

FEATURES

- High strength, density and hardness
- Good chemical resistance
- Good slide and wear properties
- Good electrical insulating properties
- Difficult to bond
- Good machinability and easy to polish
- Not hot water resistant over 60°C

White Plastic Sheet, 500mm x 330mm x 10mm

RS Stock No.: 484-6175



RS Professionally Approved Products bring to you professional quality parts across all product categories. Our product range has been tested by engineers and provides a comparable quality to the leading brands without paying a premium price.

Product Description

From RS Pro a range of high-quality POM-H acetal solid plastic sheets, natural in colour, available in a range of sizes and thicknesses

General Specifications

Form	Solid
Colour	White
Material	Acetal
Laminated	Yes
Laminated Material	Acrylic; Epoxy Resin; Fine Weave Cotton; Glass Fibre
Flammability Rating	UL 94 HB
Polymer Type	Homopolymer
Finish	Clear
Adhesive Backing	Yes
Applications	Friction bearings, Gears, Spring elements, Housing parts, Rollers Friction Strips, Plugs, Insulators, Snap fit connectors, Seals

Electrical Specifications

Specific Surface Resistance	$10^{14} \Omega$
Specific Volume Resistance	$10^{14} \Omega \cdot \text{cm}$
Dielectric Constant	2.9
Dielectric Loss Factor	0.0017tg
Breakdown Voltage	38kV/mm

Mechanical Specifications

Length	500mm
Width	330mm
Thickness	10mm
Density	1.42g/cm ³
Tensile Strength	70 MPa
Hardness	M 90 Rockwell
Water absorption	0.5%
Thermal Conductivity	0.17W/m.K
Elongation	25%
Impact Strength	12kJM ⁻²
Modulus Of Elasticity	3400MPa
Flexural Strength	175MPa
Compression Strength	23MPa
Compression Modulus	3400MPa
Ball Indentation Hardness	253MPa
Thermal Expansion	5x10 ⁻⁵ k ⁻¹
Specific Heat	1.1J/(g.K)
Specific Gravity	1.38
Flexural Modulus	2600MPa
Friction Coefficient	0.54
Poisson Ratio	0.38kJM ⁻²

Operation Environment Specifications

Maximum Operating Temperature	100°C
Melting Point	255°C
Glass Transition Temperature	150°C
Vicat Softening Point	65°C

Approvals

Compliance/Certifications	CE / UR / cUR
---------------------------	---------------

ACETAL POM-H

Chemical Designation POM-H (Polyacetal (Homopolymer)) **Colour** white opaque **Density** 1.43 g/cm³

<i>Mechanical properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Modulus of elasticity (tensile test)	1mm/min	3400	MPa	DIN EN ISO 527-2	1)
Tensile strength	50mm/min	79	MPa	DIN EN ISO 527-2	
Tensile strength at yield	50mm/min	79	MPa	DIN EN ISO 527-2	
Elongation at yield	50mm/min	37	%	DIN EN ISO 527-2	
Elongation at break	50mm/min	45	%	DIN EN ISO 527-2	
Flexural strength	2mm/min, 10 N	106	MPa	DIN EN ISO 178	2)
Modulus of elasticity (flexural test)	2mm/min, 10 N	3600	MPa	DIN EN ISO 178	
Compression strength	1% / 2% / 5% 5mm/min, 10 N	19/33/69	MPa	EN ISO 604	3)
Compression modulus	5mm/min, 10 N	2700	MPa	EN ISO 604	4)
Impact strength (Charpy)	max. 7.5J	n.b.	kJ/m ²	DIN EN ISO 179-1eU	5)
Notched impact strength (Charpy)	max. 7.5J	15	kJ/m ²	DIN EN ISO 179-1eA	
Ball indentation hardness		185	MPa	ISO 2039-1	6)
<i>Thermal properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Glass transition temperature		-60	°C	DIN EN ISO 11357	1)
Melting temperature		182	°C	DIN EN ISO 11357	
Service temperature	short term	150	°C		2)
Service temperature	long term	110	°C		
Thermal expansion (CLTE)	23-60°C, long.	12	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	23-100°C, long.	13	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
Specific heat		1.3	J/(g*K)	ISO 22007-4:2008	
Thermal conductivity		0.43	W/(K*m)	ISO 22007-4:2008	
<i>Electrical properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Specific surface resistance		10 ¹⁴	Ω	DIN IEC 60093	
<i>Other properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Water absorption	24h / 96h (23°C)	0.05 / 0.1	%	DIN EN ISO 62	1)
Resistance to hot water/ bases		-	-	-	2)
Resistance to weathering		-	-	-	
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	3)

(1) For tensile test: specimen type 1b
(2) For flexural test: support span 64mm, norm specimen.
(3) Specimen 10x10x10mm
(4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression.
(5) For Charpy test: support span 64mm, norm specimen.
(6) Specimen in 4mm thickness

(1) Found in public sources.
(2) Found in public sources. Individual testing regarding application conditions is mandatory.

(1) Ø ca. 50mm, h=13mm
(2) - poor resistance
(3) Corresponding means no listing at UL (yellow card). The information might be taken from resin, stock shape or estimation. Individual testing regarding application conditions is mandatory.