# LNP™ THERMOTUF™ COMPOUND RBX7245

## DESCRIPTION

LNP THERMOTUF RBX7245 compound is based on Polycarbonate (PC) resin with 50% post-consumer recycle (PCR) content. Added features of this grade include: Non-Brominated & Non-Chlorinated Flame Retardant with excellent V-0 rating at 0.6mm.

| GENERAL INFORMATION | |
|---|---|
| **Features** | Flame Retardant, Sustainable (Mechanical Recycling), Non Cl/Br flame retardant |
| **Fillers** | Unreinforced |
| **Polymer Types** | Polycarbonate (PC) |
| **Processing Techniques** | Injection Molding |

| INDUSTRY | SUB INDUSTRY |
|---|---|
| Building and Construction | Building Component |
| Consumer | Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance |
| Electrical and Electronics | Mobile Phone - Computer - Tablets |
| Industrial | Electrical |

## TYPICAL PROPERTY VALUES

Revision 20230607

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| MECHANICAL [1] | | | |
| **Tensile Stress, yld, Type I, 50 mm/min** | 63 | MPa | ASTM D638 |
| **Tensile Stress, brk, Type I, 50 mm/min** | 46 | MPa | ASTM D638 |
| **Tensile Strain, yld, Type I, 50 mm/min** | 4 | % | ASTM D638 |
| **Tensile Strain, brk, Type I, 50 mm/min** | 75 | % | ASTM D638 |
| **Tensile Modulus, 5 mm/min** | 2500 | MPa | ASTM D638 |
| **Flexural Stress, yld, 1.3 mm/min, 50 mm span** | 102 | MPa | ASTM D790 |
| **Flexural Modulus, 1.3 mm/min, 50 mm span** | 2400 | MPa | ASTM D790 |
| **Tensile Stress, yield, 50 mm/min** | 63 | MPa | ISO 527 |
| **Tensile Stress, break, 50 mm/min** | 44 | MPa | ISO 527 |
| **Tensile Strain, yield, 50 mm/min** | 4 | % | ISO 527 |
| **Tensile Strain, break, 50 mm/min** | 64 | % | ISO 527 |
| **Tensile Modulus, 1 mm/min** | 2400 | MPa | ISO 527 |
| **Flexural Stress, yield, 2 mm/min** | 92 | MPa | ISO 178 |
| **Flexural Stress, break, 2 mm/min** | 90 | MPa | ISO 178 |
| **Flexural Modulus, 2 mm/min** | 2500 | MPa | ISO 178 |
| IMPACT [1] | | | |
| **Izod Impact, notched, 23°C** | 700 | J/m | ASTM D256 |
| **Izod Impact, notched, 0°C** | 310 | J/m | ASTM D256 |
| **Izod Impact, notched, -30°C** | 91 | J/m | ASTM D256 |
| **Charpy Impact, notched, 23°C, 80*10*4mm, Cut** | 51 | kJ/m² | ISO 179/1eA |
| **Charpy Impact, notched, 0°C, 80*10*4mm, Cut** | 9 | kJ/m² | ISO 179/1eA |

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| Charpy Impact, notched, -30°C, 80*10*4mm, Cut | 7 | kJ/m² | ISO 179/1eA |
| THERMAL [1] | | | |
| HDT, 0.45 MPa, 3.2 mm, unannealed | 101 | °C | ASTM D648 |
| HDT, 1.82 MPa, 3.2mm, unannealed | 92 | °C | ASTM D648 |
| CTE, -40°C to 90°C, flow | 6.0E-05 | 1/°C | ASTM E831 |
| CTE, -40°C to 90°C, xflow | 7.1E-05 | 1/°C | ASTM E831 |
| CTE, -40°C to 90°C, flow | 6.3E-05 | 1/°C | ISO 11359-2 |
| CTE, -40°C to 90°C, xflow | 7.1E-05 | 1/°C | ISO 11359-2 |
| Vicat Softening Temp, Rate B/50 | 110 | °C | ISO 306 |
| Vicat Softening Temp, Rate B/120 | 116 | °C | ISO 306 |
| Relative Temp Index, Elec | 80 | °C | UL 746B |
| Relative Temp Index, Mech w/impact | 80 | °C | UL 746B |
| Relative Temp Index, Mech w/o impact | 80 | °C | UL 746B |
| PHYSICAL [1] | | | |
| Specific Gravity | 1.2 | - | ASTM D792 |
| Mold Shrinkage, flow, 3.2 mm [2] | 0.3 – 0.4 | % | SABIC method |
| Mold Shrinkage, xflow, 3.2 mm [2] | 0.4 – 0.5 | % | SABIC method |
| Melt Flow Rate, 260°C/2.16 kgf | 18 | g/10 min | ASTM D1238 |
| Water Absorption, (23°C/saturated) | 0.1 | % | ISO 62-1 |
| Moisture Absorption (23°C / 50% RH) | 0.05 | % | ISO 62 |
| Melt Volume Rate, MVR at 260°C/2.16 kg | 18 | cm³/10 min | ISO 1133 |
| Melt Volume Rate, MVR at 300°C/1.2 kg | 29 | cm³/10 min | ISO 1133 |
| FLAME CHARACTERISTICS [3] | | | |
| UL Yellow Card Link | E207780-103823841 | - | - |
| UL Recognized, 94V-2 Flame Class Rating | ≥0.25 | mm | UL 94 |
| UL Recognized, 94V-0 Flame Class Rating | ≥0.6 | mm | UL 94 |
| INJECTION MOLDING [4] | | | |
| Drying Temperature | 80 – 90 | °C | |
| Drying Time | 2 – 4 | Hrs | |
| Maximum Moisture Content | 0.02 | % | |
| Melt Temperature | 250 – 300 | °C | |
| Nozzle Temperature | 250 – 300 | °C | |
| Front - Zone 3 Temperature | 250 – 300 | °C | |
| Middle - Zone 2 Temperature | 240 – 290 | °C | |
| Rear - Zone 1 Temperature | 230 – 280 | °C | |
| Hopper Temperature | 60 – 80 | °C | |
| Mold Temperature | 60 – 85 | °C | |
| Vent Depth | 0.03 - 0.075 | mm | |

(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) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

(4) 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.

## MORE INFORMATION

For curve data and CAE cards, please visit and register at https://materialfinder.sabic-specialties.com

## DISCLAIMER