Technical Information

PLEXIGLAS® Mineral

PLEXIGLAS® Mineral BV

Product

PLEXIGLAS® Mineral BV is a new generation of mineral materials. The patented product PLEXIGLAS® Mineral BV (a combination of acrylic resin and mineral filler) offers unique thermoforming properties combined with a finished satin or gloss surface, in very large sizes. Like no other material before, PLEXIGLAS® Mineral BV unites the benefits of this class of material with the flexibility of PLEXIGLAS®.

Properties

- 2D thermoforming at very narrow radii
- 3D vacuum thermoforming possible
- Can be seamlessly bonded
- “ready to install” surface
- Large sheet sizes
- Wide selection of thicknesses
- Available in customer colors
- Improved chemical resistance
- Very high resistance to weathering and light
- Water-resistant
- Printable
- Easy-to-clean surface

Application

Owing to these properties, PLEXIGLAS® Mineral BV is suitable for both horizontal and vertical applications in indoor and outdoor areas.

Indoors

- Wall panels/wall protection
- Wet rooms: bathrooms and spas
- Shelves, window sills, furniture
- Sanitaryware such as bathtubs and shower solutions, washstands
- Displays, signs
- Platforms

Outdoors

- Facades/wall paneling
- Window sill and decor profiles
- Objects of all kinds

Processing

PLEXIGLAS® Mineral BV can be machined with all conventional woodworking and plastics processing machines. Carbide or diamond-tipped tools for optimized machining are available on the market.

- PLEXIGLAS® Mineral Guidelines for Workshop Practice

Available formats

PLEXIGLAS® Mineral BV sheet sizes
3,050 x 2,030 mm (all thicknesses)
4,050 x 2,030 mm (12mm, 10mm on request)

Standard thicknesses: 6, 8, 10, 12mm
Special thicknesses: > 15mm on request

Physical properties
Typical values at 23°C and 50% RH

Mechanical	Values	Unit	Test standard
Flexural modulus of elasticity	min. 4700	MPa	ISO 178
Flexural strength	min. 78	MPa	ISO 178
Elongation at break	max. 2,1	%	ISO 527-2/1B/5
Tensile strength	min. 40	MPa	ISO 527-2/1B/5
Impact stress large ball	> 1800	mm	EN 483-2
Density	1,54	g/cm³	ISO1183
Area weight	12,32	kg/m²	at 8mm thickness
Thickness tolerances to ISO 19712	+- 1,0 +- 0,8 +- 1,0 +- 1,2	mm mm mm mm	at 6mm thickness at 8mm thickness at 10mm thickness at 12mm thickness
Charpy notched impact strength	1,1	kJ/m²	ISO 179/1eA
Abrasion, Taber Abraser	145-160	mg	DIN 14688/2006
Barcol hardness	50-70		DIN EN 59
Anti-slip	Class C		DIN 51097
Longitudinal distortion	≤ 1,9	mm/m	Internal
Crosswise distortion	≤ 1,9	mm/m	Internal

Physical properties
Typical values at 23°C and 50% RH

Thermal	Values	Unit	Test standard
Fire behavior	D s2 d0		DIN EN 13501-1
Fire behavior	B2		DIN 4102 Part 1
Coefficient of linear thermal expansion	50 x 10^{-6} 0.5 mm/m/10°K	1/K	DIN 53752-A
Heat deflection temperature HDT	100-108	°C	ISO 75
Vicat softening temperature	>105	°C	ISO 306/B50
Forming temperature (2D)	min. 140	°C	
Forming temperature (3D)	160-210	°C	
Min. bending radius for thermoforming	twice	sheet thick-ness	internal
Resistance to thermal cycling (hot/cold water)	No cracks, no crazing, no detachment		prEN 14688: 2003
Resistance to thermal cycling (hot/cold water)	no cracks, no crazing, no detachment		ISO 19712

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