



LNP* THERMOCOMP* Compound D452

Asia Pacific: COMMERCIAL

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.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
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/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	41	kJ/m ²	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
PHYSICAL			
Density	1.52	g/cm ³	ASTM D 792
Mold Shrinkage, flow, 24 hrs (5)	0.1 - 0.25	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	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	cm ³ /10 min	ISO 1133
Melt Volume Rate, MVR at 300°C/2.16 kg	30	cm ³ /10 min	ISO 1133
FLAME CHARACTERISTICS			
UL Recognized, 94V-0 Flame Class Rating (3)	1	mm	UL 94

1) Typical values only. Variations within normal tolerances are possible for various colours. All values are measured at least after 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume rate are measured on injection moulded samples. All samples are prepared according to ISO 294.

2) Only typical data for material selection purpose. Not to be used for part or tool design.
 3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.
 4) Own measurement according to UL.
 5) 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.
 6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source, GMD, Last Update: 08/01/2013

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PROCESSING PARAMETERS	TYPICAL VALUE	UNIT
Injection Molding		
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

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