



LNP™ THERMOCOMP™ Compound D251

Asia Pacific: COMMERCIAL

LNP* Thermocomp* D251 (experimental grade name as EXTC8273) 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	1120	kgf/cm ²	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	2.7	%	ASTM D 638
Tensile Modulus, 5 mm/min	68100	kgf/cm ²	ASTM D 638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	1700	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	62700	kgf/cm ²	ASTM D 790
Tensile Stress, break, 5 mm/min	112	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.6	%	ISO 527
Tensile Modulus, 1 mm/min	6800	MPa	ISO 527
Flexural Stress, break, 2 mm/min	165	MPa	ISO 178
Flexural Modulus, 2 mm/min	6240	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	72	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	15	cm-kgf/cm	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	214	cm-kgf	ASTM D 3763
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	14	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	51	kJ/m ²	ISO 179/1eU
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	121	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	116	°C	ASTM D 648
CTE, 23°C to 80°C, flow	2.6E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	7.3E-05	1/°C	ISO 11359-2
PHYSICAL			
Density	1.35	g/cm ³	ASTM D 792
Mold Shrinkage, flow, 24 hrs (5)	0.2 - 0.4	%	ASTM D 955



LNP™ THERMOCOMP™ Compound D251

Asia Pacific: COMMERCIAL

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
PHYSICAL			
Mold Shrinkage, xflow, 24 hrs (5)	0.2 - 0.4	%	ASTM D 955
Melt Flow Rate, 300°C/1.2 kgf	12	g/10 min	ASTM D 1238
Melt Flow Rate, 300°C/2.16 kgf	24	g/10 min	ASTM D 1238
Water Absorption, (23°C/sat)	0.07	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.03	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	10	cm ³ /10 min	ISO 1133
Melt Volume Rate, MVR at 300°C/2.16 kg	20	cm ³ /10 min	ISO 1133
ELECTRICAL			
Dielectric Constant, 1.1 GHz	3.24	-	SABIC Method
Dielectric Constant, 1.9 GHz	3.28	-	SABIC Method
Dielectric Constant, 5 GHz	3.28	-	SABIC Method
Dielectric Constant, 10 GHz	3.27	-	SABIC Method
Dissipation Factor, 1.1 GHz	0.0067	-	SABIC Method
Dissipation Factor, 1.9 GHz	0.0066	-	SABIC Method
Dissipation Factor, 5 GHz	0.007	-	SABIC Method
Dissipation Factor, 10 GHz	0.0072	-	SABIC Method
FLAME CHARACTERISTICS			
UL Recognized, 94V-2 Flame Class Rating (3)	0.3	mm	UL 94
UL Recognized, 94V-1 Flame Class Rating (3)	0.5	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating (3)	0.6	mm	UL 94



LNP™ THERMOCOMP™ Compound D251

Asia Pacific: COMMERCIAL

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