

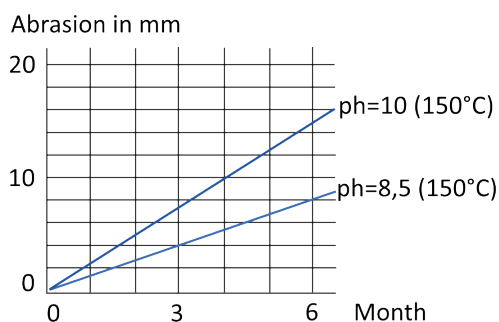


APPLICATION:

Soda lime sight glasses are required wherever visual inspection of processes in vessels or pipelines must be ensured under pressure, at low thermal and chemical loads.

ABRASION RATES:

Abrasion of sight glass plates according to DIN 8902 in aqueous phase to pH-value / abrasion in mm and time in months.



FRACTURE BEHAVIOR:

The adjacent pictures illustrate the fracture behaviour of thermally toughened soda lime glass. It shatters without leaving sharp-edged fragments. The broken glass resembles a safety front window of a car or a safety glass.

Operating conditions:

Temperature:	150 °C
Pressure:	depending on diameter and thickness

Technical Information:

Coefficient of expansion at 20 °C/300 °C	9,5 x 10 ⁻⁶ K ⁻¹
thermal shock resistance	150 °C

Chemical resistance:

Water resistance acc. to DIN ISO 719/720	hydrolysis class 4
Acid resistance acc. to DIN 12116	acid class 1
Alkali resistance acc. to DIN 52332	alkali class 2



PERMISSIBLE MATERIAL DEFECTS:

Round bubbles enclosed in the glass may have a maximum diameter of 2 mm. Oval bubbles must not exceed the value $(\text{length} + \text{width})/2 = 2 \text{ mm}$. Tapered bubbles are not permitted.

Permissible bubble frequency

Bubble diameter d3	bubble frequency
$d3 < 0,3$	3 per cm ² visible area
$0,3 \leq d3 \leq 0,5$	10 per sight glass plate
$0,5 < d3 \leq 1$	4 per sight glass plate
$1 < d3 \leq 2$	2 per sight glass plate

DIMENSIONAL TOLERANCES:

The dimensional tolerances are in accordance with DIN 8902 for sight glass plates made of soda lime glass. The table on the right shows the expected dimensional tolerances.

Dimensional tolerances according to DIN 8902

Diameter	Tolerance
bis 125 mm	± 0,5 mm
125 bis 200 mm	± 0,8 mm
über 200 mm	± 1,0 mm
Thickness	
10 bis 20 mm	± 0,50 mm
über 20 mm	± 0,80 mm

GLASS SIZES ACCORDING TO DIN 8902:

The following table lists soda lime glass plates according to DIN 8902. Special sizes can also be manufactured on request. In this case they are manufactured according to DIN 8902.

Round sight glass plate according to DIN 8902

Product code	Diameter	Thickness	admissible Pressure
12-8902-45-10	45	10	40
12-8902-63-10	63	10	16
12-8902-80-12	80	12	16
12-8902-100-15	100	15	16
12-8902-125-15	125	15	10
12-8902-125-20	125	20	16
12-8902-150-15	150	15	8
12-8902-150-20	150	20	10
12-8902-150-25	150	25	16
12-8902-175-20	175	20	10
12-8902-175-25	175	25	16
12-8902-200-20	200	20	8
12-8902-200-25	200	25	10
12-8902-250-20	250	20	4
12-8902-250-25	250	25	8