# NORYL™ RESIN NH4030R

REGION ASIA

## DESCRIPTION

NORYL™ NH4030R resin is a non-reinforced blend of polyphenylene ether (PPE) + high impact polystyrene (HIPS). This injection moldable and extrudable grade contains non-brominated, non-chlorinated flame retardant and carries a UL94 flame rating of 5VB at 2.5mm, V0 at 1.2, and V1 at 0.75mm. NORYL NH4030R resin contains mold release for improved processing and exhibits good dimensional stability, low moisture absorption, and low specific gravity. It is an excellent candidate for a variety of electrical applications.

## TYPICAL PROPERTY VALUES

Revision 20191010

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| MECHANICAL | | | |
| Tensile Stress, yield | 60 | MPa | SABIC - Japan Method |
| Tensile Strain, break | 27 | % | SABIC - Japan Method |
| Flexural Stress | 87 | MPa | ASTM D 790 |
| Flexural Modulus | 2350 | MPa | ASTM D 790 |
| IMPACT | | | |
| Izod Impact, notched, 23°C | 240 | J/m | ASTM D 256 |
| THERMAL | | | |
| HDT, 1.82 MPa, 6.4 mm, unannealed | 100 | °C | ASTM D 648 |
| Relative Temp Index, Elec [1] | 65 | °C | UL 746B |
| Relative Temp Index, Mech w/impact [1] | 65 | °C | UL 746B |
| Relative Temp Index, Mech w/o impact [1] | 65 | °C | UL 746B |
| PHYSICAL | | | |
| Specific Gravity | 1.1 | - | ASTM D 792 |
| Water Absorption, 24 hours | 0.07 | % | ASTM D 570 |
| Mold Shrinkage, flow, 3.2 mm | 0.5 – 0.7 | % | SABIC method |
| Melt Flow Rate, 250°C/10.0 kgf | 14 | g/10 min | ASTM D 1238 |
| FLAME CHARACTERISTICS [1] | | | |
| UL Yellow Card Link | E207780-102383817 | - | - |
| UL Recognized, 94-5VB Flame Class Rating | ≥2.5 | mm | UL 94 |
| UL Recognized, 94V-0 Flame Class Rating | ≥1.2 | mm | UL 94 |
| UL Recognized, 94V-1 Flame Class Rating | ≥0.75 | mm | UL 94 |
| INJECTION MOLDING | | | |
| Drying Temperature | 100 – 105 | °C | |
| Drying Time | 3 – 4 | hrs | |
| Drying Time (Cumulative) | 8 | hrs | |
| Maximum Moisture Content | 0.02 | % | |
| Melt Temperature | 270 – 300 | °C | |
| Nozzle Temperature | 270 – 300 | °C | |
| Front - Zone 3 Temperature | 260 – 300 | °C | |
| Middle - Zone 2 Temperature | 250 – 295 | °C | |
| Rear - Zone 1 Temperature | 240 – 290 | °C | |
| Mold Temperature | 65 – 95 | °C | |

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| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| **Back Pressure** | 0.3 – 0.7 | MPa | |
| **Screw Speed** | 20 – 100 | rpm | |
| **Shot to Cylinder Size** | 30 – 70 | % | |
| **Vent Depth** | 0.038 – 0.051 | mm | |

(1) 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.

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