LNP™ VERTON™ COMPOUND RVN1AESP

DESCRIPTION

LNP VERTON RVN1AESP is a compound based on Polyamide 66 (Nylon 66) resin containing 50% long glass fiber and proprietary lubricant. Added features include Easy Molding, Wear Resistant and Structural.

GENERAL INFORMATION	
Features	Wear resistant, High stiffness/Strength, No PFAS intentionally added
Fillers	Glass Fiber, Proprietary Filler
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 Stress, brk, Type I, 5 mm/min	250	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.1	%	ASTM D638
Tensile Modulus, 5 mm/min	16700	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	320	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	11800	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	235	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.4	%	ISO 527
Tensile Modulus, 1 mm/min	17000	MPa	ISO 527
Flexural Strength, 2 mm/min	330	MPa	ISO 178
Flexural Modulus, 2 mm/min	11300	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	1160	J/m	ASTM D4812
Izod Impact, notched, 23°C	270	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	12	J	ASTM D3763
Izod Impact, notched 80*10*4 +23°C	35	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -40°C	40	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	90	kJ/m²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	35	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	95	kJ/m²	ISO 179/1eU
Multiaxial Impact [2]	13	J	ISO 6603
THERMAL [1]			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Vicat Softening Temp, Rate B/50	240	°C	ISO 306
Vicat Softening Temp, Rate B/120	235	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	250	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	245	°C	ISO 75/Af
CTE, -40°C to 40°C, flow	1.4E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.7E-05	1/°C	ISO 11359-2
PHYSICAL (1)			
Moisture Absorption, (23°C/50% RH/24 hrs)	0.1	%	ASTM D570
Water Absorption, (23°C/24hrs)	0.8 – 0.9	%	ASTM D570
Specific Gravity	1.6	-	ASTM D792
Density	1.6	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.3	%	ISO 62
Water Absorption, (23°C/saturated)	4.4	%	ISO 62-1
Mold Shrinkage, flow, 24 hrs (3)	0.2 – 0.3	%	ISO 294
Mold Shrinkage, xflow, 24 hrs (3)	0.7 – 0.8	%	ISO 294
Wear Factor Washer	33	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Instr.
Dynamic COF	0.58	-	ASTM D3702 Modified: Instr.
Static COF	0.71	-	ASTM D3702 Modified: Instr.
INJECTION MOLDING (4)			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Drying Time (Cumulative)	48	Hrs	
Maximum Moisture Content	0.15 – 0.25	%	
Melt Temperature	290 – 305	°C	
Nozzle 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	
Hopper Temperature	40	°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) Test speed = 6.7m/s
(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.

ADDITIONAL PRODUCT NOTES

No PFAS intentionally added: The grade listed in this document does not contain PFAS intentionally added during Seller's manufacturing process and is not expected to contain unintentional PFAS impurities. Each user is responsible for evaluating the presence of unintentional PFAS impurities.

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