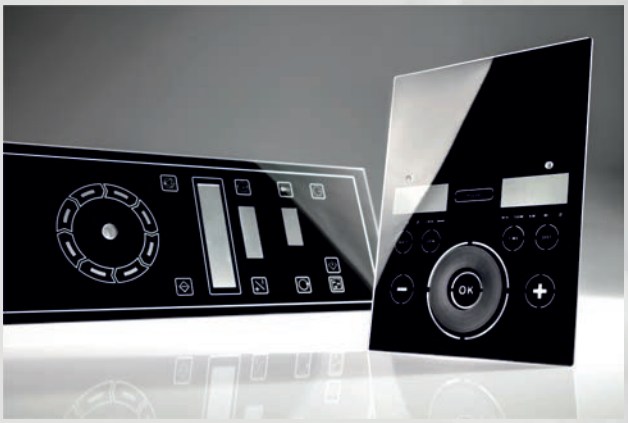
Toughened Safety Glass (ESG) METHERM®

MENNES
SPEZIALGLAS & KUNSTSTOFFTECHNIK

MERAX®
BORAN®
BORIL®
BOSIL®
MEFLOAT®
METHERM®
KeraLasTec®

individual ~ timeless ~ safe

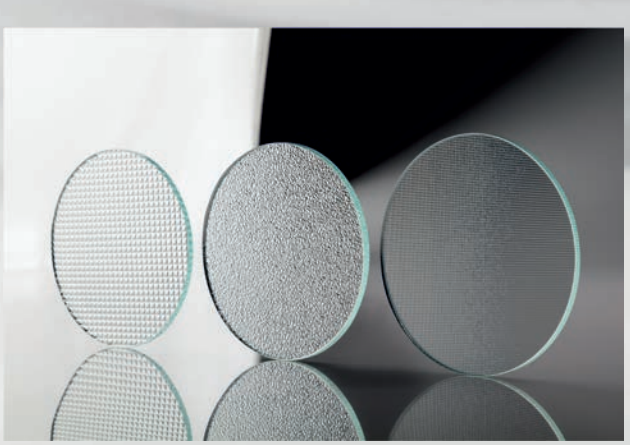


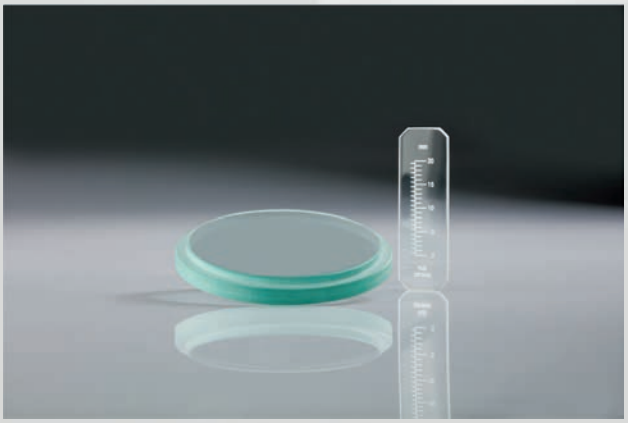
ESG METHERM® made by MENNES GmbH can be found in all industry branches. Our special glass features following advantages:

- more resistance to impact and pressure
- "Crumble effect" in case of destruction, thus no risk of injury
- Thermal fatigue resistance up to 150 K
- Pressure resistance up to 900 N/mm²

Following kinds of glass can be thermally tempered (hardened) by us:

- Float glass
- Cast glass
- Coloured glass
- White flashed opal glass
- Borosilicate glass et. al.





The edge processing for the manufacturing of ESG METHERM® is by default delivered as seamed model. Further processing such as C-cut, polished edge etc. is available on request. Special refinements such as printing, glazing, drillings and cuttings may be realized easily.

We are certified according to DIN EN ISO 9001

Exact dates of the products and technical details you find overleaf.

Technical data and details

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Measurements

Glass thickn.		2,8 - 25 mm
Length	min. 20 mm	max. 4300 mm
Width	min. 20 mm	max. 1200 mm
Ø	min. 20 mm	max. 1200 mm

Drillings

The distance between drill hole edges and glass edges and the distance between the drill hole edges have to be at least two times the glass thickness. In case of more than four drillings, please ask us for the minimum distance.

When a drilling is placed in a corner of a pane and when a distance between drilling edge and glass edge is smaller than 35 mm, the difference of the distances has to be at least 5 mm.

Correspondingly, the chart applies for the limit deviations.

Nominal diameter	Limit deviation
4 to 20	± 1
over 20 to 100	± 2
over 100	on request

Application Conditions

Max. service temperature temporary:	300 °C
Constant load:	200 °C
Resistance against temperature change:	150 K
Heat conductance:	0,8 W (m•K)
Coefficient of linear expansion:	a (20-300°C) = 9•10-6 K-1
Pressure resistance:	700 - 900 N/mm2

Bending Tensile Strength

Glass product	Nominal thickness of glass	Bending strength N/mm2 min.*
Mirror glass	4 bis 15	120
Cast glass, float glass and other glasses	4 bis 15	90
Enameled glass (mirror glass, enamel on the glass surface and in the flexural tension zone)	6 bis 15	75

* Here, bending strength is defined as the minimum bending stress which at a confidence level of 0.95 leads to a probability of fracture of 5%.

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