



versalis

info.styrenics@versalis.eni.com

Technical Data Sheet

EDISTIR®

Polystyrene

SR 550

High impact, easy flow polystyrene with good elasticity at low temperatures.

Suitable for injection moulding of large or complex parts with low thickness and high impact strength.

Designation: Thermoplastics ISO 2897-PS-I,M,083-12-07-18

Applications

Toys, housewares, technical items.

Typical processing data

Injection moulding:

- predrying normally not required
- melt temperature 200-250°C
- mould temperature 20-60°C

General information

SR 550 is certified UL94 HB "all colors" at 1.5 mm (UL file E83071).

This grade in its natural version complies by composition with the requirements set by the main Regulations for plastic materials intended for food contact (including Commission Regulation (EU) No 10/2011 and subsequent amendments).

Properties	Test conditions	Test methods	Units	Values
General				
Density		ISO 1183	g/cm ³	1.04
Bulk density		ISO 60	g/cm ³	0.65
Water absorption	24 h - 23°C	ISO 62	%	<0.1
Rheological				
Melt flow rate	200°C - 5 kg	ISO 1133	g/10 min	11
Mechanical				
Tensile stress at yield	50 mm/min	ISO 527	MPa	18
Tensile stress at break	50 mm/min	ISO 527	MPa	17
Tensile strain at break	50 mm/min	ISO 527	%	55
Tensile modulus	1 mm/min	ISO 527	MPa	1700
Flexural strength	2 mm/min	ISO 178	MPa	32
Izod impact strength, notched	+23°C - thickness 3.2 mm	ISO 180/4A	J/m	110
	+23°C - thickness 4 mm	ISO 180/1A	kJ/m ²	9
	-30°C - thickness 4 mm	ISO 180/1A	kJ/m ²	6.5
Rockwell hardness	L/M scale	ISO 2039/2	-	L60
Thermal				
Vicat softening temperature	10 N - 50°C/h	ISO 306/A	°C	90
	50 N - 50°C/h	ISO 306/B	°C	82
Deflection temperature under load (annealed)	1.8 MPa - 120°C/h	ASTM D 648	°C	81
Coefficient of linear thermal expansion		ASTM D 696	10 ⁻⁵ /°C	9
Thermal conductivity		ISO 8302	W/(K·m)	0.17
Moulding shrinkage		internal method	%	0.4 - 0.7
Flammability				
Flame behaviour	thickness 1.5 mm	UL 94	class	HB
Glow wire test (GWT)	thickness 1.6 mm	IEC 60695-2-1	°C	650
Electrical				
Surface resistivity		IEC 60093	10 ¹⁵ ohm	>1.5
Volume resistivity		IEC 60093	10 ¹⁵ ohm·cm	>7
Comparative tracking index (CTI)	solution A	IEC 60112	-	500
Dielectric strength		IEC 60243	kV/mm	65
Dielectric constant (relative permittivity)	50 Hz	IEC 60250	-	2.5
Dissipation factor	50 Hz	IEC 60250	-	0.0003