

Dec 2003 TL GP-22

Terluran[®] GP-22

Acrylonitrile Butadiene Styrene (ABS)

Product Description

Processing

Drying:

Terluran[®] GP-22 ABS will attract moisture from the atmosphere, with the rate depending on temperature and humidity. It is recommended that the material be dried in a dehumidifying dryer at 170°F to 175°F (75°C to 80°C) for 2 to 4 hours.

Recycling:

A maximum of 20% regrind can be blended with virgin product provided that it has not been contaminated or previously degraded. The reprocessed material must be dried to prevent any addition of moisture to the virgin material before processing.

Not all applications permit the use of regrind. Those applications which do allow the use of regrind should be tested for the appropriate mechanical properties per the specific molded part and application.

Processing Temperatures:

Injection Molding:

Melt temperatures for Terluran[®] GP-22 ABS lie between 430°F and 500°F (221°C and 260°C) with mold temperatures between 85°F and 140°F (30°C and 60°C).

Processing Precautions:

Avoid excessive melt temperatures and long residence times as this could lead to thermal degradation.

Applications

Form supplied and storage

Agency Approvals (Automotive, NSF, USP, FDA, etc.)

Product safety

Note

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Typical Properties for uncolored products	Test Method ISO / IEC / ASTM	SI		English	
		Unit	Value	Unit	Value
Physical					
Density	ASTM D1505	g/cm ³	1.04	g/cm ³	1.04
Melt Volume-Flow Rate (MVR), 230°C/3.8 kg	ASTM D1238	cm ³ /10min	4.80	in ³ /10min	0.293
Melt Volume-Flow Rate (MVR), 220°C/10.0 kg	ASTM D1238	cm ³ /10min	20.0	in ³ /10min	1.22
Melt Volume-Flow Rate (MVR), 200°C/5.0 kg	ASTM D1238	cm ³ /10min	1.60	in ³ /10min	0.0976
Mechanical					
Tensile Modulus (3.18 mm (0.125 in))	ASTM D638	MPa	2350	psi	341000
Tensile Strength @ Yield (3.18 mm (0.125 in), Type I)	ASTM D638	MPa	45.0	psi	6530
Tensile Strength @ Break (3.18 mm (0.125 in), Type I)	ASTM D638	MPa	34.0	psi	4930
Tensile Elongation @ Yld	ASTM D638	%	2.6	%	2.6
Flexural Modulus	ASTM D790	MPa	2300	psi	334000
Flexural Strength	ASTM D790	MPa	65.0	psi	9430
Impact					
Notched Izod Impact (23 °C (73 °F))	ASTM D256	J/m	300	ft-lb/in	5.62
Notched Izod Impact (-18 °C (0 °F))	ASTM D256	J/m	100	ft-lb/in	1.87
Notched Izod Impact (-40 °C (-40 °F))	ASTM D256	J/m	60.0	ft-lb/in	1.12
Hardness					
Rockwell Hardness, R-Scale	ASTM D785	-	103	-	103
Thermal					
DTUL @264psi - Annealed (6.35 mm (0.250 in))	ASTM D648	°C	99.0	°F	210
DTUL @264psi - Unannealed (6.35 mm (0.250 in))	ASTM D648	°C	78.0	°F	172
DTUL @66psi - Annealed (6.35 mm (0.250 in))	ASTM D648	°C	104	°F	219
DTUL @66psi - Unannealed (6.35 mm (0.250 in))	ASTM D648	°C	91.0	°F	196
Vicat Softening Point Rate A	ASTM D1525	°C	97.0	°F	207
Flammability					
Flame Rating - UL (1.50 mm)	UL 94	-	HB	-	HB
Flame Rating - UL (3.00 mm)	UL 94	-	HB	-	HB
Flame Rating - UL (0.787 mm)	UL 94	-	HB	-	HB
UL 746					
Rel Temp Indx Mech w/olmp (1.50 mm (0.0590 in))	UL 746	°C	95.0	°F	203
Rel Temp Indx Mech w/olmp (3.00 mm (0.118 in))	UL 746	°C	95.0	°F	203
Rel Temp Indx Mech w/olmp (0.787 mm (0.0310 in))	UL 746	°C	95.0	°F	203
Rel Temp Indx Mech w/lmp (0.787 mm (0.0310 in))	UL 746	°C	80.0	°F	176
Rel Temp Indx Mech w/lmp (1.50 mm (0.0590 in))	UL 746	°C	80.0	°F	176
Rel Temp Indx Mech w/lmp (3.00 mm (0.118 in))	UL 746	°C	80.0	°F	176
Rel Temp Indx Elect (0.787 mm (0.0310 in))	UL 746	°C	90.0	°F	194
Rel Temp Indx Elect (1.50 mm (0.0590 in))	UL 746	°C	90.0	°F	194
Rel Temp Indx Elect (3.00 mm (0.118 in))	UL 746	°C	90.0	°F	194
Injection					
Drying Temperature		°C	80	°F	176
Drying Time		hr	2 to 4	hr	2 to 4
Suggested Max Re grind		%	20	%	20
Processing (Melt) Temp		°C	220 to 260	°F	428 to 500
Mold Temperature		°C	30.0 to 60.0	°F	86.0 to 140

NB : no break ¹⁾ Shrinkage depends on wall thickness, design of molding, gating and processing conditions

** Properties of non-oriented cast film (2 mil thick)