



Mirror bonding

Suitable adhesives

Bonding of mirrors on glass surfaces coated as per DIN EN 1306 need adhesive systems that meet the requirements made in the Technische Richtlinie des Glaserhandwerks Nr.11 (Technical regulation of the glazing trade), current edition.

Always the aging-resistant, compatible bonding of the rear side of the mirror is in the focus.

If unsuitable systems are used or the mirror bonding method is bad, this can cause problems like

- **Shining through of the adhesive bead**
- **Tarnishing of the mirror**
- **Peeling off of the coating from the glass**
- **Adhesion loss up to the complete peeling off of the adhesive from the mirror surface**
- **Boundary changing effects**

Observing the generally applicable instructions for use and the use of the products

- **COSMO® HD-100.400 (1-C-MS-Adhesive),**
- **COSMO® HD-100.450 (1-C-MS-Assembly-Adhesive),**
- **COSMO® HD-200.101 (2-C-STP-Adhesive),**
- **COSMO® CL-300.150 (Cleaning agent)**

we could obtain the best results in our tests referring the ageing-resistant bonding of rear sides of mirrors. Also after intensive weathering and ageing tests, no adverse effects could be determined.

Instructions for use

Preparation of the glued surface on the rear side of the mirror:

The lacquer coat on the rear side may not be damaged.

Mechanical influences, e.g. sanding of the lacquer coat, or scratches caused by sharp objects are to be avoided.

Residue, dust and oily pollutions are removed using the cleaning agent COSMO® CL-300.150.

Preparation of glued surface - substrate:

The different substrates must be clean, stable and free from oil, grease and ingredients with strong migration ability, like softeners.

Preparation of materials:

The glued mirrors or the substrate should be climatically adapted to the room climate to avoid tension in the later joint.

Geometry of adhesive joints

In living rooms, or for mirror surfaces whose height is shorter than 1 m:

Generally, a minimum distance between the mirror and the substrate of 5 mm must be kept to provide for sufficient rear ventilation.

In wet rooms, or for mirror surfaces higher than 1 m:

The minimum distance between mirror and substrate is here at least 10 mm.

Furniture production:

Depending on the design, the mirror should have a minimum distance to the furniture surface of at least 0.2 mm.

Length of bonded joints:

The length of the applied beads shall not exceed 200 mm. The distances between the beads of approx. 200 mm are to be kept.

Alignment of bonded joints:

The adhesive beads or the fixation aids are always to be applied VERTICALLY!



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No oversized and/or horizontal beads, no adhesive bead in X-arrangement as well

Per 1 kg of mirror weight, an adhesive surface of 10 cm³ with adhesive applied as a bead is preferred.



Ambient temperature:

Please find the application temperature of the adhesive in the corresponding Technical Data Sheet.

Application temperatures higher than +15 °C are ideal. Too high application temperatures or above +27 °C essentially reduce the pot life of the adhesive and adhesion problems (missing coating effect) can occur.

Fixing time:

The mirror must be fixed tension-free for at least two days. The bonding or strength of the composite must be checked when removing the fixation.

1-K MS adhesives

The curing speed is usually 4 mm/24 hours.

This curing speed may vary depending on the air humidity content, the moisture content of the substrate and the ambient temperature.

Low temperatures and low humidity slow down the curing process, high temperatures and high humidity accelerate the curing process.

2-C-STP adhesive

The time until functional strength is usually 3.5 hours.

This time until functional strength may vary depending on the ambient temperature.

Low temperatures slow down the curing process, high temperatures accelerate the curing process.

Limitations:

Mirrored ceilings, fall protection systems as well as structures that are exposed to continuous and extreme weather conditions, must be fixed mechanically. Here, the fixation with only adhesive is not enough.





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Important instructions

Our user instructions, processing guidelines, product- and performance data, and other technical statements are only general directives; they describe only the condition of our products (values, determination of values on the date of completion) and the performances do not represent a warranty in the sense of § 443 BGB. **Because of the wide variety of applications of the individual product and the relevant special conditions (e. g. processing parameters, material characteristics, etc.), it is up to the user to test it itself;** our free expert advice for application provided in speech, writing, and as test is nonbinding.

Please, consider the relevant Technical Data Sheets of the recommended products mentioned above.

