

LNPT[™] VERTON[™] COMPOUND RVL29U

DESCRIPTION

LNP VERTON RVL29U is a compound based on Polyamide 66 (Nylon 66) resin containing 45% long glass fiber, 10% PTFE. Added features include UV stabilized, Wear Resistant and Structural.

GENERAL INFORMATION	
Features	Wear resistant, High stiffness/Strength, Weatherable/UV stable
Fillers	Glass Fiber, PTFE
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	Electrical, Industrial General

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Modulus, 1 mm/min	16000	MPa	ISO 527
Tensile Stress, break, 5 mm/min	230	MPa	ISO 527
Tensile Strain, break, 5 mm/min	3	%	ISO 527
Flexural Modulus, 2 mm/min	13000	MPa	ISO 178
Flexural Strength, 2 mm/min	330	MPa	ISO 178
Hardness, Rockwell R	115	-	ISO 2039-2
Hardness, Rockwell M	112	-	ISO 2039-2
Hardness, Rockwell L	96	-	ISO 2039-2
Tensile Modulus, 5 mm/min	16000	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	220	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.8	%	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	12800	MPa	ASTM D790
Flexural Strength, 1.3 mm/min, 50 mm span	320	MPa	ASTM D790
IMPACT ⁽¹⁾			
Izod Impact, notched 80*10*4 +23°C	27	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -40°C	27	kJ/m ²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	81	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -40°C	76	kJ/m ²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	31	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	80	kJ/m ²	ISO 179/1eU
Multi-Axial Instrumented Impact Total Energy, 23°C	12	J	ISO 6603-2

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, notched, 23°C	170	J/m	ASTM D256
Izod Impact, unnotched, 23°C	1090	J/m	ASTM D4812
Instrumented Dart Impact Total Energy, 23°C	10	J	ASTM D3763
THERMAL ⁽¹⁾			
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	255	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	260	°C	ISO 75/Bf
Vicat Softening Temp, Rate B/50	247	°C	ISO 306
Vicat Softening Temp, Rate B/120	253	°C	ISO 306
CTE, -40°C to 40°C, flow	1.4E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.0E-05	1/°C	ISO 11359-2
PHYSICAL ⁽¹⁾			
Density	1.64	g/cm ³	ISO 1183
Moisture Absorption, (23°C/50% RH/24hrs)	0.4 – 0.6	%	ISO 62-4
Water Absorption, (23°C/saturated)	3.2 – 3.8	%	ISO 62-1
Specific Gravity	1.66	-	ASTM D792
Wear Factor Washer	25	10 ⁻⁴ in ³ -min/ft-lb-hr	ASTM D3702 Modified: Instr.
Dynamic COF	0.42	-	ASTM D3702 Modified: Instr.
Static COF	0.48	-	ASTM D3702 Modified: Instr.
Mold Shrinkage, flow ⁽²⁾	0.2 – 0.4	%	SABIC method
Mold Shrinkage, xflow ⁽²⁾	0.7 – 0.9	%	SABIC method
INJECTION MOLDING ⁽³⁾			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Drying Time (Cumulative)	48	Hrs	
Maximum Moisture Content	0.15 – 0.25	%	
Hopper Temperature	40	°C	
Melt Temperature	290 – 305	°C	
Rear - Zone 1 Temperature	280 – 295	°C	
Middle - Zone 2 Temperature	290 – 300	°C	
Front - Zone 3 Temperature	290 – 300	°C	
Nozzle Temperature	290 – 305	°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) 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.
- (3) 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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