FLEX NORYL™ RESIN WCA955

REGION ASIA

DESCRIPTION

FLEX NORYL™ WCA955 resin is a flexible, non-reinforced extrudable blend of Polyphenylene Ether (PPE) + Thermoplastic Elastomer (TPE). This material contains non-halogenated flame retardant and performance capable of meeting UL VW-1 requirements, 105C end use temperature rating, and heat deformation performance as defined by UL 1581. FLEX NORYL WCA955 resin is intended for evaluation in wire insulation, especially internal wire applications in dark colors. It has a Shore A Hardness reading of 95 and exhibits superior thermal stability, very low water absorption, good electric properties, and low specific gravity. Processing is typically conducted on standard extrusion equipment, and UL 1581 testing is conducted on 2.0mm wire with 0.12mm X 20 stranded copper conductor and is also suitable for coating AWG26 and AWG28 copper conductor.

TYPICAL PROPERTY VALUES

Revision 20191015

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, brk, Type I, 50 mm/min	15	MPa	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	160	%	ASTM D 638
Flexural Modulus, 12.5 mm/min, 100 mm span	150	MPa	ASTM D 790
Hardness, Shore A, 30S reading	95	-	ASTM D 2240
Tensile Stress, break, 50 mm/min	15	MPa	ISO 527
Tensile Strain, break, 50 mm/min	160	%	ISO 527
Flexural Modulus, 12.5 mm/min	140	MPa	ISO 178
PHYSICAL			
Specific Gravity	1.02	-	ASTM D 792
Melt Flow Rate, 250°C/10.0 kgf	8	g/10 min	ASTM D 1238
ELECTRICAL			
Volume Resistivity	2.4E+16	Ohm-cm	IEC 60093
Comparative Tracking Index	600	V	IEC 60112
FLAME CHARACTERISTICS			
Glow Wire Flammability Index 750°C, passes at	3	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 3.0 mm	725	°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	250	%	UL 1581
Tensile strength @ break after 7days @136°C	27	MPa	UL 1581
Tensile elongation @ break after 7days @136°C	180	%	UL 1581
UL temperature rating	105	°C	UL 1581
Heat Deformation at 121°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	

© 2019 Copyright by SABIC. All rights reserved

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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.

© 2019 Copyright by SABIC. All rights reserved