LNP™ THERMOCOMP™ COMPOUND D451

DESCRIPTION

LNP THERMOCOMP D451 (or EXTC8141) is a compound based on Polycarbonate resin containing Glass Fiber, Flame Retardant. Added features of this material include: High modulus, good flatness, good ductility, Non-Brominated & Non-Chlorinated Flame Retardant.

TYPICAL PROPERTY VALUES

Revision 20191217

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	143	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	2.3	%	ASTM D 638
Tensile Modulus, 5 mm/min	11720	MPa	ASTM D 638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	186	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	9750	MPa	ASTM D 790
IMPACT			
Izod Impact, unnotched, 23°C	521	J/m	ASTM D 4812
Izod Impact, notched, 23°C	140	J/m	ASTM D 256
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	13	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	33	kJ/m²	ISO 179/1eU
THERMAL			
HDT, 1.82 MPa, 3.2mm, unannealed	114	°C	ASTM D 648
CTE, -40°C to 40°C, flow	1.54E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	5.63E-05	1/°C	ASTM E 831
Relative Temp Index, Elec (1)	80	°C	UL 746B
Relative Temp Index, Mech w/impact (1)	80	°C	UL 746B
Relative Temp Index, Mech w/o impact (1)	80	°C	UL 746B
PHYSICAL			
Density	1.52	g/cm³	ASTM D 792
Mold Shrinkage, flow, 24 hrs	0.1 – 0.25	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs	0.1 – 0.25	%	ASTM D 955
Melt Flow Rate, 300°C/2.16 kgf	17.9	g/10 min	ASTM D 1238
Melt Flow Rate, 300°C/5.0 kgf	57	g/10 min	ASTM D 1238
Melt Volume Rate, MVR at 300°C/5.0 kg	42	cm³/10 min	ASTM D 1238
Melt Volume Rate, MVR at 300°C/2.16 kg	14	cm³/10 min	ISO 1133
FLAME CHARACTERISTICS (1)			
UL Yellow Card Link	E207780-101265025	-	-
UL Recognized, 94V-0 Flame Class Rating	≥0.8	mm	UL 94
UL Recognized, 94V-1 Flame Class Rating	≥0.6	mm	UL 94
INJECTION MOLDING			
Drying Temperature	110	°C	
Drying Time	3 – 6	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	285 – 310	°C	

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Nozzle Temperature	285 – 305	°C	
Front - Zone 3 Temperature	280 – 300	°C	
Middle - Zone 2 Temperature	270 – 290	°C	
Rear - Zone 1 Temperature	260 – 280	°C	
Mold Temperature	80 – 110	°C	
Back Pressure	0.1 – 0.3	MPa	
Screw Speed	50 – 90	rpm	

(1) 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.

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