

Edistir®



RK 451G

Polystyrene

Technical Data Sheet

Edistir® RK 451G is a UL94 V-0, polybromobiphenylether (PBBE) free flame retarded high impact polystyrene. Edistir® RK 451G combines medium flow, heat resistance and good light stability for injection moulding of technical parts.

Designation: Thermoplastics ISO 2897-PS-I,MF,088-06-04-18

Applications

Edistir® RK 451G is suitable in sectors such as:

- electrical & electronics for V0 components

Typical processing data

Injection moulding:

- predrying recommended at 70°C for 2 h
- melt temperature 190-230°C
- mould temperature 20-60°C

Certification

✓ UL 94 V0 at 1.5 mm ✓ UL 94 5VA at 3.5 mm

Storage

- ⚠ Store away from atmospheric agents and direct sunlight, away from sources of heat and light.
- 🕒 The product, if stored correctly, keeps its characteristics for at least fifteen months.

General information

Edistir® RK 451G is available in different color shades:

- natural version
- light grey Versalis code 33000
- black Versalis code 39105
- white Versalis code 31266.

For further information, please contact Versalis directly writing to info.styrenics@versalis.eni.com.

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Property	Test Conditions	Test method	Units	Values
General				
Water absorption	24h - 23°C	ISO 62	%	< 0,1
Density	-	ISO 1183	g/cm ³	1,15
Bulk density	-	ISO 60	g/cm ³	0,7
Rheological				
Melt flow rate	200°C - 5kg	ISO 1133	g/10'	5
Mechanical				
Tensile strain at break	50 mm/min	ISO 527	%	50
Tensile stress at break	50 mm/min	ISO 527	MPa	22
Tensile stress at yield	50 mm/min	ISO 527	MPa	23
Flexural strength	2 mm/min	ISO 178	MPa	31
Tensile modulus	1 mm/min	ISO 527	MPa	1950
Izod impact strength, notched	+23°C - 4mm	ISO 180/1A	kJ/m ²	6
Thermal				
Coefficient of linear thermal expansion	-	ASTM D 696	10 ⁻⁵ /°C	9
Thermal conductivity	-	ISO 8302	W/(K.m)	0,17
Moulding shrinkage	-	ISO 294/4	%	0,4 - 0,7
Deflection temperature under load (annealed)	1,82 MPa - 120°C/h	ISO 75 A	°C	85
Vicat softening temperature	50 N - 50°C/h	ISO 306/B	°C	90
Vicat softening temperature	10 N - 50°C/h	ISO 306/A	°C	98
Flammability				
Flame behaviour	1,5 mm	UL 94	cl.	V0
Glow wire test (GWT)	1,6 mm	IEC 60695-2-10	°C	850
Electrical				
Dielectric constant (relative permittivity)	50 Hz	IEC 60250	-	2,5
Dissipation factor	50 Hz	IEC 60250	-	0,0003
Comparative tracking index (CTI)	Sol. A	IEC 60112	-	400
Surface resistivity	-	IEC 60093	10 ¹⁵ ohm	> 1,5
Volume resistivity	-	IEC 60093	10 ¹⁵ ohm.cm	> 7
Dielectric strength	-	IEC 60243	kV/mm	26

Please consult the relevant safety data sheet for more detailed information.

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