Terylene® PBT COMPOUNDS

TECHNICAL DATA SHEET

B95 P2 SF10 U0

ISSUED: 09/02/2021 **ISO 9001 CERTIFIED**

Terylene B95 P2 SF10 U0 is a PBT Flame Retardant (Halogen Free), Injection Molding grade, 10% Steel Fiber Reinforced, specially designed for EMI shielding applications. Electrically conductive.

PROPERTIES	CONDITIONS	TEST METHOD	UNITS	VALUES
PHYSICAL PROPERTIES				
Density	23 ºC	ISO 1183	g/cm^3	1,43
Moisture absorption	23 ºC / 50% r.h.	ISO 62	%	0,2
Water absorption	23 ºC / saturation in water	ISO 62	%	0,4
PROCESSING CONDITIONS				
Melt Volume rate	250ºC/2,16 kg	ISO 1133	cm^3/10 min	25
Melt temperature, injection moulding			ºC	250 - 280
Mould temperature			ºC	60 - 100
Moulding Shrinkage	longitudinal transversal		%	0,60 1,30
MECHANICAL PROPERTIES				
Tensile modulus	23 ºC, 1 mm/min	ISO 527-1-2	MPa	3.600
Tensile strength	23 ºC, 50 mm/min	ISO 527-1-2	MPa	20
Elongation at yield	23 ºC, 50 mm/min	ISO 527-1-2	%	0,6
Elongation at break	23 ºC, 50 mm/min	ISO 527-1-2	%	0,5
Flexural modulus	23 ºC, 2 mm/min	ISO 178	MPa	3.000
Flexural strength	23 ºC, 2 mm/min	ISO 178	MPa	50
Charpy unnotched impact strength	23ºC	ISO 179/1eU	kJ/m^2	5,0
Charpy notched impact strength	23ºC	ISO 179/1eA	kJ/m^2	1,0
FLAMMABILITY PROPERTIES				
Flammability	1,5 mm	UL-94	Class	V0
Glow Wire Flammability Index	1,5 mm	IEC 60695-2-12	ºC	960
THERMAL PROPERTIES				
Melting temperature (DSC)	10ºC/min	ISO 3146	ºC	223
Heat Deflection Temperature (HDT)	1,8 MPa 0,45 MPa	ISO 75-1-2	ºC	170 210
Thermal coefficient of linear expansion	23-80ºC long.	ISO 11359-1/-2	10^{-4}/K	0,5
ELECTRICAL PROPERTIES				
Volume resistivity		IEC 60093	Ω.m	<10
Surface resistivity		IEC 60093	Ω	10^2
Electromagnetic shielding		IEEE229	%	97-99

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CHARACTERISTICS

Terylene B95 P2 SF10 U0 is distinguished by high mechanical strength, hardness, rigidity and thermo stability. Parts made from Terylene B95 P2 SF10 U0 have particularly high dimensional stability. Its halogens free flame retardant system enhances its flame behavior to V0 class. Terylene B95 P2 SF10 U0 offers EMI Shielding properties and high electrically conductivity.

APPLICATIONS

Terylene B95 P2 SF10 U0 is used in a wide range of applications where a combination of mechanical properties, thermal resistance and flame retardancy are needed. Its excellent mechanical properties, and its flame retardant properties make it suitable for components specially used in electrical, electronic and automotive industries.

FORMAT AND STORAGE

Terylene B95 P2 SF10 U0 is supplied in moisture-proof packaging. Typical formats are Big Bag, octabin, and 25kg bags.

All containers are perfectly sealed. The product should be stored in a dry place and opened just before processing.

PROCESSING GUIDELINES

Drying

Max. Water content: 0,04%

To ensure the best performance, this product should be dried before moulding and maintained at a moisture level of less than 0,04%. When drying is necessary, conditions are:

Dehumidifying dryers temperature: 100-120 ºC

Drying time: 4 hours

Injection moulding

The recommended processing parameters for injection moulding are:

Melt temperature: 250-280ºC

Mould temperature: 60-100 ºC

Injection speed: High

Back pressure: Moderate

Shrinkage

The shrinkage of a moulded part is influenced by wall thickness, mould gating, and moulding conditions.

NOTE

All recommendations are based on knowledge and experience; The values have been established on standardized tests. The figures should be regarded as guide values and not as binding minimum values. As many factors may affect processing or applications, we recommend that customers make their own tests to determine the suitability of a product for its particular use.

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