



LNP™ THERMOCOMP™ Compound DX14354X

Asia Pacific: COMMERCIAL

LNP Thermocomp compound DX14354X is an improved flow, colorable compound based on PC copolymer resin developed for applications that require Laser Direct Structuring (LDS) for antenna, or electronic circuit manufacturing. Thermocomp compound DX14354X helps customers to improve productivity with stable plating and RF performance, excellent impact strength and surface finish.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	550	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	490	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	5	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	70	%	ASTM D 638
Tensile Modulus, 50 mm/min	25400	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	860	kgf/cm ²	ASTM D 790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	840	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	25400	kgf/cm ²	ASTM D 790
Tensile Stress, yield, 50 mm/min	54	MPa	ISO 527
Tensile Stress, break, 50 mm/min	47	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	5	%	ISO 527
Tensile Strain, break, 50 mm/min	80	%	ISO 527
Tensile Modulus, 1 mm/min	2460	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	86	MPa	ISO 178
Flexural Modulus, 2 mm/min	2560	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	76	cm-kgf/cm	ASTM D 256
Izod Impact, notched 80*10*3 +23°C	60	kJ/m ²	ISO 180/1A
THERMAL			
Vicat Softening Temp, Rate A/50	128	°C	ASTM D 1525
Vicat Softening Temp, Rate B/50	128	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	111	°C	ASTM D 648
CTE, -40°C to 40°C, flow	5.7E-05	1/°C	ASTM E 831



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TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
THERMAL			
CTE, -40°C to 40°C, xflow	6.E-05	1/°C	ASTM E 831
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	113	°C	ISO 75/Af
PHYSICAL			
Density	1.29	g/cm ³	ASTM D 792
Mold Shrinkage, flow, 24 hrs (5)	0.5 - 0.7	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	0.5 - 0.7	%	ASTM D 955
Moisture Absorption (23°C / 50% RH)	0.05	%	ISO 62
Melt Volume Rate, MVR at 260°C/5.0 kg	25	cm ³ /10 min	ISO 1133
Melt Volume Rate, MVR at 280°C/2.16 kg	27	cm ³ /10 min	ISO 1133
Melt Volume Rate, MVR at 280°C/21.6 kg	22	cm ³ /10 min	ISO 1133
ELECTRICAL			
Volume Resistivity	1.2E+16	Ohm-cm	ASTM D 257
Surface Resistivity	1.2E+16	Ohm	ASTM D 257
Relative Permittivity, 1 GHz	3.1	-	ASTM D 150
Dissipation Factor, 1 GHz	0.006	-	ASTM D 150
Dielectric Constant, 1.1 GHz	3.06	-	SABIC Method
Dielectric Constant, 1.9 GHz	3.08	-	SABIC Method
Dielectric Constant, 5 GHz	3.08	-	SABIC Method
Dissipation Factor, 1.1 GHz	0.0063	-	SABIC Method
Dissipation Factor, 1.9 GHz	0.0061	-	SABIC Method
Dissipation Factor, 5 GHz	0.0059	-	SABIC Method
FLAME CHARACTERISTICS			
UL Recognized, 94V-1 Flame Class Rating (3)	1	mm	UL 94
AFTER 40 CYCLES, SIMILAR TO USCAR-2, CLASS III			
Tensile Strain, brk, Type I, 50 mm/min	70	%	ASTM D 638
AFTER 40 CYCLES, SIMILAR TO USCAR-2, CLASS IV			
Tensile Stress, brk, Type I, 50 mm/min	440	kgf/cm ²	ASTM D 638



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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	110 - 120	°C
Drying Temperature	110 - 120	°C
Drying Time	2 - 4	hrs
Drying Time	2 - 4	hrs
Maximum Moisture Content	0.02	%
Maximum Moisture Content	0.02	%
Melt Temperature	250 - 270	°C
Melt Temperature	260 - 280	°C
Nozzle Temperature	240 - 260	°C
Nozzle Temperature	255 - 275	°C
Front - Zone 3 Temperature	245 - 265	°C
Front - Zone 3 Temperature	260 - 280	°C
Middle - Zone 2 Temperature	240 - 255	°C
Middle - Zone 2 Temperature	260 - 280	°C
Rear - Zone 1 Temperature	230 - 245	°C
Rear - Zone 1 Temperature	245 - 265	°C
Hopper Temperature	40 - 60	°C
Hopper Temperature	40 - 60	°C
Mold Temperature	40 - 100	°C
Mold Temperature	80 - 140	°C