



LNP™ THERMOCOMP™ Compound D451

Asia Pacific: COMMERCIAL

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 PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	1450	kgf/cm ²	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	2.3	%	ASTM D 638
Tensile Modulus, 5 mm/min	119500	kgf/cm ²	ASTM D 638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	1890	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	99400	kgf/cm ²	ASTM D 790
IMPACT			
Izod Impact, unnotched, 23°C	53	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	14	cm-kgf/cm	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	33	kJ/m ²	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
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/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	cm ³ /10 min	ASTM D 1238
Melt Volume Rate, MVR at 300°C/2.16 kg	14	cm ³ /10 min	ISO 1133
FLAME CHARACTERISTICS			
UL Recognized, 94V-0 Flame Class Rating (3)	0.8	mm	UL 94



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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	110	°C
Drying Time	3 - 6	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	285 - 310	°C
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