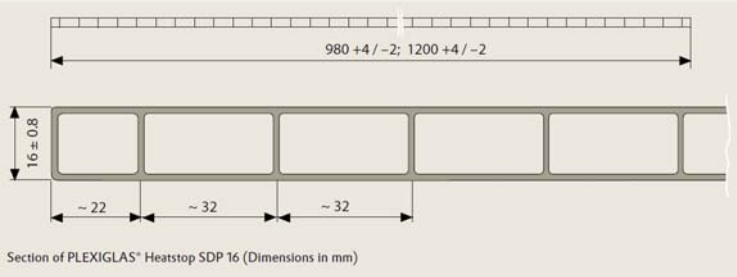
Technical Information

PLEXIGLAS® Heatstop

PLEXIGLAS® Heatstop Opal SDP 16/980 (/1200)-32



Section of PLEXIGLAS® Heatstop SDP 16 (Dimensions in mm)

Product

PLEXIGLAS® Heatstop Opal SDP 16 is an infrared (IR)-reflecting, heat-insulating and extremely weather-resistant double-skin sheet made of impact-modified acrylic (polymethyl methacrylate, PMMA). The Heatstop coating is uniformly and permanently fused with the sheet material and is equally effective on the upper and lower side of the sheet.

Properties

Besides the general properties of PLEXIGLAS® like

- Excellent light transmission and brilliance
- Outstanding weather resistance
- 100% recycling ability
- Easy to fabricate
- High surface hardness

PLEXIGLAS® Heatstop Opal SDP 16 possesses the following properties:

- It reduces heat buildup in rooms due to sunlight by almost 50 %.
- The sheets offer excellent protection against an excess of harmful UV radiation.
- They are impact-resistant during transport, handling and installation.
- They are heat-insulating.
- They help to save energy and minimize CO_2 emissions.
- They are hail-resistant (to hailstones with an impact energy up to 1 joule).
- This comes with a 10-year guarantee.

Applications

Due to these properties PLEXIGLAS® Heatstop Opal SDP 16 is suitable for the following applications:

- Carports
- Conservatories
- Façades
- Greenhouses
- Patio roofs
- Porches
- Skylights
- Verandas

Processing

For PLEXIGLAS® Heatstop Opal SDP 16 the following processing guideline is available:

- Instructions for Installing PLEXIGLAS® Multi-Skin, Corrugated and Solid Sheets (Ref-No. 311-8)

Product range

PLEXIGLAS® Heatstop Opal SDP 16 is available in the following grades and sizes:

- Length: 2000 to 7000 mm
- Width: 980 mm, 1200mm
- Colors: White (reddish-purple)

For details please refer to the PLEXIGLAS® sales handbook.

Heatstop Opal Effect

The PLEXIGLAS® Heatstop Opal multi-skin sheet very effectively reduces solar heat radiation by means of special technology. The Heatstop Opal coating gives the sheets an attractive, reddish-purple surface gloss. Seen from below, the sheets look pleasantly cool, as befits their function. This color has an iridescent effect. The color impression varies depending on the viewing angle and lighting conditions.

NO DROP coating

The water-dispersing NO DROP[1] coating applied to one side of the sheet causes any surface water to flow off as a thin, continuous film. When the sheet is installed with the NO DROP coating on the outside of the roof, it supports natural cleaning by rainwater. Installed on the inside of the roof, the coating helps to prevent dripping from condensation and the damage this may cause. The NO DROP coating is covered with a protective layer applied during the manufacturing process. This protective layer can be washed off with water and a sponge, or by hosing down the sheet. This activates the NO DROP coating.

Load-bearing capacity

Support spacing

Thanks to their high rigidity, these sheets allow large spans, which reduce shadows inside the room and cuts construction costs.
Supported on all four sides, the PLEXIGLAS® Heatstop Opal SDP 16/980 double skin sheet requires no additional cross-members at a load of up to 1,000 N/m². The spacing stated in the table applies to greater loads. The load-bearing capacity is determined in line with ETAG 010 (Guideline for European Technical Approval for Self-supporting, Translucent Roof Kits), assuming a rebate depth of 20 mm for the multi-skin sheets in the glazing system. The support spacing should be reduced correspondingly for smaller rebate depths.

[1] Europ. Patent 149 182

Support spacing [m]

Load [N/m²]	980 mm	1200 [mm]
750	No cross-members	No cross-members
1000	No cross-members	4.0
1250	4.2	3.1
1500	3.4	2.8
1750	3.1	2.6
2000	2.9	2.5
2250	2.7	2.4
2500	2.5	2.2
2750	2.4	2.1
3000	2.3	2.0

Technical data (Typical values)

Available length	2,000 to 7,000 mm
Light transmittance τ_{D65}	
White WR004 NO DROP	approx. 50 %
Total energy transmittance g	
White WR004 NO DROP	approx. 40 %
Heat transfer coefficient k	2.5 W/m2K
Coefficient of linear thermal expansion α	0.09 mm/m °C
Possible expansion due to heat and moisture	approx. 6 mm/m
Max. service temperature without load	70 °C
Weighted sound reduction index (estim.)	24 dB
Minimum permissible cold-curving radius	2.400 mm (150xsheet thickness)
Area weight	approx. 4.3 kg/m²

Fire behavior

- PLEXIGLAS® is rated as European Class E in accordance with DIN EN 13501.
- PLEXIGLAS® burns almost entirely without smoke in accordance with DIN 4102 and is easily extinguished.
- The smoke gases formed by PLEXIGLAS® are neither acutely toxic in accordance with DIN 53436 nor corrosive according to DIN VDE 0482-267.
- Roof surfaces glazed with PLEXIGLAS® open up by melting in the event of fire, allowing smoke and heat to escape.

Guarantee

You can find the guarantee statements on this and other products at www.plexiglas.net

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