LNP™ THERMOCOMP™ Compound RYY33

DESCRIPTION

LNP THERMOCOMP RYY33 compound is based on Nylon 6/6 resin containing 33% glass fiber.

GENERAL INFORMATION	
Features	High stiffness/Strength, No PFAS intentionally added
Fillers	Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polyamide 66 (Nylon 66)
Processing Techniques	Injection Molding

TYPICAL PROPERTY VALUES

Revision 20231214

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 5 mm/min	167	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.4	%	ASTM D638
Tensile Modulus, 50 mm/min	11420	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	243	MPa	ASTM D790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	242	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	9700	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	160	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.4	%	ISO 527
Tensile Modulus, 1 mm/min	10570	MPa	ISO 527
Flexural Stress	233	MPa	ISO 178
Flexural Modulus, 2 mm/min	9400	MPa	ISO 178
IMPACT [1]			
Izod Impact, notched, 23°C	67	J/m	ASTM D256
Multiaxial Impact	2	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	6	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	44	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	6	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 1.82 MPa, 3.2mm, unannealed	246	°C	ASTM D648
CTE, -30°C to 30°C, flow	2.7E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	9.8E-05	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	255	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	236	°C	ISO 75/Af
Relative Temp Index, Elec [2]	65	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	65	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	65	°C	UL 746B
PHYSICAL [1]			
Specific Gravity	1.41	-	ASTM D792
Density	1.4	g/cm³	ASTM D792

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Moisture Absorption, (23°C/50% RH/24 hrs)	0.64	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [3]	0.3 – 0.6	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [3]	0.9 – 2	%	ASTM D955
Moisture Absorption (23°C / 50% RH)	0.94	%	ISO 62
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E121562	-	-
UL Recognized, 94HB Flame Class Rating	≥1.5	mm	UL 94
INJECTION MOLDING [4]			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.15 – 0.25	%	
Melt Temperature	280 – 305	°C	
Front - Zone 3 Temperature	295 – 305	°C	
Middle - Zone 2 Temperature	280 – 295	°C	
Rear - Zone 1 Temperature	265 – 275	°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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