# LNP™ THERMOCOMP™ COMPOUND DX13354X

## DESCRIPTION

LNP* Thermocomp* compound DX13354X is a colorable, glass fiber reinforced Polycarbonate resin based LDS material solution with stable plating and RF performance, providing excellent stiffness with good surface and good impact strength. The product is available for internal and external parts for Laser Direct Structuring applications.

## TYPICAL PROPERTY VALUES

Revision 20191216

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| MECHANICAL | | | |
| Tensile Stress, brk, Type I, 5 mm/min | 90 | MPa | ASTM D 638 |
| Tensile Strain, brk, Type I, 5 mm/min | 2.2 | % | ASTM D 638 |
| Tensile Modulus, 5 mm/min | 6900 | MPa | ASTM D 638 |
| Flexural Stress | 130 | MPa | ASTM D 790 |
| Flexural Modulus | 6300 | MPa | ASTM D 790 |
| Tensile Stress, break, 50 mm/min | 90 | MPa | ISO 527 |
| Tensile Strain, break, 50 mm/min | 2.1 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 6600 | MPa | ISO 527 |
| Flexural Stress | 130 | MPa | ISO 178 |
| Flexural Modulus | 6400 | MPa | ISO 178 |
| IMPACT | | | |
| Charpy Impact, unnotched, 23°C | 36 | kJ/m² | ISO 179/2C |
| Izod Impact, unnotched, 23°C | 500 | J/m | ASTM D 4812 |
| Izod Impact, notched, 23°C | 90 | J/m | ASTM D 256 |
| Izod Impact, unnotched 80*10*4 +23°C | 32 | kJ/m² | ISO 180/1U |
| Izod Impact, notched 80*10*4 +23°C | 9 | kJ/m² | ISO 180/1A |
| Charpy Impact, notched, 23°C | 9 | kJ/m² | ISO 179/2C |
| THERMAL | | | |
| HDT, 0.45 MPa, 3.2 mm | 124 | °C | ASTM D 648 |
| HDT, 1.82 MPa, 3.2 mm | 120 | °C | ASTM D 648 |
| CTE, -40°C to 40°C, flow | 2.2E-05 | 1/°C | ASTM E 831 |
| CTE, -40°C to 40°C, xflow | 6.3E-05 | 1/°C | ASTM E 831 |
| CTE, -40°C to 40°C, flow | 1.9E-05 | 1/°C | ISO 11359-2 |
| CTE, -40°C to 40°C, xflow | 6.1E-05 | 1/°C | ISO 11359-2 |
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm | 126 | °C | ISO 75/Bf |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm | 122 | °C | ISO 75/Af |
| PHYSICAL | | | |
| Specific Gravity | 1.43 | - | ASTM D 792 |
| Mold Shrinkage, flow, 3.2 mm | 0.1 – 0.3 | % | SABIC method |
| Mold Shrinkage, xflow, 3.2 mm | 0.3 – 0.5 | % | SABIC method |
| Melt Flow Rate, 280°C/2.16 kgf | 12 | g/10 min | ASTM D 1238 |
| Melt Flow Rate, 300°C/1.2 kgf | 16 | g/10 min | ASTM D 1238 |
| Melt Volume Rate, MVR at 300°C/1.2 kg | 13 | cm³/10 min | ASTM D 1238 |
| Density | 1.43 | g/cm³ | ISO 1183 |

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| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| ELECTRICAL | | | |
| Dielectric Constant, 1.1 GHz | 3.47 | - | SABIC method |
| Dielectric Constant, 1.9 GHz | 3.45 | - | SABIC method |
| Dielectric Constant, 5 GHz | 3.45 | - | SABIC method |
| Dissipation Factor, 1.1 GHz | 0.013 | - | SABIC method |
| Dissipation Factor, 1.9 GHz | 0.012 | - | SABIC method |
| Dissipation Factor, 5 GHz | 0.011 | - | SABIC method |
| INJECTION MOLDING | | | |
| Drying Temperature | 110 | °C | |
| Drying Time | 3 – 4 | hrs | |
| Melt Temperature | 270 – 295 | °C | |
| Nozzle Temperature | 270 – 295 | °C | |
| Front - Zone 3 Temperature | 270 – 295 | °C | |
| Middle - Zone 2 Temperature | 270 – 295 | °C | |
| Rear - Zone 1 Temperature | 270 – 295 | °C | |
| Mold Temperature | 100 – 120 | °C | |

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