

645 Flächen Kleber

Hybrid adhesive



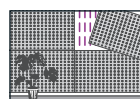
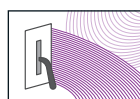
Technical data sheet

Version: 07-2025



Tests:

- EMI CODE EC1^{PLUS} "very low emissions"
- Suitable for use in the foodstuffs industry acc. to ISEGA certificate 62598 U24
- Fulfills the French VOC requirement Class A+
- DIN EN ISO 846, Method A
- Suitable for bonding CALOSTAT[®] insulation panels, Evonik Industries
- Listed on baubook



Suitable for processing with smoothing tools



Elastic and stress compensating



Good adhesion on moist substrates



Approved for foodstuffs

1. Technical data

Basis	Hybrid adhesive - MS polymer
Skin formation time	~ 15 Min. (23°C/50% relative humidity)
Full curing time	~ 2 mm/24 hours (at +23°C/50% relative humidity)
Density	~ 1.51 (EN ISO 1183-1)
Shore A hardness	~ 49 (DIN EN ISO 868)
Volume shrinkage	~ 3.1% (EN ISO 10563)
Non-sag property	< 3 mm
Tear propagation resistance	~ 11.3 N/mm (ISO 34-1)
Tensile stress at break	~ 1.5 N/mm ² (DIN 53504-S2)
Module	~ 1.2 N/mm ² (DIN 53504-S2)
Theoretical consumption, notched smoothing tool	A3: ~570 g (380 ml)/m ² ; B2: ~780 g (520 ml)/m ² ; B12: ~870 g (580 ml)/m ²
Elongation at break	~ 250% (DIN 53504-S2)
Resistance to high and low temperatures	-40°C to +110°C (long-term exposure)
Application temperature (substrate, environment)	Lower +5°C, upper +35°C
Colours	White
Packaging	600 ml & 1800 ml foil bags; other containers on request
Shelf life of foil bags	12 months in original packaging in cool and dry storage conditions
Shelf life of industrial container	6 months, cool and dry in sealed original container

2. Properties/Applications

645 Flächen Kleber has a high initial tack and can be processed immediately due to its single-component system. Perfect for processing with a notched trowel due to its good ridge retention. The adhesive is free of water and solvents, does not cause the wood to swell or incompatibilities with solvent-sensitive materials. 645 Flächen Kleber is permanently elastic, stress-neutralising, spreadable, weather-resistant, non-corrosive, and free of silicones, solvents and isocyanate. 645 Flächen Kleber is used for full surface bonding of various materials made of wood, concrete, plaster, metal, plastic, PVC, polyester and polystyrene, etc. The adhesive is characterised in particular by its virtually shrinkage-free, fast curing.

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3. Substrate pre-treatment

The substrate must be level, clean, load-bearing, and free from cracks, tension and compression stresses. To ensure optimum curing, vapor diffusion-tight substrates should be moistened before full-surface bonding! The amount of water added should be 5-8 g/m². Pre-cleaning with 828 Grundreiniger is generally recommended on non-absorbent substrates, but compatibility with sensitive surfaces should be checked in advance to avoid surface damage. If required, carefully pretreat the adhesion surfaces using a suitable primer. Sanding with a fine sanding fleece can further improve adhesion on smooth surfaces. Due to the many different coating systems, an adhesion test is recommended before application to painted surfaces.

Substrate*	Pre-treatment
Glass	828 Grundreiniger
Tiles	828 Grundreiniger
Pine wood	Dust free
Wet ground concrete	Dust free
Concrete, formwork smoothness	Dust free
Steel DC 04	828 Grundreiniger
Hot-dip galvanised steel	828 Grundreiniger
Stainless steel	828 Grundreiniger
Zinc	828 Grundreiniger
Aluminium	828 Grundreiniger
Aluminium AlMg1	828 Grundreiniger
Aluminium AlCuMg1	828 Grundreiniger
Aluminium 6016	828 Grundreiniger
Anodised aluminium	828 Grundreiniger
PVC Kömadur ES	828 Grundreiniger
PVC soft	828 Grundreiniger / Primer 100
PC Makrolon Makroform 099	828 Grundreiniger
Polyacrylic PMMA XT 20070 Röhm* ¹	828 Grundreiniger / Primer 40
Polystyrene PS Iroplast	828 Grundreiniger / Primer 100
ABS Metzoplast ABS 7 H	828 Grundreiniger / Primer 100
PET	828 Grundreiniger
PU waste quality	828 Grundreiniger / Primer 100
PMMA Röhm sanitary quality	828 Grundreiniger
GRP	828 Grundreiniger
EPDM Semperit E 9614	828 Grundreiniger

***For substrates which are not listed in this table, the processor must always carry out preliminary tests to check the suitability of the sealant for use. The tests carried out above only refer to the adhesive properties and have no significance in terms of compatibility with the stated substrates.**

This table is based on adhesion tests with Rocholl test specimens under laboratory conditions. In practice, the adhesive properties depend on a large number of external influences (weathering, contamination, etc.). Therefore, this table is for guidance only and does not constitute a binding statement.

***1:** Different PLEXIGLAS® types exhibit certain differences in their chemical resistance. Stresses must be expected in some applications. The resulting stresses, in combination with certain agents, can lead to "stress cracking". The duration, temperature and concentration of the acting substance have a fundamental influence on any "stress cracks". When using our products in combination with PLEXIGLAS®, the suitability must therefore be checked in advance.

***2:** The compatibility with various mirror coatings by different manufacturers is regularly tested in our laboratory. Advance testing is recommended due to production processes of the various manufacturers, into which we have no insights, and as a function of the existing substrate and bonding variants.

4. Application notes/restrictions

- Not approved for bonding natural stone
- Not suitable for bonding mirrors.
- Substrates containing tar and bitumen are unsuitable as adhesion substrates.
- Always carry out your own tests before applying to coated substrates.
- Without pre-treatment, no adhesion is possible on plastics with a low-energy surface, such as PE, PP or PTFE.
- Hybrid sealants and adhesives are not suitable for permanent joints or adhesion bonding of copper and brass.
- Not suitable for processing in permanently wet or underwater areas.

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5. Processing

General instructions: The expiry date of the material must be observed, otherwise the properties of the product can no longer be guaranteed. If the products are stored and/or transported over a longer period of time at higher temperatures/humidity, the shelf life may be reduced or the material properties may change. Strong environmental influences (e.g. high temperature, UV exposure, chemical influences such as vapours) can affect the properties of the material to varying degrees. Before applying, the processor must ascertain that the building materials (solid, liquid or in gaseous form) are compatible with the adhesive in the contact area. Pay attention to the ambient and substrate temperature during application because as excessively high or low temperatures can lead to changes in properties. Due to the large number of possible influences during processing, it is always advisable for the processor to carry out a test processing before use. Good ventilation must be ensured during processing and curing.

Pre-treatment of the adhesion surfaces: The substrate must be pretreated in accordance with the instructions in section 3 of this technical data sheet.

Additional application notes: The adhesive is designed for an optimum material temperature of +20 °C. The viscosity of the uncured adhesive depends on the temperature. The viscosity increases at low temperatures and decreases at low temperatures. If necessary, the temperature of the adhesive must be adjusted before use. Never apply more adhesive than can be covered in approx. 15 minutes. Apply over the entire surface using a notched smoothing tool. The adhesive must be applied such that the substrates to be bonded are fully wetted. Note that bonding large areas delays the formation of the vulcanisate and therefore the build-up of adhesive strength.

Consumption: Consumption is highly dependent on the substrate and application thickness. You can generally assume approx. 800 to 900 g/m². Uneven substrates increase the consumption. Fine notching is recommended for small-format elements and/or even substrates, coarse notching for large-format and/or uneven and rough substrates.

Application recommendations:

Stable substrate, unevenness up to ~ 3 mm (concrete, screed...) Stable, even covering (parquet, laminate...): **Notched smoothing tool B12**
 Stable, even substrate, stable, even covering: **Notched smoothing tool B2**
 Stable, even substrate, stable, flexible covering (PVC flooring, linoleum): **Notched smoothing tool A1-A2**

These recommendations are guide values only. Carry out prior tests to determine the notch size suitable for the construction project at hand.

6. Meets the requirements of IVD instruction sheet

No. 30	Assembly adhesive for bonding and sealing
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7. Safety instructions

Please refer to the current EC safety data sheets. Data sheets are available at any time from our website at www.ramsauer.eu.

8. Liability for defects

The information, in particular the suggestions for the processing and use of our products, is based on our knowledge and experience in normal use cases at the time of printing. Depending on the specific circumstances, in particular with regard to substrates, processing and environmental conditions, the results may differ from this information. Therefore, no guarantee can be provided for the quality of the results achieved, which are influenced by the aforementioned circumstances. No legal claim, in whatever form, can be asserted against Ramsauer GmbH & Co KG based on these reference or from a verbal consultation, unless we are guilty of intent or gross negligence in this respect. Ramsauer GmbH & Co KG guarantees that its products comply with the technical properties specified in the technical data sheets until the expiry date. Product users must consult the latest technical data sheet, which can be requested from us. Our current General Terms and Conditions apply, which you can download at any time from our homepage at www.ramsauer.eu. On publication of a new version/revision of the technical data sheet, all previous versions of the respective product lose their validity.

