



versalis

Provisional Data Sheet

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**Sinkral<sup>®</sup>**  
ABS Resin

**PD D 232/M4**

Special very low gloss extrusion / co-extrusion grade, with good flow.

Designation: Thermoplastic ISO 2580-ABS 1,EGN,105-08-09-15

## Applications

Sinkral PD D 232/M4 is widely used in the extrusion / co-extrusion of foils, when a very high matt appearance is required, as well as in the extrusion of profiles.

## Typical processing data

Extrusion:

- if no venting, pre-drying required at 80°C for 2 - 4hr in an air circulating oven
- melt temperature 180 - 220°C

## General information

This grade is available in natural color only

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	8
<b>Mechanical</b>				
Tensile strength	50 mm/min	ASTM D 638	MPa	27
Strain at break	50 mm/min	ASTM D 638	%	100
Flexural strength	2 mm/min	ASTM D 790	MPa	40
Flexural modulus	2 mm/min	ASTM D 790	MPa	1550
Izod impact strength, notched	+23°C - thickness 3.2 mm	ISO 180/4A	J/m	110
	0°C - thickness 3.2 mm	ISO 180/4A	J/m	90
	-20°C - thickness 3.2 mm	ISO 180/4A	J/m	80
	-40°C - thickness 3.2 mm	ISO 180/4A	J/m	75
	+23°C - thickness 4,0 mm	ISO 180/1A	kJ/m <sup>2</sup>	9,5
	-40°C - thickness 4,0 mm	ISO 180/1A	kJ/m <sup>2</sup>	7
Charpy impact strength, notched unnotched unnotched	+23°C	DIN 53453	kJ/m <sup>2</sup>	9
	+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	-	R97
<b>Thermal</b>				
Vicat softening temperature	10 N - 120°C/h	ISO 306/A 120	°C	106
	50 N - 120°C/h	ISO 306/B 120	°C	101
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

Revision n° 3

This Sheet is valid for six months from the revision date.

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On the subject of the experimental product the Company reserves the right to change without prewarning the characteristics to optimize the performance and the cost