LNP™ VERTON™ COMPOUND UX03320

PDX-U-03320

DESCRIPTION

LNP VERTON UX03320 is a compound based on Polyphthalamide (PPA) resin containing 50% long glass fiber and proprietary fillers. Added feature of this grade is Structural.

GENERAL INFORMATION	
Features	High stiffness/Strength, No PFAS intentionally added
Fillers	Glass Fiber, Proprietary Filler
Polymer Types	Polyphthalamide (PPA)
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 20231127

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, break	220	MPa	ASTM D638
Tensile Strain, break	1.9	%	ASTM D638
Tensile Modulus, 5 mm/min	18200	MPa	ASTM D638
Flexural Stress	300	MPa	ASTM D790
Flexural Modulus	18000	MPa	ASTM D790
Tensile Stress, break	200	MPa	ISO 527
Tensile Strain, break	1.9	%	ISO 527
Tensile Modulus, 1 mm/min	20300	MPa	ISO 527
Flexural Stress, break, 2 mm/min	360	MPa	ISO 178
Flexural Modulus, 2 mm/min	17700	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	800	J/m	ASTM D4812
Izod Impact, notched, 23°C	300	J/m	ASTM D256
Multiaxial Impact	19	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	15	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	70	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	38	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 1.82 MPa, 3.2mm, unannealed	260	°C	ASTM D648
CTE, -40°C to 40°C, flow	1.2E-05	1/°C	ASTM E831

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 40°C, xflow	2.2E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	1.2E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	2.2E-05	1/°C	ISO 11359-2
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	275	°C	ISO 75/Af
PHYSICAL [1]			
Density	1.63	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.2	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [2]	0.05 – 0.1	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	0.08 – 0.2	%	ASTM D955
Mold Shrinkage, flow, 24 hrs [2]	0.06	%	ISO 294
Mold Shrinkage, xflow, 24 hrs [2]	0.15	%	ISO 294
Spiral flow (1mm)	30	cm	SABIC method
Spiral flow (3mm)	70	cm	SABIC method
Density	1.63	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.3	%	ISO 62
FLAME CHARACTERISTICS [3]			
UL Yellow Card Link	E45329-101284433	-	-
UL Recognized, 94HB Flame Class Rating [3]	≥0.8	mm	UL 94
INJECTION MOLDING [4]			
Drying Temperature	120 – 150	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.15	%	
Melt Temperature	315 – 330	°C	
Front - Zone 3 Temperature	330 – 345	°C	
Middle - Zone 2 Temperature	320 – 330	°C	
Rear - Zone 1 Temperature	315 – 325	°C	
Mold Temperature	140 – 165	°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) 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.

(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.

DISCLAIMER