Grilamid® TR 55

Polyamide 12

EMS-GRIVORY

PROSPECTOR®
www.ulprospector.com

Technical Data

Product Description

Grilamid® TR 55 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 55 are:

- Flame Rated
- RoHS Compliant
- Food Contact Acceptable

Typical applications include:

- Medical/Healthcare
- Plumbing/Piping/Potable Water
- Automotive
- Film
- Food Contact Applications

General

Material Status	• Commercial: Active		
Literature [1]	• Processing - Pipe Extrusion (German) • Technical Datasheet (English)		
UL Yellow Card [2]	• E53898-243820 • E53898-243821 • E132701-100536657 • E132701-100536658 • E132701-237864		
Search for UL Yellow Card	• EMS-GRIVORY • Grilamid®		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Food Contact Acceptable		
Uses	• Appliance Components • Automotive Applications • Automotive Interior Parts • Consumer Applications • Cosmetic Packaging • Electrical/Electronic Applications • Engineering Parts • Film	• Household Goods • Hydraulic Applications • Industrial Applications • Medical Devices • Medical Packaging • Medical/Healthcare Applications • Non-oriented Film • Optical Applications	• Packaging • Pneumatic Applications • Power/Other Tools • Sporting Goods • Tubing • Wire & Cable Applications
Agency Ratings	• DVGW W270 • EU Food Contact, Unspecified Rating • FDA Food Contact, Unspecified Rating	• ISO 10993 • KTW Unspecified Rating • NSF STD-61	• USP Class VI • WRAS Unspecified Rating
RoHS Compliance	• RoHS Compliant		
Appearance	• Clear/Transparent		
Forms	• Granules		
Processing Method	• Extrusion	• Film Extrusion	• Injection Molding
Multi-Point Data	• Isochronous Stress vs. Strain (ISO 11403-1) • Isothermal Stress vs. Strain (ISO 11403-1)	• Secant Modulus vs. Strain (ISO 11403-1) • Shear Modulus vs. Temperature (ISO 11403-1)	• Specific Volume vs Temperature (ISO 11403-2) • Viscosity vs. Shear Rate (ISO 11403-2)

Physical	Dry	Conditioned	Unit	Test Method
Density	1.06	--	g/cm³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	0.70	--	%	
Flow	0.60	--	%	
Water Absorption				ISO 62
Saturation, 23°C	3.5	--	%	
Equilibrium, 23°C, 50% RH	1.5	--	%	
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus	2200	2200	MPa	ISO 527-2
Tensile Stress (Yield)	75.0	75.0	MPa	ISO 527-2
Tensile Strain (Yield)	7.0	9.0	%	ISO 527-2
Nominal Tensile Strain at Break	> 50	> 50	%	ISO 527-2
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	7.0	7.0	kJ/m²	
23°C	7.0	8.0	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	--	120	MPa	ISO 2039-1
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Heat Deflection Temperature				
0.45 MPa, Unannealed	145	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	130	--	°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]	160	--	°C	ISO 11357-2
CLTE				ISO 11359-2
Flow	8.0E-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	--	31	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 12/MACMI, GT, 11-020	--		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

Where to Buy

Supplier

EMS-GRIVORY
Sumter, SC 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: 800-375-5440
Web: http://www.entecpolymers.com/
Availability: North America

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