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Technical Data Sheet

Sinkral®

C 333/M2

ABS Resin

Special low gloss grade for injection moulding which combines medium heat resistance with a good balance between stiffness and toughness.

Designation: Thermoplastic ISO 2580-ABS 1,MG,105-04-16-20

Applications

Main application for this grade is automotive interiors, for example dashboard instruments and panels, where a matt surface finish and high thermal resistance are highly desirable. The choice of this material, when properly processed in tools having a suitable quality finish, can mean the elimination of subsequent painting operations with a consequent reduction in part costs together with easier recycling.

Typical processing data

Injection moulding:
- pre-drying required at 80°C for 2 - 4 hr in an air circulating oven
- melt temperature 230 - 270°C
- mould temperature 50 - 80°C

General information

Sinkral C 333/M2 can be supplied with improved UV resistance (/U).

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Properties	Test conditions	Test methods	Units	Values
General				
Density		ISO 1183	g/cm³	1.04
Water absorption	24 h / 23°C	ASTM D 570	%	0.3
Rheological				
Melt flow rate (MFR)	220°C - 10 kg	ISO 1133	g/10 min	5
Mechanical				
Tensile strength	50 mm/min	ASTM D 638	MPa	35
Strain at break	50 mm/min	ASTM D 638	%	65
Flexural strength	2 mm/min	ASTM D 790	MPa	55
Flexural modulus	2 mm/min	ASTM D 790	MPa	2000
Izod impact strength, notched	+23°C - thickness 3.2 mm	ISO 180/4A	J/m	190
	0°C - thickness 3.2 mm	ISO 180/4A	J/m	135
	-20°C - thickness 3.2 mm	ISO 180/4A	J/m	110
	-40°C - thickness 3.2 mm	ISO 180/4A	J/m	95
	+23°C - thickness 4,0 mm	ISO 180/1A	kJ/m²	14
	-40°C - thickness 4,0 mm	ISO 180/1A	kJ/m²	8
Charpy impact strength, notched	+23°C	DIN 53453	kJ/m²	12
unnotched	+23°C	DIN 53453	kJ/m²	NB
unnotched	-40°C	DIN 53453	kJ/m²	NB
Rockwell hardness	scale R	ISO 2039/2	-	R107
Thermal				
Vicat softening temperature	10 N - 120°C/h	ISO 306/A 120	°C	108
	50 N - 120°C/h	ISO 306/B 120	°C	103
Deflection temperature under load (annealed)	1.8 MPa - 120°C/h	ASTM D 648	°C	102
Coefficient of linear thermal expansion		ASTM D 696	10^{-5}/°C	9
Thermal conductivity		ASTM C 177	W/(K· m)	0.17
Moulding shrinkage		internal method	%	0.4 - 0.6
Flammability				
Flame behaviour (internal test)	thickness 1.5 mm	UL 94	class	HB
Glow wire test (GWT)	thickness 3,0 mm	IEC 60695-2-1	°C	650
Electrical				
Surface resistivity	dry	IEC 60093	ohm	10E14
Volume resistivity	dry	IEC 60093	ohm·cm	10E15
Dielectric strength	dry	IEC 60243	kV/mm	30
Dielectric constant (relative permittivity)	1000 Hz - dry	IEC 60250	-	3.1
Dissipation factor	1000 Hz - dry	IEC 60250	-	15·10E-3