

Technical Information

PLEXIGLAS® Textures for Luminaires 0A000 SL

PRODUCT

PLEXIGLAS® Textures are extruded polymethyl methacrylate (PMMA) sheets. PLEXIGLAS® Textures for Luminaires 0A000 SL is suitable for backlit ceiling lights and optimized for edge-lit LED ceiling lights.

For edge-lit LED ceiling lights the material reduces the lamp luminance above the minimum shielding angle in accordance with **European Standard 12464-1** Light and Lighting – Lighting of Workplaces.

PROPERTIES

In addition to the well-known and proven properties of PLEXIGLAS® such as

- outstanding light transmission and brilliance
- very high weathering resistance
- easy processability
- high surface hardness
- low weight, half that of glass
- high impact resistance, 11 times that of glass
- 100% recyclability

PLEXIGLAS® Textures for Luminaires 0A000 SL has the following special features:

- very good glare suppression (see fig. 1 and 2)
- very good thickness tolerances due to the extrusion process.

APPLICATIONS

Due to these properties, PLEXIGLAS® Textures for Luminaires 0A000 SL is especially suitable for

- edge-lit LED ceiling lights, especially in workplace lighting
- other backlit lighting applications (recessed as well as surface-mounted ceiling lights)

PROCESSING

PLEXIGLAS® Textures for Luminaires 0A000 SL can be processed like standard PLEXIGLAS®.

The following processing guidelines are available for PLEXIGLAS®:

- Machining PLEXIGLAS® (no. 311-1)
- Forming PLEXIGLAS® (no. 311-2)
- Joining PLEXIGLAS® (no. 311-3)
- Fabricating tips for PLEXIGLAS® solid sheets (no. 311-5)

PRODUCT RANGE

PLEXIGLAS® Textures for Luminaires 0A000 SL is available ex stock in the following sizes and thicknesses:

Surface	Grade	Thickness	Size
SL	0A000	2.5 mm and 3 mm	2050 mm x 1650 mm

PLEXIGLAS® Textures for Luminaires 0A000 SL can be used in any desired cutting size.

Further details are available in the PLEXIGLAS® Sales Handbook.

GLARE SUPPRESSION AND TECHNICAL DATA

In ceiling lights, light-emission angles greater than or equal to 65° (the minimum shielding angle) lead to a glare effect for the viewer. PLEXIGLAS® Textures for Luminaires 0A000 SL, which is optimized for the area of edge-lit LED ceiling lights, ensures that the light is focused mainly on an exit angle smaller than 65°. This significantly reduces the glare effect of the ceiling lights (see fig. 2).

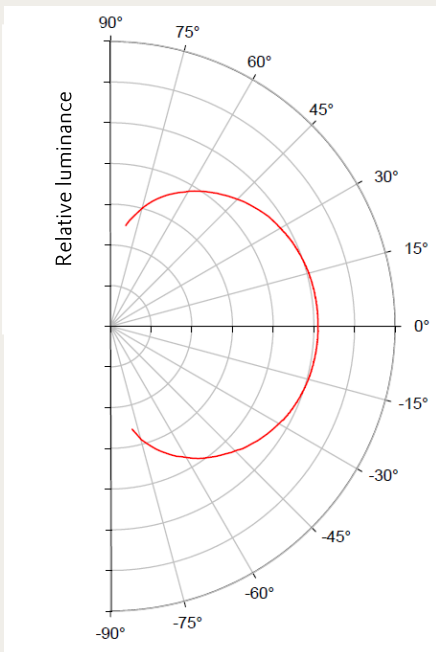


Fig. 1: Performance of a standard light-diffuser panel

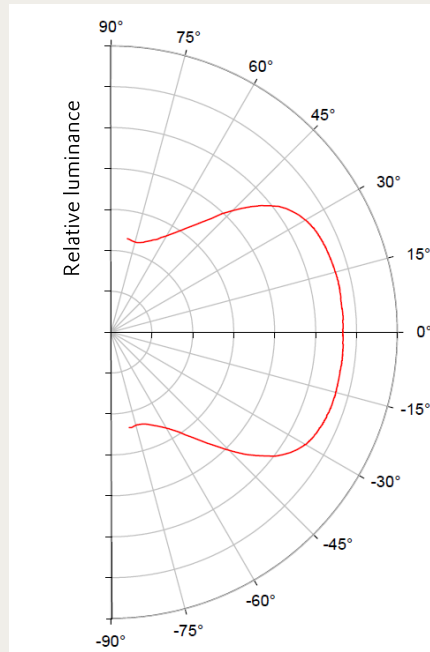


Fig. 2: Glare suppression of PLEXIGLAS® Textures for Luminaires OA000 SL for edge-lit LED ceiling lights

	Unit	Test standard	PLEXIGLAS® XT
Light transmission t_{66s}	%	DIN 5036 Part 3	92
Max. continuous working temperature	°C		70
Coefficient of linear expansion α for 0 ... 50°C	1/K (mm/m °C)	DIN 53752-A	$7 \cdot 10^{-5}$ (0.07)
Building material class		DIN 4102	B2
Fire behavior		BS 476/Part 7+6 BS 2782, Method 508 A DIN EN 13501	Class 3 TP(b) E

Other characteristic values are available in Technical Information PLEXIGLAS® GS/XT (211-1).

* = 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 Products
Riedbahnstr. 70
64331 Weiterstadt
Germany

info@plexiglas.de
www.plexiglas.de
www.evonik.de