volume Resistivity	5.6E+15	Ohm-cm	ASTM D 257
Surface Resistivity	2.5E+16	Ohm	ASTM D 257
Dielectric Strength in oil, 2.0mm	25	kV/mm	ASTM D 149
Relative Permittivity, 1 GHz	3	-	ASTM D 150
Dissipation Factor, 1 GHz	0.003	-	ASTM D 150
Comparative Tracking Index	600	V	IEC 60112
FLAME CHARACTERISTICS			
Smoke Density on 0.5mm plaque, Non-flame, Ds, max	142	-	ASTM E 662
Smoke Density on 0.5mm plaque, Flame, Ds, max	57	-	ASTM E 662
Glow Wire Flammability Index 850°C, passes at	3	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 3.0 mm	775	°C	IEC 60695-2-13
Oxygen Index (LOI)	36	%	ISO 4589
WIRE AND CABLE - UL 1581 TESTED ON 2.0MM WIRE WITH 0.12MMX20 STRANDED COPPER			
Tensile strength @ break	18	MPa	UL 1581
Tensile elongation @ break	263	%	UL 1581
Tensile strength @ break after 7days @136°C	19	MPa	UL 1581
Tensile elongation @ break after 7days @136°C	243	%	UL 1581
Heat Deformation at 100°C/250g	23	%	UL 1581
Vertical Flame Test	PASSES	-	EN 50265-2-1
WIRE COATING EXTRUSION			
Drying Temperature	75 – 85	°C	
Drying Time	5 – 7	hrs	

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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	
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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