

APPLICATION INSTRUCTIONS

KEMPERTEC MA-SF METAL ADHESIVE



With the right
know-how for a
**perfect adhesion
result**

1. PRE-TREATMENT OF SUBSTRATES

Substrates must be dry, even, intact and free of any substances that may reduce adhesiveness and must be prepared accordingly. First remove loose particles and dust from the respective substrates such as **KEMPEROL** waterproofing, elastomer sheets and insulating materials as well as particle-producing, highly absorbent and open-pored substrates such as perforated bricks (Poroton), old cementitious or natural stone surfaces. Before bonding, metals and metal sheets must be cleaned of oils, greases and adhesion-reducing sub-

stances with **KEMCO MEK cleaning agent** and sanded with a P40 grain sheet to avoid adhesion problems.

NOTE

Larger areas of unevenness (> 3 mm) should be levelled before applying the **KEMPERTEC MA-SF metal adhesive**. When bonding wood, make sure that you only use unvarnished, dry wood (residual moisture < 20%). In the case of perforated bricks and similar, a complete bearing surface must be ensured.



2. PRIMING

Substrata e.g. gravelled bituminous sheetings, lime sandstone or concrete do not require upfront priming. **KEMPEROL** waterproofing and non-gravelled elastomer sheets must be primed after cleaning with a solvent-

free, two-component primer, e.g. **KEMPERTEC EP-5 Primer**, and then scattered with **KEMCO NQ0712**. Particle-producing, highly absorbent and open-pored substrates must be primed, for example with the **KEMPERTEC TG primer**.*

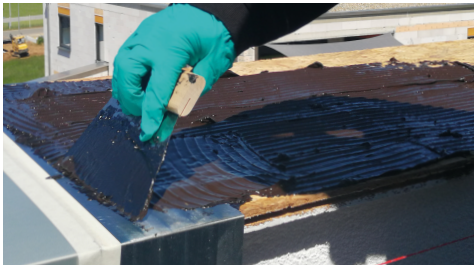


* **KEMPEROL 1K-PUR** and **KEMPEROL 2K-PUR**, **KEMPERTEC EP** or **EP5 Primer** including **KEMCO NQ 0712 Natural Quartz**. **KEMPEROL AC Speed** or **AC Speed+**, **KEMPERTEC AC Primer** including **KEMCO NQ 0712 Natural Quartz**.

3. APPLICATION OF MATERIAL

The **KEMPERTEC MA-SF** metal adhesive is ready to use and is taken directly from the container by means of a trowel. The material is applied with the **KEMPEROL professional notched trowel** evenly, parallel and over the full surface in the longitudinal direction of the metal over the entire surface to be bonded in the required layer thickness. To prevent the material from running down the facade/parapet, the material is left approx.

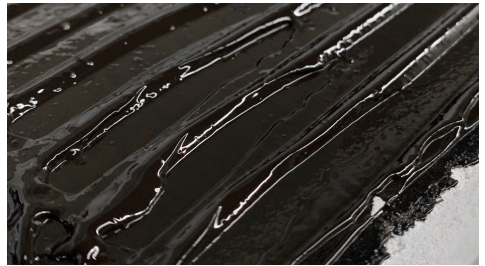
1 cm adhesive-free towards the edge. This allows the air to escape easily when the metals are placed and pressed on, and a full-surface bond without cavities is achieved. In addition,



this creates a sound-absorbing effect in case of precipitation. For bonding areas wider than 30 cm, the metal adhesive must be applied on both sides.

NOTE

Remember to provide additional mechanical fixation when bonding metal to metal. The metal adhesive must be applied over the entire surface and the consumption must not exceed 1.5 kg/m². Metal covers (wall and parapet covers) that are located in areas that receive both sun and shade must also be mechanically fixed on the top side.



4. BONDING THE METAL PARTS

Now bond the metal or sheet metal parts to the substrate by applying the metal parts to the substrate with appropriate pressure. For smaller items, it is sufficient to press down firmly by hand. For larger items, use a board, for example, to distribute the pressure.

NOTE

In the case of wall or parapet covers consisting of several individual parts, a seam bottom plate with at least 10 cm wide and adapted to the metal section must be inserted underneath the joints to compensate for expansion. Depending on the metal material, the bonding of metal to metal should not exceed approx. 4 - 6

cm. In the case of continuous metal profiles of approx. 3m in length, expansion compensation must be provided in the same way for temperature-induced changes in length, to ensure there is no water ingress. The metal spacing for expansion compensation must be chosen depending on the ambient temperature and the expansion coefficient of the metal. This prevents the metals from pushing each other up (Fig. 1 and cross-sections). The adhesive should not go beyond the metal to be bonded to avoid contamination or yellowish discoloration. To prevent the metal/profile from sliding underneath in the joint area, a seam bottom plate (see Fig. 1) should be inserted.

Areas that are not to be bonded should be masked or protected. Excess material, which can occur, for example, when two metal plates and

the splice plate are pushed together, should be removed immediately, unless the metal plates have been masked on the top side.

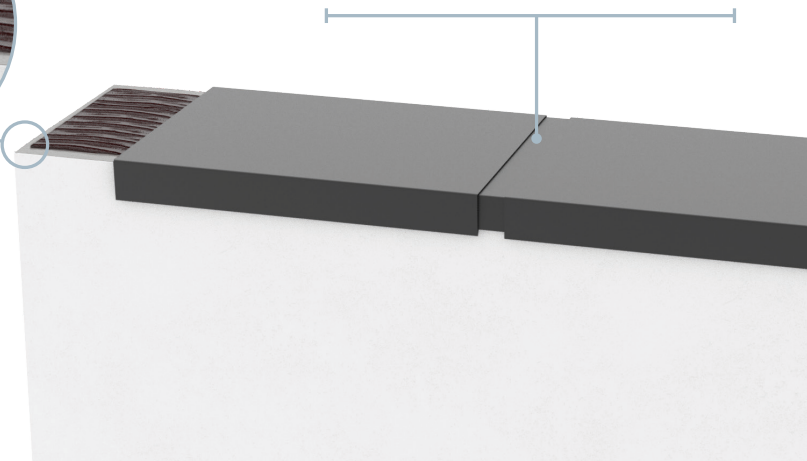
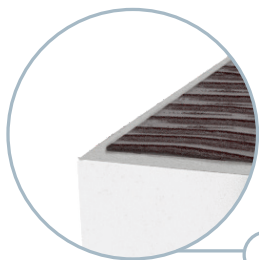
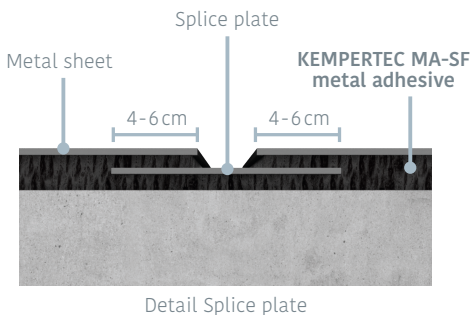
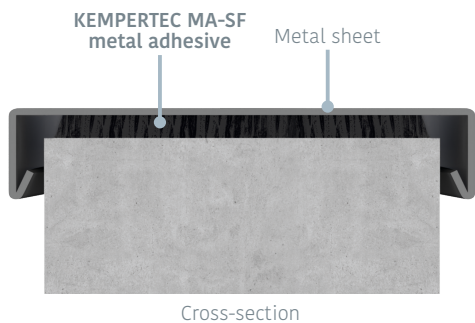
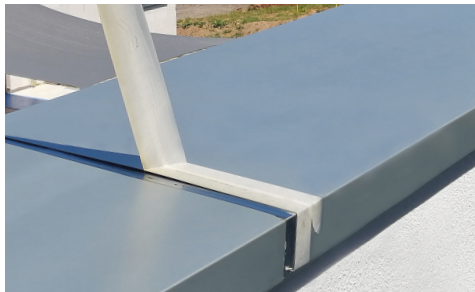


Figure 1: Bonding with splice plate

NOTE: BONDING ON INCLINED AND VERTICAL SURFACES

Components with vertical surfaces or an inclination of more than 3° must be additionally mechanically fixed by suitable fasteners. When applied correctly, the **KEMPERTEC MA-SF metal adhesive** does not run on vertical surfaces even when freshly applied. This means that you only need mechanical fixings to prevent the metal parts from sliding off. When used for vertical areas, apply **KEMPERTEC MA-SF** on both surfaces, i.e.

apply approx. 1.0kg/m² material to each of the sides to be bonded. Apply the intended number of fixing points using suitable items such as fixing strips. After installation, apply pressure to the bonded materials very carefully and evenly. When installing a covering on a sloping wall, ensure the materials can expand sufficiently by overlapping the metal parts (3-5cm)*.

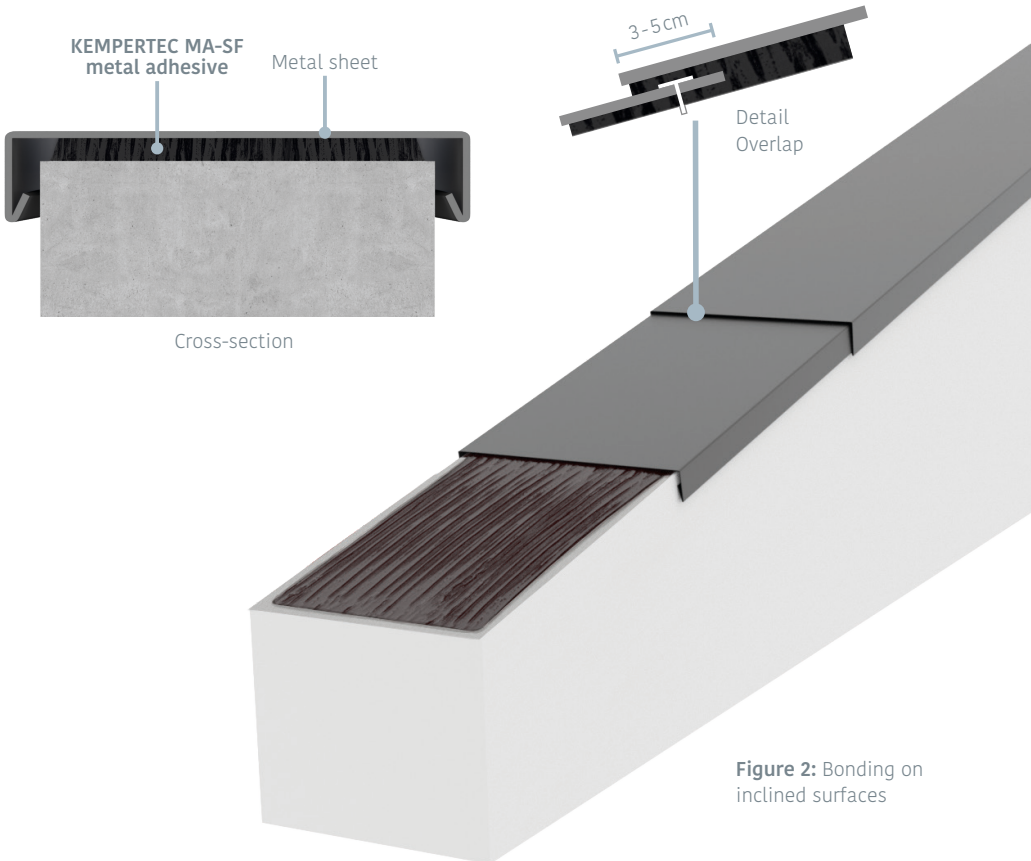


Figure 2: Bonding on inclined surfaces

* The maximum overlap from metal to metal is 5 cm

FIELDS OF APPLICATION

KEMPERTEC MA-SF metal adhesive is a solvent-free, permanently elastic bituminous adhesive that can be used to easily bond window and wall coverings, vergeboards and eaves flashings, parapets, breasts and metal cladding.

MATERIALS

Metal sections and common metals, e.g.:

- Copper
- Aluminium
- Stainless steel
- Galvanised steel

Construction materials:

- Sand-lime brick
- Concrete/aerated concrete
- Clay brick
- Perforated brick
- Wood
- Chipboard and OSB boards
- KEMPEROL waterproofing, polymer bitumen sheeting and insulation materials

NOTE: Please observe the technical data sheet „Bonding for plumbing technology” during processing.

PROCESSING TEMPERATURE

The ambient and substrate temperature during application and curing of **KEMPERTEC MA-SF metal adhesive** must be between +5°C and +50°C. The same applies to the materials to be bonded. Pre-storage of the material in a temperature-controlled area is recommended during low temperatures.

CONSUMPTION

On a level substrate the consumption is 1.5 – 2.0 kg/m²; on an uneven substrate this may increase. However, the consumption must not exceed 3.0 kg/m², as at higher rates there is a risk of uncured material slipping off under its own weight in summer temperatures.

The exact consumption depends on the respective toothing of the spatula:

TOOTHING IN MM	CONSUMPTION KG/M ²	LOADABLE AFTER HRS.
4	1,50	2,0
6	1,75	2,5
8	2,00	3,0

CURING TIME

Joining the metals to be bonded and the substrate can be started immediately or up to 30 minutes after application of the **KEMPERTEC MA-SF metal adhesive**. The material is resilient after 2-3 hours and fully cured after 14 days.