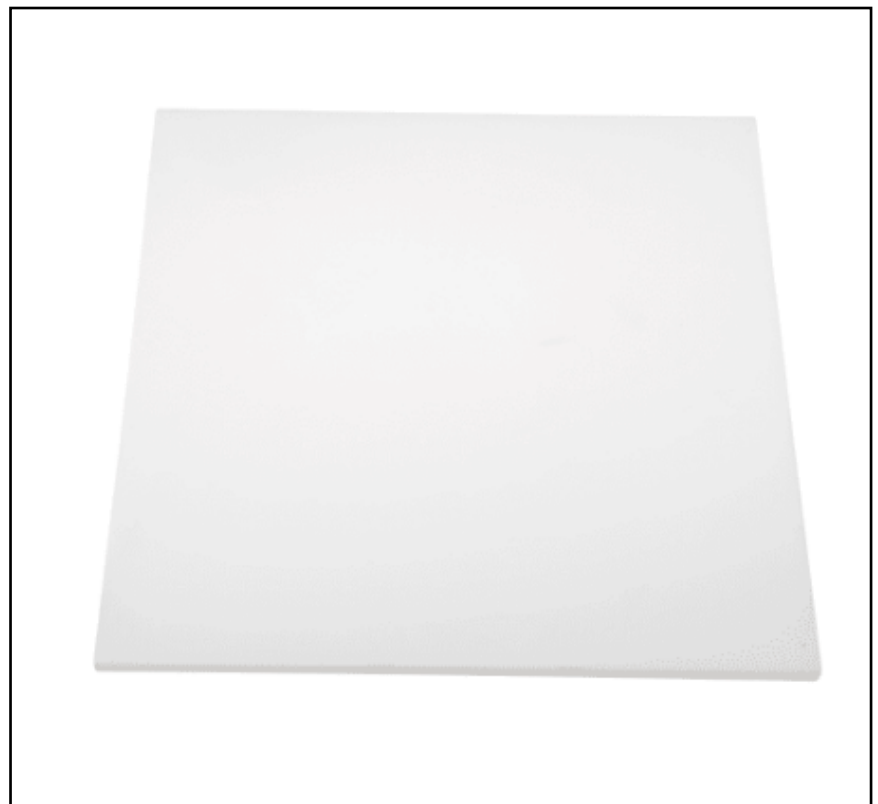


FEATURES

- Extremely high chemical resistance
- Hot water resistant
- High temperature performance a high melting point of -200 to +260°C, short-term up to 300°C
- Excellent sliding properties with low coefficient of friction
- Non-stick surface, no materials will stick to it. PTFE is also difficult to bond or weld
- High coefficient of thermal expansion (The ratio that a material expands in accordance with changes in temperature)
- Relatively low strength and rigidity
- Excellent UV and weather resistance
- Good electrical insulation properties

Opaque Plastic Sheet, 300mm x 300mm x 6mm

RS Stock No.: 197-0067



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 PTFE solid plastic sheets available in a range of sizes and thicknesses

General Specifications

Form	Solid
Colour	Opaque
Material	PTFE
Laminated	Yes
Laminated Material	Acrylic; Epoxy Resin; Fine Weave Cotton; Glass Fibre
Flammability Rating	UL 94 V-0
Polymer Type	Copolymer
Finish	Opaque
Adhesive Backing	Yes
Applications	Components that can be manufactured from this plastic include the following: Slide bearings and runners, Pump housings and parts, Valve seats, Tank linings, Roller coverings, Pipe linings, Filter housings, Etching plates, High frequency insulation, Seals

Electrical Specifications

Specific Surface Resistance	$10^{14} \Omega$
Specific Volume Resistance	$10^{13} \Omega \cdot \text{cm}$
Dielectric Constant	2.9
Dielectric Loss Factor	0.0017tg
Breakdown Voltage	17kV/mm
Dielectric Strength 23°C, 50% r.h.	49kV/mm

Mechanical Specifications

Length	300mm
Width	300mm
Thickness	8mm
Density	2.18 to 2.21g/cm ³
Tensile Strength	25Mpa
Hardness	R 118 Rockwell
Water absorption	0.3%
Thermal Conductivity	0.17W/m.K
Elongation	50%
Impact Strength	12kJM ⁻²
Modulus Of Elasticity	2500Mpa
Flexural Strength	91Mpa
Compression Strength	20Mpa
Compression Modulus	2300Mpa
Ball Indentation Hardness	165Mpa
Thermal Expansion	8x10 ⁻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	260°C
Melting Point	255°C
Glass Transition Temperature	-60°C
Vicat Softening Point	65°C

Approvals

Compliance/Certifications	CE / UR / cUR
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PTFE

Chemical Designation **Colour** **Density**
 PTFE (Polytetrafluorethylene) white opaque 2.15 g/cm³

<i>Mechanical properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Tensile strength		22	MPa	ASTMD 4894	1) (1) Tested on extruded and machined specimen
Elongation at break		220	%	ASTMD 4894	2) (2) Tested on extruded and machined specimen
Compression strength	1% strain	5	MPa	ASTMD 695	(3)
Shore hardness	Shore D	55		ASTMD 2240	3)
<i>Thermal properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Glass transition temperature		- 20	°C	DIN 53765	1) (1) Found in public sources.
Service temperature	short term	260	°C	-	2) (2) Found in public sources. Individual testing regarding application conditions is mandatory.
Service temperature	long term	260	°C	-	
Thermal expansion (CLTE)	23-100°C, long.	13	10 ⁻⁵ K ⁻¹	ASTMD 696	
Thermal conductivity		0.20	W/(K*m)	ASTMC 177	
<i>Electrical properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Specific surface resistance		10 ¹⁶	Ω	ASTMD 257	1) (1) Without defects
Specific volume resistance		10 ¹⁷	Ω*cm	ASTMD 257	
Dielectric strength	In air, 0.125mm thick	80	kV/mm	ASTMD 149	
Dielectric constant	50-109Hz	2.1		ASTMD 150	
<i>Other properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Water absorption	23°C	< 0.01	%	ASTMD 570	(1) 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.
Flammability (UL94)	corresponding to	V0		DIN IEC 60695-11-10;	1)