

Grilamid® TRVX-50X9 nat

Polyamide 12
EMS-GRIVORY

PROSPECTOR®

www.ulprospector.com

Technical Data

Product Description

Grilamid® TRVX-50X9 nat is a Polyamide 12 (Nylon 12) material filled with 50% glass fiber. It is available in Asia Pacific, Europe, Latin America, or North America for injection molding. Primary attribute of Grilamid® TRVX-50X9 nat: Flame Rated.

Typical applications include:

- Appliances
- Automotive
- Electrical/Electronic Applications

General

| | |
|-----------------------------|---|
| Material Status | • Commercial: Active |
| Literature ¹ | • Processing - Pipe Extrusion (German) • Technical Datasheet (English) |
| UL Yellow Card ² | • E53898-100723455 |
| Search for UL Yellow Card | • EMS-GRIVORY • Grilamid® |
| Availability | • Asia Pacific • Europe • Latin America • North America |
| Filler / Reinforcement | • Glass Fiber, 50% Filler by Weight |
| Uses | • Appliance Components • Automotive Applications • Electrical/Electronic Applications |
| Appearance | • Natural Color |
| Forms | • Granules |
| Processing Method | • Injection Molding |

| Physical | Dry | Conditioned | Unit | Test Method |
|----------------------------------|------|-------------|-------------------|-------------|
| Density | 1.50 | -- | g/cm ³ | ISO 1183 |
| Molding Shrinkage | | | | ISO 294-4 |
| Across Flow | 0.10 | -- | % | |
| Flow | 0.10 | -- | % | |
| Water Absorption | | | | ISO 62 |
| Saturation, 23°C | 1.0 | -- | % | |
| Equilibrium, 23°C, 50% RH | 0.30 | -- | % | |
| Mechanical | Dry | Conditioned | Unit | Test Method |
| Tensile Modulus | -- | 12500 | MPa | ISO 527-2 |
| Tensile Stress (Break) | -- | 160 | MPa | ISO 527-2 |
| Tensile Strain (Break) | -- | 2.1 | % | ISO 527-2 |
| Impact | Dry | Conditioned | Unit | Test Method |
| Charpy Notched Impact Strength | | | | ISO 179/1eA |
| -30°C | -- | 15 | kJ/m ² | |
| 23°C | -- | 16 | kJ/m ² | |
| Charpy Unnotched Impact Strength | | | | ISO 179/1eU |
| -30°C | -- | 60 | kJ/m ² | |
| 23°C | -- | 65 | kJ/m ² | |
| Hardness | Dry | Conditioned | Unit | Test Method |
| Ball Indentation Hardness | -- | 190 | MPa | ISO 2039-1 |
| Thermal | Dry | Conditioned | Unit | Test Method |
| Heat Deflection Temperature | | | | |
| 1.8 MPa, Unannealed | 115 | -- | °C | ISO 75-2/A |
| 8.0 MPa, Unannealed | 105 | -- | °C | ISO 75-2/C |



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| Thermal | Dry | Conditioned | Unit | Test Method |
|---|-------------------------------|-------------|----------|----------------------|
| Continuous Use Temperature | | | | |
| -- ⁴ | 80.0 to 110 | -- | °C | ISO 2578 |
| -- ⁵ | 120 | -- | °C | Internal Method |
| Glass Transition Temperature ⁶ | 125 | -- | °C | ISO 11357-2 |
| CLTE | | | | ISO 11359-2 |
| Flow | 2.0E-5 | -- | cm/cm/°C | |
| Transverse | 8.0E-5 | -- | cm/cm/°C | |
| Electrical | Dry | Conditioned | Unit | Test Method |
| Surface Resistivity | -- | 1.0E+12 | ohms | IEC 60093 |
| Volume Resistivity | -- | 1.0E+13 | ohms·cm | IEC 60093 |
| Electric Strength | -- | 32 | kV/mm | IEC 60243-1 |
| Comparative Tracking Index | -- | 600 | V | IEC 60112 |
| Flammability | Dry | Conditioned | Unit | Test Method |
| Flammability Classification (0.8 mm) | HB | -- | | IEC 60695-11-10, -20 |
| Additional Information | Dry | Conditioned | Unit | Test Method |
| ISO Type | PA MACM12+X, MH, 12-120, GF50 | -- | | ISO 1874 |

Notes

¹ These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

² A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

³ Typical properties: these are not to be construed as specifications.

⁴ Long Term

⁵ Short Term

⁶ 10°C/min



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Where to Buy

Supplier

EMS-GRIVORY

Sumter, SC USA

Telephone: 803-481-6171

Web: <http://www.emsgrivory.com/>

Distributor

Entec Polymers

Telephone: 800-375-5440

Web: <http://www.entecpolymers.com/>

Availability: North America

Erteco Rubber & Plastics AB

Telephone: +46-8-587-517-00

Web: <http://www.erteco.se/>

Availability: Denmark, Norway, Sweden

ESSE International - OMYA

ESSE International - OMYA is a Pan European distribution company. Contact ESSE International - OMYA for availability of individual products by country.

Telephone: +33-1-30-80-56-56

Web: <http://www.omya.com>

Availability: Europe

Telko Oy

Telko Oy is a Pan European distribution company. Contact Telko Oy for availability of individual products by country.

Telephone: +358-9-5211

Web: <http://www.telko.com/>

Availability: Belarus, Estonia, Finland, Latvia, Lithuania, Poland, Russian Federation, Ukraine

