



versalis

Technical Data Sheet

# Sinkral<sup>®</sup>

ABS Resin

**F 332**

Sinkral F 332 is a general purpose injection moulding grade which combines excellent thermal stability during processing with a good balance between flow and impact characteristics.

Designation: Thermoplastic ISO 2580-ABS 1,MGN,105-15-16-20

## Applications

Suitable for use in a variety of industrial sectors, for the production of small household appliances and white goods, vacuum cleaners and telephones.

## 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 40 - 70°C

## General information

Grade available in natural colour only.

The composition of this grade, on request, can meet European Regulations for packaging in contact with foodstuffs.



Properties	Test conditions	Test methods	Units	Values
<b>General</b>				
Density		ISO 1183	g/cm <sup>3</sup>	1.04
Water absorption	24 h / 23°C	ASTM D 570	%	0.3
<b>Rheological</b>				
Melt flow rate (MFR)	220°C - 10 kg	ISO 1133	g/10 min	14
<b>Mechanical</b>				
Tensile strength	50 mm/min	ASTM D 638	MPa	42
Strain at break	50 mm/min	ASTM D 638	%	60
Flexural strength	2 mm/min	ASTM D 790	MPa	60
Flexural modulus	2 mm/min	ASTM D 790	MPa	2250
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	125
	-20°C - thickness 3.2 mm	ISO 180/4A	J/m	100
	-40°C - thickness 3.2 mm	ISO 180/4A	J/m	90
	+23°C - thickness 4,0 mm	ISO 180/1A	kJ/m <sup>2</sup>	14
	-40°C - thickness 4,0 mm	ISO 180/1A	kJ/m <sup>2</sup>	8
Charpy impact strength, notched unnotched unnotched	+23°C	DIN 53453	kJ/m <sup>2</sup>	13
	+23°C	DIN 53453	kJ/m <sup>2</sup>	NB
	-40°C	DIN 53453	kJ/m <sup>2</sup>	NB
Rockwell hardness	scale R	ISO 2039/2	-	R110
<b>Thermal</b>				
Vicat softening temperature	10 N - 120°C/h	ISO 306/A 120	°C	107
	50 N - 120°C/h	ISO 306/B 120	°C	102
Deflection temperature under load (annealed)	1.8 MPa - 120°C/h	ASTM D 648	°C	101
Coefficient of linear thermal expansion		ASTM D 696	10 <sup>-5</sup> /°C	9
Thermal conductivity		ASTM C 177	W/(K· m)	0.17
Moulding shrinkage		internal method	%	0.4 - 0.6
<b>Flammability</b>				
Flame behaviour	thickness 1.5 mm	UL 94	class	HB
Glow wire test (GWT)	thickness 3,0 mm	IEC 60695-2-1	°C	650
<b>Electrical</b>				
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

