MADREPERLA

cast acrylic sheets

TECHNICAL SHEET Setasand^{Ò}
Cast acrylic sheets sanded on both surfaces

Technical-commercial information

Setasand® is a cast acrylic sheet with both surfaces sanded, developed by Madreperla SpA for applications which need a greater resistance to scratches and the property of not being easily marked by finger prints during the product's normal use.

The surface finish of the sheet, associated to the intrinsic characteristics of the hardness of the methacrylate give the product made with **Setasand**® extremely high scratchproof properties and therefore make it an alternative to matt-finished glass.
The surface of the sheet is also refractory to finger prints and reduces the deposit of dust thanks to the low electrostatic factor of the material.

Unlike other acrylic sheets with matt-finished/embossed surfaces, the sanded effect of **Setasand**® remains unchanged even after thermoforming with high stretch ratios The post-machining of **Setasand**® sheets requires the same procedures and tools typical of normal cast sheets.

Main sectors of use of **Setasand**®

- interior design and furnishing accessories (vertical panelling, doors, tables, chairs)
- advertising and retail (Pop/POS, reception desk, totems, high range display units)
- lighting (diffuser screens, lamps)

The sheets we supply are produced in observance of the requirements of standard UNI EN ISO 7823.1
(Polymethyl methacrylate sheets – types, dimensions and characteristics – cast sheets) where this is applicable. By request sheets with stricter requirements than the above-mentioned standard are produced. For details, contact our technical-commercial offices.
Standard colours and thicknesses are reported in our delivery program. Other thicknesses and colours can be produced on request and with a minimum quantity.

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Standard protection

The film printed with the logo indicates the side to be used.

All the P.E. films used are suitable for laser cutting.

*Warning : for sheets with sanded surface (**Setasand**®) the protection film **is not thermo-formable**.*

Cuts to measure, square cuts and dimensional tolerances

On request shapes can be supplied cut to measure: minimum surface 400 cm^2.

The sheets are supplied with the following tolerances: standard sheet 0/+10 mm – formats cut to measure +/-1mm/ml. Square cuts can be supplied on request.

Untrimmed sheets can be supplied on request. The sheets are supplied with invoicing net of surplus allowance. Small surface defects can be found in the allowance. The size of the untrimmed sheet is, approximately, 4 cm more than the trimmed size.

Colour formulation

Our laboratories are available to develop new colours or personalised duplicating with a minimum quantity as indicated in the specific technical sheet (“Minimum quantity of productions on request”)

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Physical-chemical properties.

The following table reports the characteristic properties of standard **Setasand**® sheets; coloured opaline sheets have different physical-chemical properties (in addition to optic ones, obviously) depending on the type.

	Method	Unit of measure-ment	Values
Physical Properties			
Density	ISO 1183	g/cm3	1.19
Water absorption after 24 h	ISO R 62/DIN53495	%	0.3
Mechanical Properties			
Coefficient of elasticity due to pulling stress 23°C	ISO 527-2/1 B/1	MPa	3300
Ultimate elongation 23°C	ISO 527-2/1 B/5	%	5
Tensile strength 23°C	ISO 527-2/1 B/5	MPa	76
Flexing resistance	ISO 178	MPa	110
Compression resistance	ISO 604	MPa	110
IZOD impact resistance with notch	ISO 180/ 1 A	kJ/m2	1.4
Charpy impact resistance without notch	ISO 179/ 1	kJ/m2	13
Abrasion resistance	ISO 14782	%	0.5 to 1
Maximum allowed tension		MPa	5-7
Minimum cold curvature radius		mm	330 x thickness
Thermal Properties			
Softening time (Vicat)	ISO R 306 Method A 50	°C	>108
Deflection time (HDT)	ISO 75/A	°C	>102
Maximum running time		°C	80
Linear Expansion Coefficient	VDE 0304/1		7
Thermal conductivity	DIN 52612	W/m/°C	0.17
Fire behaviour			
Self-ignition temperature	DIN 51794	°C	430 approx.
Fire Behaviour	NF P 9250		M4
Other properties			
Poission coefficient	ISO 527 -1		0,39
Thermoforming Parameters			
Thermoforming Interval		°C	140-190
Heating furnace temperature		°C	130-180
Maximum heating temperature		°C	200
Shrinkage after heating		%	2.5 max

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