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Ultramid® B27 HM 01

Product description

Ultramid® B27 HM 01 is a low viscosity, heat stabilized, nylon 6 universal wire jacketing resin offering excellent performance through the range of THHN, THWN, and TFFN constructions. It possesses a balance of performance properties including flexibility, toughness and abrasion resistance combined with excellent chemical resistance to gasoline, oil and other hydrocarbons. It is a preferred resin for wire conductor jacketing, including shipboard cable, and non-metallic-sheathed cable primary jacketing.

Specification	Test method	Unit	Value
Relative Viscosity (RV) 1% [m/v] in 96% [m/m] sulfuric acid	According to ISO 307 (calculated by Huggins method)		2.55 - 2.80
Viscosity Number (VN) 0,5% [m/v] in 96% [m/m] sulfuric acid	According to ISO 307	ml/g	136 - 156
Moisture content	According to ISO 15512	% [m/m]	max. 0.17
Extractables	According to ISO 6427-chips not ground/16h	% [m/m]	2.5 - 5.5

General properties

	Test method	Unit	Typical value
Density	According to ISO 1183	g/cm ³ / lb/in ³	1.13 / 0.0408
Melting Point	According to ISO 3146	°C / °F	220 / 428
Bulk density		kg/m ³	660
Pellet size		mm	2 - 2.5
Pellet shape			cylindrical
Water absorption, 23°C/50% rh		%	2.7
Water absorption, saturation in water 23°C		%	9.5

Typical properties (dry as molded)	Test method	Unit	Typ. value	Unit	Typ. value
Tensile stress at yield	ISO 527	MPa	80	psi	11,600
Elongation at yield	ISO 527	%	4.25	%	4.25
Tensile Modulus	ISO 527	MPa	2800	psi	406,000
Flexural Modulus (23°C, 73F)	ISO 178	MPa	2600	psi	377,000
Izod notched impact strength (23°C, 73F)	ISO 180/A	kJ/m ²	3.6		
Izod notched impact strength (-40°C, -40F)	ISO 180/A	kJ/m ²	2.1		
ISO Rockwell Hardness (R-scale)	ISO 2039-2	na	118	na	118

Processing Ultramid® B27 HM 01 may be processed on standard extrusion equipment. Recommendations for extruder screws include an L:D of 24 to 30 and a minimum compression ratio of 3.5:1 for metering screws and 3.0:1 for barrier screws. Typical extruder settings are: rear: 240-255°C / 464-491F, middle: 250-270°C / 482-518F, front: 260-290°C / 500-554F.

Supply form and storage Product is supplied in sealed containers and drying prior to molding is not required. If drying becomes necessary, a dehumidifying or desiccant dryer operating at 65 °C (149 F) is recommended. Drying time is dependent on moisture level. Further information concerning safe handling procedures can be obtained from the Material Safety Data Sheet. Alternatively, please contact your BASF representative.

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Further information

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