



LNP™ THERMOCOMP™ COMPOUND D151RC

REGION ASIA

DESCRIPTION

LNP* Thermocomp* D151RC (experimental grade name as EXTC8482) is a compound based on Recycle Polycarbonate resin containing Glass Fiber, Flame Retardant. Added features of this material include: high modulus, good surface, good flatness, good ductility, Non-Brominated & Non-Chlorinated Flame Retardant. Post-Consumer Recycling (PCR) polycarbonate content up to 35%.

TYPICAL PROPERTY VALUES

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Flexural Modulus, 1.3 mm/min, 50 mm span	4070	MPa	ASTM D 790
Flexural Stress, yld, 1.3 mm/min, 50 mm span	133	MPa	ASTM D 790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	130	MPa	ASTM D 790
Flexural Modulus, 2 mm/min	4180	MPa	ISO 178
Flexural Stress, yield, 2 mm/min	134	MPa	ISO 178
Flexural Stress, break, 2 mm/min	132	MPa	ISO 178
Tensile Modulus, 5 mm/min	4430	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	82	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	3.7	%	ASTM D 638
Tensile Modulus, 1 mm/min	4380	MPa	ISO 527
Tensile Stress, break, 5 mm/min	82	MPa	ISO 527
Tensile Strain, break, 5 mm/min	3.6	%	ISO 527
IMPACT			
Izod Impact, notched, 23°C	140	J/m	ASTM D 256
Izod Impact, notched, -30°C	75	J/m	ASTM D 256
Izod Impact, unnotched, 23°C	700	J/m	ASTM D 4812
Izod Impact, notched 80*10*4 +23°C	13	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	7	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	42	kJ/m²	ISO 180/1U
Instrumented Impact Total Energy, 23°C	21	J	ASTM D 3763
THERMAL			
HDT, 1.82 MPa, 3.2mm, unannealed	115	°C	ASTM D 648
HDT, 0.45 MPa, 3.2 mm, unannealed	121	°C	ASTM D 648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	115	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	121	°C	ISO 75/Bf
Vicat Softening Temp, Rate B/50	123	°C	ISO 306
Vicat Softening Temp, Rate B/120	126	°C	ISO 306
CTE, 23°C to 80°C, flow	4.0E-05	1/°C	ASTM E 831
CTE, 23°C to 80°C, xflow	8.3E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	3.5E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	6.9E-05	1/°C	ASTM E 831
PHYSICAL			
Density	1.27	g/cm ³	ASTM D 792
Melt Flow Rate, 300°C/2.16 kgf	24	g/10 min	ASTM D 1238
Melt Flow Rate, 300°C/1.2 kgf	12	g/10 min	ASTM D 1238
Melt Volume Rate, MVR at 300°C/2.16 kg	23	cm ³ /10 min	ISO 1133
Melt Volume Rate, MVR at 300°C/1.2 kg	11	cm ³ /10 min	ISO 1133
Mold Shrinkage, flow, 24 hrs (5)	0.3 – 0.5	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	0.3 – 0.5	%	ASTM D 955
Water Absorption, 23°C/24hrs	0.04	%	ISO 62-1
ELECTRICAL			
Dielectric Constant, 1.1 GHz	3.03	-	SABIC method
Dissipation Factor, 1.1 GHz	0.0064	-	SABIC method
Dielectric Constant, 1.9 GHz	3.04	-	SABIC method
Dissipation Factor, 1.9 GHz	0.0063	-	SABIC method
Dielectric Constant, 5 GHz	3.05	-	SABIC method
Dissipation Factor, 5 GHz	0.0062	-	SABIC method
Dielectric Constant, 10 GHz	3.05	-	SABIC method
Dissipation Factor, 10 GHz	0.0064	-	SABIC method
Volume Resistivity	> 1.0E+16	Ohm-cm	ASTM D 257
Surface Resistivity	> 1.0E+16	Ohm	ASTM D 257
FLAME CHARACTERISTICS			
UL Recognized, 94V-0 Flame Class Rating (3)	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	
Nozzle Temperature	285 – 305	°C	
Front - Zone 3 Temperature	280 – 300	°C	
Middle - Zone 2 Temperature	270 – 290	°C	



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Rear - Zone 1 Temperature	260 – 280	°C	
Mold Temperature	80 – 110	°C	
Back Pressure	0.1 – 0.3	MPa	
Screw Speed	50 – 90	rpm	