LNP™ THERMOCOMP™ COMPOUND D452

DESCRIPTION

LNP* Thermocomp* D452 (or EXTC8202) is a compound based on SABIC unique Polycarbonate copolymer resin containing Glass Fiber, Flame Retardant. Added features of this material include: High modulus, good flatness, good ductility, Non-Brominated & Non-Chlorinated Flame Retardant, and super good flow with IMR/IMD capability. Limited color space (White, Black and Grey color only).

TYPICAL PROPERTY VALUES

Revision 20191217

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	141	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	2.3	%	ASTM D 638
Tensile Modulus, 5 mm/min	11960	MPa	ASTM D 638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	211	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	11660	MPa	ASTM D 790
Tensile Stress, break, 5 mm/min	140	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.2	%	ISO 527
Tensile Modulus, 1 mm/min	11290	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	189	MPa	ISO 178
Flexural Modulus, 2 mm/min	10050	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	620	J/m	ASTM D 4812
Izod Impact, notched, 23°C	145	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	41	kJ/m²	ISO 179/1eU
THERMAL			
HDT, 1.82 MPa, 3.2mm, unannealed	98	°C	ASTM D 648
CTE, 23°C to 80°C, flow	1.58E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	5.8E-05	1/°C	ISO 11359-2
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/1.2 kgf	17.4	g/10 min	ASTM D 1238
Melt Flow Rate, 300°C/2.16 kgf	39	g/10 min	ASTM D 1238
Melt Volume Rate, MVR at 300°C/1.2 kg	12	cm³/10 min	ISO 1133
Melt Volume Rate, MVR at 300°C/2.16 kg	30	cm³/10 min	ISO 1133
FLAME CHARACTERISTICS [1]			
UL Yellow Card Link	E207780-101549550	-	-
UL Recognized, 94V-0 Flame Class Rating	≥1	mm	UL 94
INJECTION MOLDING			

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Drying Temperature	90 – 100	°C	
Drying Time	3 – 5	hrs	
Melt Temperature	280 – 310	°C	
Nozzle Temperature	280 – 310	°C	
Front - Zone 3 Temperature	275 – 310	°C	
Middle - Zone 2 Temperature	270 – 310	°C	
Rear - Zone 1 Temperature	265 – 280	°C	
Mold Temperature	70 – 110	°C	
Back Pressure	0.3 – 1	MPa	
Screw Speed	20 – 100	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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