

## Styrolution Terluran<sup>®</sup> GP-35 ABS

Category : Polymer , Thermoplastic , ABS Polymer , Acrylonitrile Butadiene Styrene (ABS), Impact Grade, Molded

### Material Notes:

Terluran GP-35 is a very high flow grade of ABS for injection molding with good resistance to impact and heat deflection. Information provided by STYROLUTION, which is a joint venture between BASF and INEOS.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Styrolution-Terluran-GP-35-ABS.php](http://www.lookpolymers.com/polymer_Styrolution-Terluran-GP-35-ABS.php)

Physical Properties	Metric	English	Comments
Density	1.04 g/cc	0.0376 lb/in <sup>3</sup>	ISO 1183
Water Absorption	0.95 %	0.95 %	ISO 62
Moisture Absorption at Equilibrium	0.24 %	0.24 %	23 <sup>°</sup> C/50% R.H.; ISO 62
Linear Mold Shrinkage	0.0055 cm/cm	0.0055 in/in	ASTM Data; MD
Melt Flow	3.1 g/10 min	3.1 g/10 min	ASTM Test
	@Load 5.00 kg, Temperature 200 <sup>°</sup> C	@Load 11.0 lb, Temperature 392 <sup>°</sup> F	
	11 g/10 min	11 g/10 min	ASTM Test
	@Load 3.80 kg, Temperature 230 <sup>°</sup> C	@Load 8.38 lb, Temperature 446 <sup>°</sup> F	
	34 g/10 min	34 g/10 min	ISO 1133
	@Load 10.0 kg, Temperature 220 <sup>°</sup> C	@Load 22.0 lb, Temperature 428 <sup>°</sup> F	
	34 g/10 min	34 g/10 min	ASTM Test
	@Load 10.0 kg, Temperature 220 <sup>°</sup> C	@Load 22.0 lb, Temperature 428 <sup>°</sup> F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	102	102	ASTM Test
Tensile Strength, Yield	44.0 MPa	6380 psi	50mm/min; ISO 527
	45.0 MPa	6530 psi	2 in/min; ASTM Test
	19.0 MPa	2760 psi	ISO Data
@Temperature 80.0 <sup>°</sup> C	@Temperature 176 <sup>°</sup> F		
	63.0 MPa	9140 psi	ISO Data
	@Temperature -40.0	@Temperature -40.0	

Mechanical Properties	°C Metric	°F English	Comments
Elongation at Break	12 %	12 %	50mm/min, Nominal strain; ISO 527
Elongation at Yield	2.4 %	2.4 %	50mm/min; ISO 527
	2.4 %	2.4 %	2 in/min; ASTM Test
	2.5 % @Temperature 80.0 °C	2.5 % @Temperature 176 °F	ISO Data
	3.6 % @Temperature -40.0 °C	3.6 % @Temperature -40.0 °F	ISO Data
Tensile Modulus	2.30 GPa	334 ksi	1mm/min; ISO 527
	2.50 GPa	363 ksi	ASTM Test
Flexural Strength	65.0 MPa	9430 psi	ISO Data
	65.0 MPa	9430 psi	ASTM Test
Flexural Modulus	2.35 GPa	341 ksi	ASTM Test
Izod Impact, Notched	0.800 J/cm @Temperature -30.0 °C	1.50 ft-lb/in @Temperature -22.0 °F	ASTM Test
	0.850 J/cm @Temperature -18.0 °C	1.59 ft-lb/in @Temperature -0.400 °F	ASTM Test
	2.40 J/cm @Thickness 3.17 mm	4.50 ft-lb/in @Thickness 0.125 in	ASTM Test
Izod Impact, Notched (ISO)	22.0 kJ/m <sup>2</sup>	10.5 ft-lb/in <sup>2</sup>	ISO Test
Charpy Impact Unnotched	12.5 J/cm <sup>2</sup>	59.5 ft-lb/in <sup>2</sup>	ISO 179
	9.00 J/cm <sup>2</sup> @Temperature -30.0 °C	42.8 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	ISO 179
Charpy Impact, Notched	1.90 J/cm <sup>2</sup>	9.04 ft-lb/in <sup>2</sup>	ISO 179
	0.700 J/cm <sup>2</sup> @Temperature -30.0 °C	3.33 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	ISO 179

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	95.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	52.8 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359
Deflection Temperature at 0.46 MPa (66 psi)	89.0 $\text{Å}^\circ\text{C}$	192 $\text{Å}^\circ\text{F}$	ASTM Test
	99.0 $\text{Å}^\circ\text{C}$	210 $\text{Å}^\circ\text{F}$	ISO 75
	101 $\text{Å}^\circ\text{C}$	214 $\text{Å}^\circ\text{F}$	annealed; ASTM Test
Deflection Temperature at 1.8 MPa (264 psi)	75.0 $\text{Å}^\circ\text{C}$	167 $\text{Å}^\circ\text{F}$	ASTM Test
	94.0 $\text{Å}^\circ\text{C}$	201 $\text{Å}^\circ\text{F}$	ISO 75
	97.0 $\text{Å}^\circ\text{C}$	207 $\text{Å}^\circ\text{F}$	annealed; ASTM Test
Vicat Softening Point	95.0 $\text{Å}^\circ\text{C}$	203 $\text{Å}^\circ\text{F}$	Rate "A" Loading 2 (50 degC/h 50N); ASTM Test
	95.0 $\text{Å}^\circ\text{C}$	203 $\text{Å}^\circ\text{F}$	(50 $\text{Å}^\circ\text{C}/\text{h}$ / 50N) - B/50; ISO 306
Flammability, UL94	HB	HB	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	
	@Thickness 0.800 mm	@Thickness 0.0315 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00\text{e}+13$ ohm-cm	$\geq 1.00\text{e}+13$ ohm-cm	IEC 60093
Dielectric Strength	38.0 kV/mm	965 kV/in	IEC 60243-1

Processing Properties	Metric	English	Comments
Melt Temperature	250 $\text{Å}^\circ\text{C}$	482 $\text{Å}^\circ\text{F}$	Injection molding
Mold Temperature	83.0 $\text{Å}^\circ\text{C}$	181 $\text{Å}^\circ\text{F}$	Ejection temperature
Injection Velocity	60.0 mm/sec	2.36 in/sec	Injection molding

Descriptive Properties	Value	Comments
Color	Natural	
Commercial Status	North America and Europe	
FDA	Yes	
Form	Pellets	

<b>Impact Modified Descriptive Properties</b>	<b>Yes Value</b>	<b>Comments</b>
NSF Std. 14	Yes	
NSF Std. 51	Yes	
NSF Std. 61	Yes	
Primary Processing Technique	Injection Molding	
Processing	Injection Molding	
Special characteristic	Platable	
UL.UL-C	Yes	
USP Class VI	No	

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