Terluran® GP-22

INEOS Styrolution - Acrylonitrile Butadiene Styrene

Sunday, November 3, 2019

General Information

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.

FEATURES

- Excellent colorability
- Medium flow
- Good impact resistance
- Good heat distortion resistance
- High quality surface finish and gloss
- Great mechanical strength and rigidity

APPLICATIONS

- Injection molding
- Appliance housings
- Household and sanitary appliances
- Toys
- Automotive components
- Consumer products

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• General Purpose • Good Colorability • Good Impact Resistance	• Good Rigidity • Good Surface Finish • High Gloss	• Medium Flow
Uses	• Appliances • Automotive Applications • Consumer Applications	• Household Goods • Housings • Sanitary Products	• Toys
Automotive Specifications	• BMW GS 93016 • CHRYSLER MS-DB-200 CPN4030 Color: Color As Noted On Drawing • DAIMLER DBL 5404 • FORD ESB-M4D483-A1 • FORD WSK-M4D827-A Color: Black • FORD WSK-M4D864-A3 • FORD WSS-M4D483-C1 • FORD WSS-M4D483-D1 • FORD WSS-M4D827-A3 • GM GMP.ABS.001 • GM GMP.ABS.002 • GM GMP.ABS.004 • GM GMW15572P-ABS-T1 • GM QK 002012 Color: Natural • PSA Peugeot-Citroën SPA X62 2108 • TOYOTA TSM 5512G • VOLKSWAGEN TL 527		
Forms	• Pellets		

Terluran® GP-22

INEOS Styrolution - Acrylonitrile Butadiene Styrene

General	
Processing Method	• Injection Molding

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.04		ASTM D792
Density	1.04	g/cm³	ISO 1183
Melt Mass-Flow Rate			ASTM D1238
200°C/5.0 kg	1.5	g/10 min	
220°C/10.0 kg	19	g/10 min	
Melt Volume-Flow Rate (MVR) (230°C/3.8 kg)	4.80	cm³/10min	ASTM D1238
Melt Volume-Flow Rate (MVR) (220°C/10.0 kg)	19	cm³/10min	ISO 1133
Molding Shrinkage - Flow	4.0E-3 to 7.0E-3	in/in	ASTM D955
Molding Shrinkage	0.40 to 0.70	%	ISO 294-4
Water Absorption (Saturation, 73°F)	1.0	%	ASTM D570
Water Absorption (Saturation, 73°F)	1.0	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.22	%	ISO 62

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	334000	psi	ASTM D638
Tensile Modulus	334000	psi	ISO 527-2
Tensile Strength (Yield, 73°F)	6520	psi	ASTM D638
Tensile Stress (Yield, 73°F)	6530	psi	ISO 527-2
Tensile Strain (Yield, 73°F)	2.6	%	ISO 527-2
Tensile Elongation (Break)	2.6	%	ASTM D638
Nominal Tensile Strain at Break (73°F)	10	%	ISO 527-2
Flexural Modulus (73°F)	334000	psi	ASTM D790
Flexural Strength (73°F)	9430	psi	ASTM D790
Flexural Stress (73°F)	9430	psi	ISO 178

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	3.8	ft·lb/in²	
73°F	10	ft·lb/in²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	48	ft·lb/in²	
73°F	86	ft·lb/in²	
Notched Izod Impact			ASTM D256
-22°F	1.1	ft·lb/in	
0°F	1.9	ft·lb/in	
73°F	5.6	ft·lb/in	
Notched Izod Impact Strength			ISO 180/A
-22°F	3.8	ft·lb/in²	
73°F	12	ft·lb/in²	

Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	103		ASTM D785
Ball Indentation Hardness	14100	psi	ISO 2039-1

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	195	°F	ASTM D648
Deflection Temperature Under Load (66 psi, Annealed)	219	°F	ASTM D648
Heat Deflection Temperature [2] (66 psi, Annealed)	210	°F	ISO 75-2/B

Terluran® GP-22
INEOS Styrolution - Acrylonitrile Butadiene Styrene

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed	172	°F	
Deflection Temperature Under Load (264 psi, Annealed)	210	°F	ASTM D648
Heat Deflection Temperature [2] (264 psi, Annealed)	201	°F	ISO 75-2/A
Vicat Softening Temperature			
--	221	°F	ISO 306/A50
--	205	°F	ISO 306/B50
CLTE - Flow	4.4E-5 to 6.1E-5	in/in/°F	ISO 11359-2
Thermal Conductivity	1.2	Btu·in/hr/ft²/°F	DIN 52612

Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+13	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms·cm	ASTM D257
Volume Resistivity	1.0E+15	ohms·cm	IEC 60093
Dielectric Constant (0.0394 in, 1 MHz)	2.80		ASTM D150
Relative Permittivity			IEC 60250
100 Hz	2.90		
1 MHz	2.80		
Dissipation Factor			IEC 60250
100 Hz	4.8E-3		
1 MHz	7.9E-3		

Optical	Nominal Value	Unit	Test Method
Yellowness Index	13	YI	DIN 6167

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	175	°F
Drying Time	2.0 to 4.0	hr
Processing (Melt) Temp	425 to 500	°F
Mold Temperature	85 to 140	°F
Injection Velocity	472	in/min

Notes

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

[2] 4h/80°C