INEOS STYROLUTION

Terluran HI-12

Acrylonitrile Butadiene Styrene (ABS)

TECHNICAL DATASHEET

DESCRIPTION

Terluran® HI-12 is an injection molding grade of ABS with a very high toughness and easy flow.

FEATURES

- Very high toughness
- Easy flowing
- UL 94 HB (1.6 & 3.2 mm)

APPLICATIONS

- Home appliances
- Electrical and electronics
- Helmets
- Heel top
- Motor bicycle parts

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Volume Rate 220 °C/10 kg	ISO 1133	cm³/10 min	14
Mechanical Properties			
Izod Notched Impact Strength, 23 °C (73 °F)	ASTM D 256	kJ/m²	35
Izod Notched Impact Strength, 23 °C	ISO 180/A	kJ/m²	31
Izod Notched Impact Strength, -30 °C	ISO 180/A	kJ/m²	11
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m²	30
Charpy Notched Impact Strength, -30 °C	ISO 179/1eA	kJ/m²	11
Charpy Unnotched, -30 °C	ISO 179/1eU	kJ/m²	160
Tensile Stress at Yield, 23 °C	ISO 527	MPa	40
Tensile Strain at Yield, 23 °C	ISO 527	%	2.7
Tensile Modulus	ISO 527	MPa	1900
Flexural Strength, 23 °C	ISO 178	MPa	58
Hardness, Rockwell	ISO 2039-2	R scale	101
Hardness, Ball Indentation	ISO 2039-1	MPa	80
Thermal Properties			
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	96

Contact us:
Phone +82 2 6322 7775
INSTY.asia@ineos.com
www.ineos-styrolution.com

Revision Date: 2016.01.17

Terluran HI-12

Acrylonitrile Butadiene Styrene (ABS)

TECHNICAL DATASHEET

Property, Test Condition	Standard	Unit	Values
Vicat Softening Temperature, VST/A/50 (10N, 50 °C/h)	ISO 306	°C	104
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	ISO 75	°C	97
Heat Deflection Temperature B; (annealed 4 h/80 °C; 0.45 MPa)	ISO 75	°C	102
Coefficient of Linear Thermal Expansion	ISO 11359	10^{-6}/°C	80 - 110
Thermal Conductivity	DIN 52612-1	W/(m K)	0.17
Electrical Properties			
Dielectric Constant at 106 CPS (1000000 Hz, 0,0394 in)	-	-	2.8
Dielectric Constant (100 Hz)	IEC 62631-2-1	-	2.9
Dissipation Factor (100 Hz)	IEC 62631-2-1	10^{-4}	54
Dissipation Factor (1 MHz)	IEC 62631-2-1	10^{-4}	82
Volume Resistivity	IEC 62631-3-1	Ohm*m	10^{13}
Comparative Tracking Index	IEC 60112	V	600
Other Properties			
Density	ISO 1183	kg/m³	1020
Water Absorption, Saturated at 23 °C	ISO 62	%	1.03
Moisture Absorption, Equilibrium 23 °C/50% RH	ISO 62	%	0.21
Processing			
Linear Mold Shrinkage	ISO 294-4	%	0.4 - 0.7
Melt Temperature Range	ISO 294	°C	230 - 260
Mold Temperature Range	ISO 294	°C	40 - 60
Max Service Temperature	-	°C	80

Typical values for uncolored products

SUPPLY FORM

Terluran is delivered in the form of cylindrical or spherical pellets. The bulk density of the pellets is from 0.55 to 0.65 g/cm³. Values may differ for special grades. Standard Packaging unit: 25 kg paper bag. In addition, delivery in larger units of up to 1000 kg (IBC = Intermediate Bulk

Contact us:
Phone +82 2 6322 7775
INSTY.asia@ineos.com
www.ineos-styrolution.com

Container) or silo trucks can be arranged. In dry areas with normal temperature control, Terluran pellets can be stored for relatively long periods of time without any change in mechanical properties. With unstable colors, however, storage over a number of years can give rise to some change in color. Under poor storage conditions, Terluran absorbs moisture, but this can be removed by drying.

PRODUCT SAFETY

No adverse effects on the health of processing personnel have been observed if the products are correctly processed and the production areas are suitably ventilated. For styrene, acrylonitrile and 1,3-butadiene the maximum allowable workplace concentrations must be observed according to the pertaining national regulations. In Germany, the following limit values are valid (Oct. 2002): styrene, MAK-value: 20 ml/m³ = 86 mg/m³; acrylonitrile, TRK-value: 3 ml/m³ = 7 mg/m³ and 1,3-butadiene, TRK-value: 5 ml/m³ = 11 mg/m³. According to EU directive 67/548 /EWG, Annex I and TRGS 905 (Oct. 2002), acrylonitrile and 1,3-butadiene are classified as carcinogenic, category 2 (´substances which should be regarded as if they are carcinogenic to man´) and 1 (substances known to be carcinogenic to man), respectively. Experience has shown that during appropriate processing of Terluran with suitable ventilation the values obtained are well below the limits mentioned above. TRGS 402 (Germany) can be used for determining and assessing the concentrations of hazardous substances in the air within working areas. Inhalation of gaseous degradation products, such as those which may arise on severe overheating of the material or during pumped evacuation, must be avoided. Further information can be found in our Terluran safety data sheets.

DISCLAIMER

The aforementioned data shall constitute the agreed contractual quality of the product sold by INEOS Styrolution at the time of passing of risk. INEOS Styrolution does not make any further warranty, representation or guarantee of any kind, express or implied, regarding the suitability of the product for any particular purpose or application and INEOS Styrolution disclaims all liability in connection therewith. The customer himself is required to verify whether or not the product is suitable for the further processing or application intended and whether or not the product complies with the relevant statutory requirements. Unless explicitly and individually otherwise agreed in writing, INEOS Styrolution's sole and exclusive liability with respect to its products is set forth in INEOS Styrolution's General Terms and Conditions for Sale.

Contact us:
Phone +82 2 6322 7775
INSTY.asia@ineos.com
www.ineos-styrolution.com