Technical Data

Product Description

Grilamid® TR 90 is a Polyamide 12 (Nylon 12) material. It is available in Africa & Middle East, Asia Pacific, Europe, Latin America, or North America for extrusion, film extrusion, or injection molding.

Important attributes of Grilamid® TR 90 are:

- Flame Rated
- · RoHS Compliant
- Food Contact Acceptable

Typical applications include:

- Medical/Healthcare
- Plumbing/Piping/Potable Water
- Automotive
- Electrical/Electronic Applications
- Film

General · Commercial: Active Material Status Processing - Pipe Extrusion (German) Literature ¹ Technical Datasheet (English) UL Yellow Card² E53898-243823 EMS-GRIVORY Search for UL Yellow Card Grilamid® Africa & Middle East Europe Availability North America Asia Pacific Latin America Features Food Contact Acceptable Appliance Components Eyeglasses Automotive Applications Film · Non-oriented Film Automotive Interior Parts · Household Goods **Optical Applications** Hydraulic Applications Connectors Packaging Consumer Applications • Industrial Applications Pneumatic Applications Uses Cosmetic Packaging Lenses Power/Other Tools Electrical/Electronic Medical Devices Safety Equipment Applications Medical Packaging Sporting Goods Engineering Parts Medical/Healthcare Eyeglass Frames Applications • DVGW W270 KTW Unspecified Rating EU Food Contact, Unspecified Rating FDA Food Contact, Unspecified • USP Class VI • NSF STD-61 · WRAS Unspecified Rating Agency Ratings RoHS Compliant **RoHS** Compliance Clear/Transparent Appearance Forms · Granules Injection Molding Extrusion Film Extrusion **Processing Method** Isochronous Stress vs. Strain Secant Modulus vs. Strain (ISO • Specific Volume vs Temperature (ISO 11403-2) (ISO 11403-1) 11403-1) Multi-Point Data İsothermal Stress vs. Strain Shear Modulus vs. Temperature• Viscosity vs. Shear Rate (ISO (ISO 11403-1) (ISO 11403-1) 11403-2)

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Grilamid® TR 90 Polyamide 12

EMS-GRIVORY



Physical	Dry	Conditioned	Unit	Test Method
Density	1.00		g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	0.80		%	
Flow	0.70		%	
Water Absorption				ISO 62
Saturation, 23°C	3.0		%	
Equilibrium, 23°C, 50% RH	1.5		%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	1600	1600	MPa	ISO 527-1
Tensile Stress (Yield)	60.0	60.0	MPa	ISO 527-2
Tensile Strain (Yield)	6.0	6.0	%	ISO 527-2
Nominal Tensile Strain at Break	> 50	> 50	%	ISO 527-2
mpact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	9.0	12	kJ/m²	
23°C	9.0	13	kJ/m²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	No Break	No Break		
23°C	No Break	No Break		
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness		90.0	MPa	ISO 2039-1
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				
0.45 MPa, Unannealed	135		°C	ISO 75-2/B
1.8 MPa, Unannealed	115		°C	ISO 75-2/A
Continuous Use Temperature				
4	80.0 to 100		°C	ISO 2578
5	120		°C	Internal Method
Glass Transition Temperature ⁶	155		°C	ISO 11357-2
CLTE				ISO 11359-2
Flow	9.0E-5		cm/cm/°C	100 11000 2
Transverse	9.0E-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		34	kV/mm	IEC 60243-1
Comparative Tracking Index		600	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
		Conditioned	Unit	IEC 60695-11-10
Flammability Classification (0.8 mm)	HB			-20
Additional Information	Dry	Conditioned	Unit	Test Method
ISO Туре	PA MACM12, GT,14-020			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, Sumter USA Telephone: 803-481-6171 Web: http://www.emsgrivory.com/

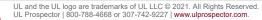
Distributor

Conventus Polymers Telephone: 973-343-7669 Web: http://www.conventuspolymers.com/ Availability: North America

Entec Polymers Telephone: 833-319-0299 Web: https://www.entecpolymers.com/?utm_source=ul&utm_medium=paid%20association&utm_campaign=entec%20%7C%20entec %201&utm_term=ul%20%7C%20where%20to%20buy Availability: North America

PolySource

Telephone: 866-558-5300 Web: http://www.polysource.net/ Availability: North America



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