Terluran® GP-22

Acrylonitrile Butadiene Styrene

Styrolution

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Technical Data

Product Description

Terluran GP-22 is an easy-flow, general purpose injection molding grade with high resistance to impact and heat distortion; intended for a wide range of applications, particularly in the housings sector.

General

Material Status	• Commercial: Active		
Literature [1]	• Technical Datasheet - ASTM (English) • Technical Datasheet - ISO (English)		
Search for UL Yellow Card	• Styrolution • Terluran®		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• General Purpose • Good Colorability	• Good Impact Resistance • Good Surface Finish	• High Gloss • Medium Flow
Uses	• Appliances • Automotive Applications • General Purpose	• Household Goods • Housings • Sanitary Products	• Toys
Forms	• Pellets		
Processing Method	• Injection Molding		
Multi-Point Data	• Creep Modulus vs. Time (ISO 11403-1) • 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	Nominal Value (English)	Nominal Value (SI)	Test Method
Specific Gravity			
--	1.04	1.04 g/cm³	ASTM D792
--	1.04 g/cm³	1.04 g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR)			ASTM D1238
200°C/5.0 kg	1.5 g/10 min	1.5 g/10 min	
220°C/10.0 kg	19 g/10 min	19 g/10 min	
Melt Volume-Flow Rate (MVR)			
230°C/3.8 kg	0.293 in³/10min	4.80 cm³/10min	ASTM D1238
220°C/10.0 kg	1.16 in³/10min	19.0 cm³/10min	ISO 1133
Molding Shrinkage			
Flow	4.0E-3 to 7.0E-3 in/in	0.40 to 0.70 %	ASTM D955
--	0.40 to 0.70 %	0.40 to 0.70 %	ISO 294-4
Water Absorption			
Saturation, 73°F (23°C)	1.0 %	1.0 %	ASTM D570 ISO 62
Equilibrium, 73°F (23°C), 50% RH	0.22 %	0.22 %	ISO 62

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	334000 psi	2300 MPa	ASTM D638 ISO 527-2
Tensile Strength			
Yield, 73°F (23°C)	6520 psi	45.0 MPa	ASTM D638
Yield, 73°F (23°C)	6530 psi	45.0 MPa	ISO 527-2
Tensile Strain			
Yield, 73°F (23°C)	2.6 %	2.6 %	ISO 527-2
Break	2.6 %	2.6 %	ASTM D638
Nominal Tensile Strain at Break			ISO 527-2
73°F (23°C)	10 %	10 %	

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Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Flexural Modulus	334000 psi	2300 MPa	ASTM D790
Flexural Strength	9430 psi	65.0 MPa	ASTM D790 ISO 178
Impact	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Charpy Notched Impact Strength			ISO 179
-22°F (-30°C)	3.8 ft·lb/in²	8.0 kJ/m²	
73°F (23°C)	10 ft·lb/in²	22 kJ/m²	
Charpy Unnotched Impact Strength			ISO 179
-22°F (-30°C)	48 ft·lb/in²	100 kJ/m²	
73°F (23°C)	86 ft·lb/in²	180 kJ/m²	
Notched Izod Impact			
-22°F (-30°C)	1.1 ft·lb/in	59 J/m	ASTM D256
0°F (-18°C)	1.9 ft·lb/in	100 J/m	ASTM D256
73°F (23°C)	5.6 ft·lb/in	300 J/m	ASTM D256
-22°F (-30°C)	3.8 ft·lb/in²	8.0 kJ/m²	ISO 180/A
73°F (23°C)	12 ft·lb/in²	26 kJ/m²	ISO 180/A
Hardness	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Rockwell Hardness (R-Scale)	103	103	ASTM D785
Ball Indentation Hardness	14100 psi	97.0 MPa	ISO 2039-1
Thermal	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Deflection Temperature Under Load			
66 psi (0.45 MPa), Unannealed	195 °F	90.6 °C	ASTM D648
66 psi (0.45 MPa), Annealed	219 °F	104 °C	ASTM D648
66 psi (0.45 MPa), Annealed	210 °F	99.0 °C	ISO 75-2/B
264 psi (1.8 MPa), Unannealed	172 °F	77.8 °C	ASTM D648
264 psi (1.8 MPa), Annealed	210 °F	98.9 °C	ASTM D648
264 psi (1.8 MPa), Annealed	201 °F	94.0 °C	ISO 75-2/A
Vicat Softening Temperature			
--	221 °F	105 °C	ISO 306/A50
--	205 °F	96.0 °C	ISO 306/B50
CLTE - Flow	4.4E-5 to 6.1E-5 in/in/°F	8.0E-5 to 1.1E-4 cm/cm/°C	ISO 11359-2
Thermal Conductivity	1.2 Btu·in/hr/ft²/°F	0.17 W/m/K	DIN 52612
Electrical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Surface Resistivity	1.0E+13 ohms	1.0E+13 ohms	IEC 60093
Volume Resistivity			
--	> 1.0E+15 ohms·cm	> 1.0E+15 ohms·cm	ASTM D257
--	1.0E+15 ohms·cm	1.0E+15 ohms·cm	IEC 60093
Dielectric Constant			
0.0394 in (1.00 mm), 1 MHz	2.80	2.80	ASTM D150
100 Hz	2.90	2.90	IEC 60250
1 MHz	2.80	2.80	IEC 60250
Dissipation Factor			IEC 60250
100 Hz	4.8E-3	4.8E-3	
1 MHz	7.9E-3	7.9E-3	
Optical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Yellowness Index	13 YI	13 YI	DIN 6167

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	176 °F	80.0 °C
Drying Time	2.0 to 4.0 hr	2.0 to 4.0 hr
Processing (Melt) Temp	428 to 500 °F	220 to 260 °C
Mold Temperature	86.0 to 140 °F	30.0 to 60.0 °C
Injection Velocity	472 in/min	200 mm/sec

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

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Where to Buy

Supplier

Styrolution
Wyandotte, MI USA
Telephone: 734-324-6100
Web: http://www.styrolution.com/

Distributor

Amco Polymers
Telephone: 800-262-6685
Web: http://www.amcopolymers.com/
Availability: North America

Entec Polymers
Telephone: 800-375-5440
Web: http://www.entecpolymers.com/
Availability: North America

GAZECHIM PLASTIQUES
GAZECHIM PLASTIQUES is a Pan European distribution company. Contact GAZECHIM PLASTIQUES for availability of individual products by country.
Telephone: +33-4-67-49-55-37
Web: http://www.gazechim.com/
Availability: France

M. Holland Canada Company
Telephone: 905-665-1168
Web: http://www.mholland.com/
Availability: Canada

M. Holland Company
Telephone: 855-497-1403
Web: http://www.mholland.com/
Availability: Mexico, United States

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, Latvia, Lithuania, Russian Federation, Ukraine

Ultrapolymers
Ultrapolymers is a Pan European distribution company. Contact Ultrapolymers for availability of individual products by country.
Telephone: +32-11-57-95-57
Web: http://www.ultrapolymers.com/
Availability: Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Denmark, Estonia, Finland, Germany, Ireland, Italy, Latvia, Lithuania, Macedonia, Norway, Portugal, Serbia, Slovakia, Slovenia, Spain, Sweden, Turkey, United Kingdom

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