

# LNPTM THERMOCOMPTM COMPOUND CX05470

CF-1004 ZS

## DESCRIPTION

LNP THERMOCOMP CX05470 compound is based on Polystyrene (PS) resin containing 20% glass fiber.

### GENERAL INFORMATION

|                       |                         |
|-----------------------|-------------------------|
| Features              | High stiffness/Strength |
| Fillers               | Glass Fiber             |
| Polymer Types         | Polystyrene (PS)        |
| Processing Techniques | Injection Molding       |

### INDUSTRY

Automotive  
Building and Construction  
Consumer  
Electrical and Electronics  
Industrial

### SUB INDUSTRY

Automotive Interiors  
Building Component  
Sport/Leisure  
Mobile Phone - Computer - Tablets  
Material Handling

## TYPICAL PROPERTY VALUES

Revision 20231109

| PROPERTIES                                  | TYPICAL VALUES | UNITS             | TEST METHODS |
|---------------------------------------------|----------------|-------------------|--------------|
| <strong>MECHANICAL <sup>(1)</sup></strong>  |                |                   |              |
| Flexural Strength, 2 mm/min                 | 85             | MPa               | ISO 178      |
| Flexural Modulus, 2 mm/min                  | 6320           | MPa               | ISO 178      |
| Tensile Stress, break, 5 mm/min             | 52             | MPa               | ISO 527      |
| Tensile Strain, break, 5 mm/min             | 1.1            | %                 | ISO 527      |
| Tensile Modulus, 1 mm/min                   | 6800           | MPa               | ISO 527      |
| Tensile Modulus, 5 mm/min                   | 7100           | MPa               | ASTM D638    |
| Tensile Stress, brk, Type I, 5 mm/min       | 56             | MPa               | ASTM D638    |
| Tensile Strain, brk, Type I, 5 mm/min       | 1.2            | %                 | ASTM D638    |
| Flexural Strength, 1.3 mm/min, 50 mm span   | 90             | MPa               | ASTM D790    |
| Flexural Modulus, 1.3 mm/min, 50 mm span    | 6480           | MPa               | ASTM D790    |
| <strong>IMPACT <sup>(1)</sup></strong>      |                |                   |              |
| Izod Impact, notched 80°10°4 +23°C          | 3              | kJ/m <sup>2</sup> | ISO 180/1A   |
| Izod Impact, unnotched 80°10°4 +23°C        | 9              | kJ/m <sup>2</sup> | ISO 180/1U   |
| Multiaxial Impact                           | 2              | J                 | ISO 6603     |
| Izod Impact, unnotched, 23°C                | 156            | J/m               | ASTM D4812   |
| Izod Impact, notched, 23°C                  | 36             | J/m               | ASTM D256    |
| Instrumented Dart Impact Total Energy, 23°C | 8              | J                 | ASTM D3763   |
| <strong>THERMAL <sup>(1)</sup></strong>     |                |                   |              |
| HDT/Bf, 0.45 MPa Flatw 80°10°4 sp=64mm      | 97             | °C                | ISO 75/Bf    |
| HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm       | 92             | °C                | ISO 75/Af    |

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CHEMISTRY THAT MATTERS™

| PROPERTIES                                   | TYPICAL VALUES | UNITS               | TEST METHODS |
|----------------------------------------------|----------------|---------------------|--------------|
| HDT, 0.45 MPa, 3.2 mm, unannealed            | 97             | °C                  | ASTM D648    |
| HDT, 1.82 MPa, 3.2mm, unannealed             | 93             | °C                  | ASTM D648    |
| CTE, -30°C to 30°C, flow                     | 5.60E-05       | 1 / °C              | ASTM D696    |
| CTE, -30°C to 30°C, xflow                    | 6.90E-05       | 1 / °C              | ASTM D696    |
| <b>PHYSICAL <sup>(1)</sup></b>               |                |                     |              |
| Moisture Absorption (23°C / 50% RH)          | 0.07           | %                   | ISO 62       |
| Density                                      | 1.18           | g / cm <sup>3</sup> | ASTM D792    |
| Specific Gravity                             | 1.18           | -                   | ASTM D792    |
| Moisture Absorption, (23°C/50% RH/24 hrs)    | 0.06           | %                   | ASTM D570    |
| Mold Shrinkage, flow, 24 hrs <sup>(2)</sup>  | 0.1 – 0.4      | %                   | ASTM D955    |
| Mold Shrinkage, xflow, 24 hrs <sup>(2)</sup> | 0.2 – 0.5      | %                   | ASTM D955    |
| <b>INJECTION MOLDING <sup>(3)</sup></b>      |                |                     |              |
| Drying Temperature                           | 80             | °C                  |              |
| Drying Time                                  | 4              | Hrs                 |              |
| Melt Temperature                             | 250            | °C                  |              |
| Front - Zone 3 Temperature                   | 265 – 275      | °C                  |              |
| Middle - Zone 2 Temperature                  | 245 – 255      | °C                  |              |
| Rear - Zone 1 Temperature                    | 220 – 230      | °C                  |              |
| Mold Temperature                             | 40 – 65        | °C                  |              |
| Back Pressure                                | 0.2 – 0.3      | MPa                 |              |
| Screw Speed                                  | 30 – 60        | rpm                 |              |

(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(3) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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