

UL94 V-0, polybromobiphenylether (PBBE) free, flame retarded, high impact polystyrene.
This grade 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

Printers and copiers, ventilators, TV back covers, business machines, monitor cabinets.

Typical processing data

Injection moulding:
predrying recommended at 70°C for 2 h

- melt temperature 190-230°C
- mould temperature 20-60°C

General information

RK 451G can be supplied in a natural or coloured version upon request.
This grade is certified UL94 V-0 at 1.5 mm "all colors";
UL94-5VA at 6.0 mm "all colors" in the foamed version at density from 0.86 to 1.2 g/cm³ and
UL94-5VA at 4.0 mm "all colors" in the foamed version at density from 0.96 to 1.2 g/cm³ (UL file E83071).



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'	4
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	1650
Izod impact strength, notched	+23°C - 3,2mm	ISO 180/4A	J/m	80
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	ASTM D 648	°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 60695-2-1	°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

