

MIRROR BONDING ADiNO® PowerNail MS

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.

Focus here always is on the aging resistance and compatibility of the bonding of the mirror rear side. Unsuitable adhesive systems or poor bonding methods 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 general application guidelines and utilizing product ADiNO® PowerNail MS we could obtain the best results in our tests referring to the aging-resistant bonding of rear sides of mirrors. After intensive weathering and aging tests, no adverse effects could be determined

INSTRUCTIONS FOR USE

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

The lacquer coating on the rear side must not be damaged. Mechanical influences, e.g. sanding of the lacquer coat, or scratches caused by sharp objects are to be avoided. Residues, dust and oily pollutions are removed using the cleaning agent ADiNO® CL 60.

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

Generally, a minimum distance must be kept between the bottom edge of the mirror and the horizontal surface below the mirror installation, to provide for sufficient rear ventilation:

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| <i>In living rooms, or for mirror surfaces whose height is shorter than 1 m:</i> | <i>at least 5mm</i> |
| <i>In wet rooms, or for mirror surfaces higher than 1 m:</i> | <i>at least 10 mm</i> |
| <i>In furniture production (for constructional reasons):</i> | <i>at least 0.2 mm</i> |



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!**
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 cm² with adhesive applied as a bead is preferred.



Open time and fixing time:

Open time (assembly time) and fixing time (until functional strength of the bonding for further handling and processing is reached) depend on individual factors like ambient temperature, relative humidity in the ambient air, moisture content in the substrate, width of applied beads, etc. Low temperatures and low humidity decelerate the process; high temperatures and high air humidity accelerate the process.

It is therefore necessary to determine the correct fixing time in self-tests.

For fast, efficient and even glue application from cartridge, tubular alu-PE bag or from drum, the Adino team can assist with the suitable and recommended equipment.

In horizontal wall installations or if the bonded mirror needs to be handled before functional strength of the adhesive is reached, ADiNO® PowerNail MS can be used in combination with fixation aids like double-sided adhesive tape, to generate an immediate fixation. (The adhesive tape must also be compatible for use on mirror rear sides.)

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.