



# 690

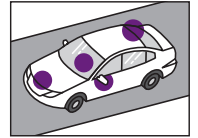


**RAMSAUER®**

**LASTING BONDS.**

## 2K MS Kleber

**2-component hybrid industrial adhesive**



### Technical data sheet

Version: 04-2024

#### Tests:

- Tested for break-in-resistant RC2/RC3 bonding



### 1. Mechanical Properties

Basis	2-component hybrid sealant
Shore hardness after 4 hrs. / 24 hrs. / 7 days	~ 25 / ~ 45 / ~ 48 (DIN 53505)
Modulus of elasticity 100 %	0.5 N/mm <sup>2</sup> (DIN 53504 S2)
Elongation at break	~ 400 % (DIN 53504 S2)
Tensile strength at +23 °C	~ 1.7 N/mm <sup>2</sup> (DIN 53504 S2)
Density comp. A	~ 1.37 g/cm <sup>3</sup>
Density comp. B	~ 1.36 g/cm <sup>3</sup>
Resistance to high and low temperatures	-40 °C to +90 °C
Application temperature (substrate, environment)	Lower +5°C, upper +35°C
Pot life at +23 °C/50 % RH	Max. 40 minutes
Volume change	~ 10 % (DIN 52451)
Consistency	Stable up to 40 mm joint width
Curing	Elastic and tack-free within 4 hours
Permissible joint movement	25%
Application temperature	+5 °C to +35 °C
Substrate temperature	+5 °C to +30 °C
Shelf life	15 months - cartridges in original packaging in cool and dry storage conditions
Colours	Antique white, black
Packaging	2 x cartridges of 310ml incl. connection piece

### 2. Properties

690 2-K-MS Kleber is a new, innovative adhesive and sealant with a special rapid curing formula for controlled polymer curing even if the gaps to be bonded or sealant joints are large. 690 2-K-MS Kleber cures within 4 hours for sufficient load even on materials impermeable to air moisture, such as metals, plastics, glass and painted surfaces. Fast curing, and the very good tensile strength and elongation at break values, open up a wide range of applications for 690 2-K-MS Kleber, supporting use wherever 1-component adhesives and sealants such as MS, PU, silicone (moisture-curing) cause problems due to their slower curing. For professional processing of the 620 ml duo-cartridge, please use our processing equipment such as the RH620-2K manual gun or the 2K-620 pneumatic sealant gun. 690 2-K-MS Kleber is free from solvents, isocyanate and silicone. The adhesive is virtually odourless when cured and can be sanded and painted after complete curing.



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### 3. Priming table

Key

+	Good adhesion without priming
-	No adhesion
Primer	Recommended primer

Glass	+
Tiles	+
Pine wood	+
Wet ground concrete	+
Concrete, formwork smoothness	+
Steel DC 04	+
Hot-dip galvanised steel	+
Stainless steel	+
Zinc	+
Aluminium	+
Aluminium AlMg1	+
Aluminium AlCuMg1	+
Aluminium 6016	+
Anodised aluminium	+
Brass MS 63 Hardness F 37	+
PVC Kömadur ES	Primer 100
PVC soft	Primer 100
PC Makrolon Makroform 099	Primer 100
Polyacrylic PMMA XT 20070 Röhm*1	Primer 40
Polystyrene PS Iroplast	Primer 100
ABS Metzoplast ABS 7 H	Primer 100
PET	Primer 100
PU waste quality	-
Copper	+
GFK	+
PMMA Röhm sanitary quality	Primer 100
Mirrors*2	+
Natural stone	-
EPDM Semperit E9614	-

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, loads, etc.). Therefore, this table is for guidance only and does not constitute a binding statement. For further information please contact our application engineering department. The tests carried out above only refer to the adhesive properties and have no significance in terms of compatibility with the stated substrates.

\*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.



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### 4. Application

690 2-K-MS Kleber is suitable for flexible bonding of profiles, brackets, fittings, plates, sheets, claddings, sandwich components, containers, superstructures, frames, panels and covers, etc., and for other applications. Due to the wide range of applications in metalwork, equipment manufacturing and mechanical engineering, vehicle and body construction, and ventilation and air conditioning technology, our 690 2-K-MS Kleber covers a very broad field of application. The adhesive is a great choice for use on steel, stainless steel, aluminium, anodised aluminium, brass, copper, glass, ceramics, stone, wood, concrete, powder-coated, painted, galvanised, chromated and hot-dip galvanised surfaces. After curing, 690 2-K-MS Kleber can be exposed to elevated temperatures up to +180 °C for a short time (up to 20 minutes) in the scope of powder coating. Suitable for mirror bonding. Suitable for break-in-resistant RC2/RC3 bonding. Compatibility with the edge sealant system in use must be clarified in advance.

### 5. Meets the requirements of IVD instruction sheet

No. 30	Assembly adhesive for bonding and sealing
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### 6. Processing

**General instructions:** The expiry date of the material must be observed, otherwise the stated mechanical properties of the product can no longer be guaranteed. Observe the ambient temperature and substrate temperature. **Pretreatment of the adhesion surfaces:** The substrate must be dry, load-bearing, clean, free of dust, grease, and oil. Even without a primer, good adhesion is achieved on many clean surfaces. In combination with some surfaces a primer-pretreatment is recommended (see priming table above). **Processing:** After the surface-pre-treatment is done, open 1 cartridge each of component A and component B and connect them by using the provided coupling piece. Then press until the two components escape uniformly. Wipe off any excess. Assemble the static mixer and place the complete unit into the sealant gun. Make sure that the mixture is nicely and evenly mixed (discard the first 5cm).

### 7. Application restrictions

**Caution:** 690 2-K-MS Kleber is not suitable for underwater joints in swimming baths and sanitary installations and for aquarium construction work. Not suitable for sealing and bonding natural stone (edge zone contamination). Not suitable for sealing glass rebates. Avoid contact with materials containing bitumen and plasticisers, e.g. butyl, EPDM, neoprene, insulating paints or bituminous coating, etc. Before applying, the user must ascertain that the building materials (solid, liquid or in gaseous form) are compatible with the sealant in the contact area. Please contact our application engineering department for applications with laminated glass units and/or insulating glazing. For break-in-resistant bonding, the compatibility with the edge sealant system in use must be clarified or tested in advance.

### 8. 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](http://www.ramsauer.eu). **Occupational health and safety:** Avoid swallowing, prolonged or repeated contact with the skin. Keep out of the reach of children. Request a safety data sheet!



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### **9. Application notes**

Good ventilation must be ensured during processing and curing. Due to the large number of possible influences during processing and application, the processor must always carry out a test processing before use. Note the expiry date of the material. Component A does not react with humidity in the atmosphere and is stable under normal conditions (23 °C/50 % RH). Component B is sensitive to humidity in the atmosphere and must be protected against moisture. Ensure constant, correct mixing. To this end, the recommendation is to create a specimen before processing and compare this with a reference sample. The products must be stored in the original containers. If the products are stored and/or transported at elevated temperatures/humidity, a reduction of the shelf life or impairment of the material properties cannot be ruled out.

### **10. 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, with regard to the substrate, processing and environmental conditions, the results may differ from our information. No warranty or liability claim for any reason whatsoever arises from these instructions or from any instructions issued verbally. Ramsauer guarantees that its products comply with the technical properties specified in the technical data sheets until the expiry date.

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