

EMS-Grivory Grivory® ELX 50 HNZ TPA

Category : Polymer , Thermoplastic , Nylon , Nylon 6

Material Notes:

Product description: Grilon ELX 50 H NZ is a high viscosity, heat stabilized, impact modified, thermoplastic PA6 elastomer for extrusion blow molding applications. Grilon ELX 50 H NZ has the following important properties: Very high melt strengthVery high flexibilityExcellent toughness at low temperaturesProcessable on conventional as well as on 3 D-machinesSuitable for sequential blow molding technology Grilon ELX 50 H NZ is used typically as flexible part in the sequential blow molding technology in combination with a rigid PA6 grade such as Grilon EB 50 H or Grilon R 50 H NZ or Grilon EBV-15H. Application examples are air ducts for turbo-chargers and engine air ducts.Information provided by EMS Grivory

Order this product through the following link:

http://www.lookpolymers.com/polymer_EMS-Grivory-Grivory-ELX-50-HNZ-TPA.php

| Physical Properties | Metric | English | Comments |
|-----------------------------------|--------------|---------------------------|-----------------|
| Density | 1.01 g/cc | 0.0365 lb/in ³ | ISO 1183 |
| Water Absorption | 6.5 % | 6.5 % | ISO 62 |
| Moisture Absorption | 2.00 % | 2.00 % | ISO 62 |
| Linear Mold Shrinkage, Flow | 0.0070 cm/cm | 0.0070 in/in | ISO 294-4, 2577 |
| Linear Mold Shrinkage, Transverse | 0.0080 cm/cm | 0.0080 in/in | ISO 294-4, 2577 |

| Mechanical Properties | Metric | English | Comments |
|-------------------------|----------------|----------------|---------------------------|
| Hardness, Shore D | 47 | 47 | conditioned, 15s; ISO 868 |
| | 50 | 50 | dry, 15s; ISO 868 |
| Tensile Stress | 12.0 MPa | 1740 psi | conditioned; ISO 527-1/-2 |
| | @Strain 50.0 % | @Strain 50.0 % | |
| | 16.0 MPa | 2320 psi | dry; ISO 527-1/-2 |
| | @Strain 50.0 % | @Strain 50.0 % | |
| Elongation at Break | >= 50 % | >= 50 % | dry; ISO 527-1/-2 |
| | >= 50 % | >= 50 % | conditioned; ISO 527-1/-2 |
| Tensile Modulus | 0.150 GPa | 21.8 ksi | conditioned; ISO 527-1/-2 |
| | 0.220 GPa | 31.9 ksi | dry; ISO 527-1/-2 |
| Charpy Impact Unnotched | NB | NB | dry; ISO 179/1eU |
| | NB | NB | conditioned; ISO 179/1eU |

| Mechanical Properties | NB Metric | NB English | Comments |
|------------------------|----------------------|----------------------|--------------------------|
| | @Temperature 30.0 °C | @Temperature 86.0 °F | dry; ISO 179/1eU |
| | NB | NB | conditioned; ISO 179/1eU |
| | @Temperature 30.0 °C | @Temperature 86.0 °F | |
| Charpy Impact, Notched | NB | NB | dry; ISO 179/1eA |
| | NB | NB | conditioned; ISO 179/1eA |
| | NB | NB | dry; ISO 179/1eU |
| | @Temperature 30.0 °C | @Temperature 86.0 °F | |
| | NB | NB | conditioned; ISO 179/1eU |
| | @Temperature 30.0 °C | @Temperature 86.0 °F | |

| Thermal Properties | Metric | English | Comments |
|---|--------------|----------------|--------------------------|
| CTE, linear, Parallel to Flow | 160 µm/m-°C | 88.9 µin/in-°F | ISO 11359-1/-2 |
| CTE, linear, Transverse to Flow | 170 µm/m-°C | 94.4 µin/in-°F | ISO 11359-1/-2 |
| Melting Point | 210 °C | 410 °F | 10°C/min; ISO 11357-1/-3 |
| Maximum Service Temperature, Air | 100 - 120 °C | 212 - 248 °F | long term; EMS |
| | 180 °C | 356 °F | short term; EMS |
| Deflection Temperature at 0.46 MPa (66 psi) | 50.0 °C | 122 °F | ISO 75-1/-2 |
| Deflection Temperature at 1.8 MPa (264 psi) | 35.0 °C | 95.0 °F | ISO 75-1/-2 |
| Flammability, UL94 | HB | HB | IEC 60695-11-10 |

| Electrical Properties | Metric | English | Comments |
|----------------------------|-----------------|-----------------|--------------------------|
| Volume Resistivity | 1.00e+10 ohm-cm | 1.00e+10 ohm-cm | conditioned; IEC 60093 |
| | 1.00e+11 ohm-cm | 1.00e+11 ohm-cm | dry; IEC 60093 |
| Surface Resistance | 1.00e+10 ohm | 1.00e+10 ohm | IEC 60093 |
| Dielectric Strength | 29.0 kV/mm | 737 kV/in | dry; IEC 60243-1 |
| | 30.0 kV/mm | 762 kV/in | conditioned; IEC 60243-1 |
| Comparative Tracking Index | 575 V | 575 V | conditioned; IEC 60112 |

| Descriptive Properties | Value | Comments |
|------------------------|-------|----------|
|------------------------|-------|----------|

| Descriptive Properties | Value | Comments |
|---------------------------|--------------------------------|----------|
| | Cooling and climate control | |
| Electricals & Electronics | Cables & Tubes | |
| Form | Granules | |
| Industry & Consumer goods | Hydraulics & Pneumatics | |
| Processing | Extrusion - blow molding | |
| | Other Extrusion | |
| Special Characteristics | High impact or impact modified | |
| | Improved heat resistance | |

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