

FLEX NORYL™ RESIN WCD841U

REGION ASIA

DESCRIPTION

Flexible, UV stabilized, halogen free extrusion grade for applications such as wire insulation and cable jacket. Good color stability after UV weathering per ASTM D4459. Light color capable. Flame retardant performance capable of meeting UL VW-1 requirement. 80C application temperature rating as defined by UL 1581. 84 Shore A hardness. Processing typically conducted on standard extrusion equipment. UL 1581 tests conducted on 2.0 mm wire with 0.12 mm x 20 stranded copper conductor.

TYPICAL PROPERTY VALUES

Revision 20180905

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	250	%	ASTM D 638
Flexural Modulus, 12.5 mm/min, 100 mm span	90	MPa	ASTM D 790
Hardness, Shore A, 30S reading	84	-	ASTM D 2240
Tensile Stress, break, 50 mm/min	17	MPa	ISO 527
Tensile Strain, break, 50 mm/min	220	%	ISO 527
Flexural Modulus, 12.5 mm/min	90	MPa	ISO 178
IMPACT			
Brittleness Temperature	<-40	°C	ASTM D 746
PHYSICAL			
Specific Gravity	1.08	-	ASTM D 792
Melt Flow Rate, 250°C/5.0 kgf	23	g/10 min	ASTM D 1238
ELECTRICAL			
Volume Resistivity	4.2E+15	Ohm-cm	ASTM D 257
Relative Permittivity, 1 MHz	2.6	-	ASTM D 150
Dissipation Factor, 1 MHz	0.006	-	ASTM D 150
Dielectric strength in oil, 2.0mm	21.5	kV/mm	IEC 60243-1
Comparative Tracking Index	600	V	IEC 60112
FLAME CHARACTERISTICS			
Smoke Density on 0.5mm plaque, Non-flame, Ds, max	170	-	ASTM E 662
Smoke Density on 0.5mm plaque, Flame, Ds, max	133	-	ASTM E 662
Glow Wire Flammability Index 960°C, passes at	3	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 3.0 mm	750	°C	IEC 60695-2-13
Oxygen Index (LOI)	25	%	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	295	%	UL 1581
Tensile strength @ break after 7days @113°C	20	MPa	UL 1581
Tensile elongation @ break after 7days @113°C	238	%	UL 1581
UL temperature rating	80	°C	UL 1581
Heat Deformation at 100°C/250g	19	%	UL 1581
VW-1	Pass	-	UL 1581
WIRE COATING EXTRUSION			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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	
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	

DISCLAIMER

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NONINFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.