

## EMS-Grivory Grivory® TR 55 LY PA12/MACMI

Category : Polymer , Thermoplastic , Nylon , Nylon 12

### Material Notes:

Product description: Grilamid TR grades are transparent thermoplastic polyamides based on aliphatic and cycloaliphatic blocks. Grilamid TR 55 LY offers a variety of interesting properties such as: clear transparency even in high wall thicknesses good light natural color can be colored in transparent as well as opaque color tough stiff good chemical- and stress-crack resistance Grilamid TR grades are suitable for production of optical and technical demanding parts in the application fields of: Optics Electro / Electronics Automotive Mechanical engineering Domestic appliances Sanitary Information provided by EMS Grivory

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_EMS-Grivory-Grivory-TR-55-LY-PA12MACMI.php](http://www.lookpolymers.com/polymer_EMS-Grivory-Grivory-TR-55-LY-PA12MACMI.php)

Physical Properties	Metric	English	Comments
Density	1.04 g/cc	0.0376 lb/in <sup>3</sup>	ISO 1183
Water Absorption	2.5 %	2.5 %	ISO 62
Moisture Absorption	1.00 %	1.00 %	ISO 62
Linear Mold Shrinkage, Flow	0.0030 cm/cm	0.0030 in/in	ISO 294-4, 2577
Linear Mold Shrinkage, Transverse	0.0050 cm/cm	0.0050 in/in	ISO 294-4, 2577

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	110 MPa	16000 psi	conditioned; ISO 2039-1
Tensile Strength at Break	40.0 MPa	5800 psi	conditioned; ISO 527-1/-2
Tensile Strength, Yield	70.0 MPa	10200 psi	conditioned; ISO 527-1/-2
Elongation at Break	>= 50 %	>= 50 %	conditioned; ISO 527-1/-2
Elongation at Yield	6.0 %	6.0 %	conditioned; ISO 527-1/-2
Tensile Modulus	1.90 GPa	276 ksi	conditioned; ISO 527-1/-2
Charpy Impact Unnotched	NB	NB	conditioned; ISO 179/1eU
	NB	NB	conditioned; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
Charpy Impact, Notched	0.900 J/cm <sup>2</sup>	4.28 ft-lb/in <sup>2</sup>	conditioned; ISO 179/1eA
	0.800 J/cm <sup>2</sup>	3.81 ft-lb/in <sup>2</sup>	conditioned; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	90.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	50.0 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ISO 11359-1/-2
CTE, linear, Transverse to Flow	90.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	50.0 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ISO 11359-1/-2
Maximum Service Temperature, Air	80.0 $^{\circ}\text{C}$	176 $^{\circ}\text{F}$	long term; EMS
	95.0 $^{\circ}\text{C}$	203 $^{\circ}\text{F}$	short term; EMS
Transformation Temperature, Tg	110 $^{\circ}\text{C}$	230 $^{\circ}\text{F}$	10 $^{\circ}\text{C}/\text{min}$ ; ISO 11357-1/-2
Deflection Temperature at 0.46 MPa (66 psi)	90.0 $^{\circ}\text{C}$	194 $^{\circ}\text{F}$	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	80.0 $^{\circ}\text{C}$	176 $^{\circ}\text{F}$	ISO 75-1/-2
Flammability, UL94	HB	HB	IEC 60695-11-10

Optical Properties	Metric	English	Comments
Transmission, Visible	90 %	90 %	transparent; thickness not quantified

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 ohm-cm	1.00e+13 ohm-cm	conditioned; IEC 60093
Surface Resistance	1.00e+12 ohm	1.00e+12 ohm	IEC 60093
Dielectric Strength	32.0 kV/mm	813 kV/in	conditioned; IEC 60243-1
Comparative Tracking Index	600 V	600 V	conditioned; IEC 60112

Descriptive Properties	Value	Comments
Automotive	Cooling and climate control	
	Fuel systems	
	Powertrain and Chassis	
Form	Granules	
Industry & Consumer goods	Housewares	
	Mechanical Engineering	
	Sports & Leisure	
	Tools & Accessories	
Optics	Optical components	

Descriptive Properties	Value	Comments
	Sunglasses	
Processing	Injection Molding	
Product Attributes	Improved alcohol resistance	
Special Characteristics	Transparent	
Water Contact	NSF 61	

## Contact Songhan Plastic Technology Co.,Ltd.

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