

PLEXIGLAS® Hi-Gloss C1 & C2

Colored acrylic sheets with a piano lacquer effect

Product

PLEXIGLAS® Hi-Gloss sheets are made of acrylic containing colored or special-effect pigments. The sheets are provided with an additional perfectly smooth, high-gloss layer of clear-transparent PLEXIGLAS® that enhances the colors or special effects and makes them glow even brighter.

All colors in the PLEXIGLAS® sales range (Silver, Interference, Gold, Metallic and Multicolor Pigments) are suitable for high-gloss, eye-catching applications.

Hi-Gloss C1 grades have a colored acrylic layer on one side and a clear-transparent PLEXIGLAS® core.

Hi-Gloss C2 grades have a colored acrylic core and are coated on both sides with a layer of clear-transparent PLEXIGLAS®.

Both grades of acrylic sheet are obtained by a coextrusion process that permanently fuses up to three independent melt streams of high-quality PLEXIGLAS®.

Properties

In addition to the typical properties of PLEXIGLAS® such as:

- excellent light transmission and brilliance
- very high weather resistance
- ease of fabrication
- high surface hardness
- low weight – half the weight of glass
- 100% recyclability

- 11 times the impact strength of glass,

all PLEXIGLAS® Hi-Gloss grades offer the following special characteristics:

- high gloss
- deep-view color effect.

As additional properties, PLEXIGLAS® Hi-Gloss C1 offers:

- resistance to high and low temperatures
- resistance to wet/dry cycling
- resistance to chemicals
- resistance to alternating wet/dry air cycling
- good resistance to stress cracking.

The grades of the PLEXIGLAS® Hi-Gloss C1 series meet the wet/dry cycling test prescribed by European Standard EN 263. The PLEXIGLAS® molding compound or PLEXIGLAS® sheets manufactured from this compound are protected under EP patent application 03740478.7.

Applications

- Kitchens (alcove paneling)
- Baths and spas (shower partitions)
- Living rooms (wall design)
- Interior design (hotels, restaurants, offices...)
- Exhibition booths, furniture, store fixtures
- Façade construction
- Displays
- Lampshades
- Area lighting or luminous displays (only applies to Hi-Gloss C2).

Machining

PLEXIGLAS® Hi-Gloss can be machined just like standard PLEXIGLAS®.

The following Guidelines for Workshop Practice are available for PLEXIGLAS®:

- Machining and Installing PLEXIGLAS® Hi-Gloss (Ref. No. 332-3)
- Machining PLEXIGLAS® (Ref. No. 311-1)
- Forming PLEXIGLAS® (Ref. No. 311-2)
- Joining PLEXIGLAS® (Ref. No. 311-3)
- Surface Treatment of PLEXIGLAS® (Ref. No. 311-4)
- Fabricating Tips for PLEXIGLAS® Solid Sheets (Ref. No. 311-5)

Physical form

The PLEXIGLAS® Hi-Gloss grades are supplied in standard sizes of 3,050 mm x 2,050 mm and in thicknesses of 3 – 10mm. Greater lengths can be provided (up to 12.5 m) with an extrusion width of 2,050 mm.

You can find more information in the PLEXIGLAS® Sales Handbook.

Scratch-resistant coating

This is also possible for Hi-Gloss C1 and C2. Just contact us.

Technical data

Mechanical properties	PLEXIGLAS® Hi-Gloss C1	Unit	Test standard
Density	1.19	g/cm ³	ISO 1183
Charpy impact strength	16	kJ/m ²	ISO 179/1fu
Tensile strength	77	MPa	ISO 527- 2/1B/5
Nominal elongation at break	7.6	%	ISO 527- 2/1B/5
Thermal values			
Vicat softening temperature	109	°C	ISO 306, B50
Permanent service temperature, max.	79	°C	-
Sanitary standard			
Excellent resistance to high and low temperatures in accordance with the standard for sanitary- grade acrylic		≥ 105° C	EN 263
Resistant to chemicals in accordance with the standard for sanitary- grade acrylic		5 test media	EN 263
Resistant to wet/dry cycling in accordance with the standard for sanitary-grade acrylic		20 cycles	EN 263
Behavior to water			
Water absorption (24 h, 23°C) compared with dry state, specimen 50 x 50 x 2 mm	40	mg	ISO 62, Method 1

For further typical values for acrylic, please refer to Technical Information PLEXIGLAS® GS/XT (211-1). The values listed there also apply to Hi-Gloss C2.

® = registered trademark PLEXIGLAS is a registered trademark of Evonik Röhm GmbH, Darmstadt, Germany.

Certified to DIN EN ISO 9001 (Quality) and DIN EN ISO 14001 (Environment)

Evonik is a worldwide manufacturer of PMMA products sold under the PLEXIGLAS® trademark on the European, Asian, African and Australian continents and under the ACRYLITE® trademark in the Americas.

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Evonik Performance Materials GmbH

Acrylic Polymers

Kirschenallee, 64293 Darmstadt, Germany
info@plexiglas.net www.plexiglas.net www.evonik.com

Ref. No. 232-21

July 2015