

LNPTM VERTON™ COMPOUND RV0079

RF-7007 FR

DESCRIPTION

LNP VERTON RV0079 is a compound based on Polyamide 66 (Nylon 66) resin containing 35% long glass fiber. Added features include Flame Retardant and Structural.

GENERAL INFORMATION	
Features	Flame Retardant, High stiffness/Strength, No PFAS intentionally added
Fillers	Glass Fiber
Polymer Types	Polyamide 66 (Nylon 66)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Exteriors
Building and Construction	Building Component
Consumer	Sport/Leisure, Home Appliances, Commercial Appliance
Industrial	Industrial General

TYPICAL PROPERTY VALUES

Revision 20231127

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, yld, Type I, 5 mm/min	194	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	194	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	1.7	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	1.7	%	ASTM D638
Tensile Modulus, 50 mm/min	14780	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	241	MPa	ASTM D790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	241	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	9700	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	177	MPa	ISO 527
Tensile Stress, break, 5 mm/min	177	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	1.7	%	ISO 527
Tensile Strain, break, 5 mm/min	1.7	%	ISO 527
Tensile Modulus, 1 mm/min	12380	MPa	ISO 527
Flexural Modulus, 2 mm/min	10810	MPa	ISO 178
IMPACT ⁽¹⁾			
Izod Impact, unnotched, 23°C	806	J/m	ASTM D4812
Izod Impact, notched, 23°C	314	J/m	ASTM D256
Multiaxial Impact	5	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	11	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	52	kJ/m ²	ISO 180/1U

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, notched 80*10*4 +23°C	36	kJ/m ²	ISO 180/1A
THERMAL ⁽¹⁾			
HDT, 0.45 MPa, 3.2 mm, unannealed	259	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	254	°C	ASTM D648
CTE, -30°C to 30°C, flow	1.9E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	4.8E-05	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	259	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	255	°C	ISO 75/Af
Relative Temp Index, Elec ⁽²⁾	130	°C	UL 746B
Relative Temp Index, Mech w/impact ⁽²⁾	105	°C	UL 746B
Relative Temp Index, Mech w/o impact ⁽²⁾	115	°C	UL 746B
PHYSICAL ⁽¹⁾			
Density	1.69	g/cm ³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.59	%	ASTM D570
Mold Shrinkage, flow, 24 hrs ⁽³⁾	0.3 – 0.5	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs ⁽³⁾	0.7 – 0.9	%	ASTM D955
Density	1.69	g/cm ³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.75	%	ISO 62
ELECTRICAL ⁽²⁾			
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 0	≥3	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 1	≥1.7	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 0	≥3	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 1	≥1.7	mm	UL 746A
High Voltage Arc Track Rate {PLC}	1	PLC Code	UL 746A
Arc Resistance, Tungsten {PLC}	7	PLC Code	ASTM D495
FLAME CHARACTERISTICS ⁽²⁾			
UL Yellow Card Link	E45329-101281605	-	-
UL Recognized, 94V-0 Flame Class Rating ⁽²⁾	≥1.7	mm	UL 94
INJECTION MOLDING ⁽⁴⁾			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.15 – 0.25	%	
Melt Temperature	290 – 305	°C	
Front - Zone 3 Temperature	290 – 300	°C	
Middle - Zone 2 Temperature	290 – 300	°C	
Rear - Zone 1 Temperature	280 – 295	°C	
Mold Temperature	95 – 110	°C	
Back Pressure	0.2 – 0.3	MPa	
Screw Speed	30 – 60	rpm	

- (1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.
- (2) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.
- (3) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.
- (4) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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