

# 4290

## 2-component SMP



### Technical data sheet

Version: V1 - 10-2025

#### 1. Properties

- SMP | free of silicone, isocyanate and solvents
- 2-component compound
- moisture-independent cross-linking
- UV, ageing and weather resistant
- special formula for longer working time
- temperature resistance at short term exposure up to +180 °C

#### 2. Areas of application

- Ideal for surface bonding where the supply of air humidity is limited.
- For bonding large components that are subject to dynamic loads.
- For applications where rapid strength is required.
- For sealing and bonding different metals, such as aluminium, steel, metal primers, etc., as well as paints and plastics.
- Its very high short-term temperature resistance makes it ideal for applications in the field of powder and thermal coating.

#### 3. Technical data

CTM *	Standard	Feature	Unit	Value
		Base		2-component SMP
		Curing mechanism		2C moisture-independent
		Pot life at +23 °C   50 % RH	mins	~ 20
		Time until tack-free at +23 °C   50% RH	mins	~ 240
	EN ISO 1183-1	Density (mixture)	g/cm <sup>3</sup>	~ 1.36
	DIN EN ISO 868	Shore A hardness		~ 40
	EN ISO 10563	Volume shrinkage	%	~ 10.00
		Initial tack		low
	DIN 53504-S2	Elongation at break	%	~ 400
	DIN 53504-S2	Tensile strength	N/mm <sup>2</sup>	~ 2.60
	DIN 53504-S2	Modulus of elasticity 100 %	N/mm <sup>2</sup>	~ 1.00
	DIN ISO 34-1	Tear resistance	N/mm	~ 15.50
		Temperature resistance (long term exposure)	°C	-40 to +90
		Temperature resistance (short term exposure)	°C	up to +180
		Processing temperature	°C	+5 to +30
f-1-0/g-1-0		Shear stress   51/s	Pa	~ 990
f-1-0/g-1-0		Viscosity   51/s	Pa·s	~ 19
		Extrusion rate 310 ml side-by-side-cartridge	g/min	component A: ~ 370 component B: ~ 710
		Electrical conductivity (volume resistance)	Ω·cm	> 1 x 10 <sup>10</sup>
		Thermal conductivity	W/(m·K)	~ 0.30
		Colours	Black	
		Packaging	Barrel, hobcock, 2 x 310 ml side-by-side-cartridge	
		Shelf life	Barrel/hobcock: 6 months Cartridge: 15 months (when stored in a cool and dry place in the original container)	

\* Corporate Test Method | CTM copies available on request

4. Substrate preparation

The adhesive surfaces must be dry, stable and free of dust, oil and grease. On non-absorbent substrates, pre-cleaning with 828 Basic Cleaner is recommended. For sensitive surfaces, compatibility should be checked in advance to avoid surface damage. If necessary, carefully pre-treat the adhesive surfaces with a suitable primer. Sanding with fine abrasive fleece can further improve adhesion on smooth surfaces. Due to the many different coating systems, an adhesion test is recommended before application on painted surfaces.

Substrate*	Pre-treatment
ABS Metzoplast ABS 7 H	828 Basic Cleaner   Primer 100
Aluminium	828 Basic Cleaner
Aluminium 6016	828 Basic Cleaner
Aluminium AlCuMg1	828 Basic Cleaner
Aluminium AlMg1	828 Basic Cleaner
Anodised aluminium	828 Basic Cleaner
Concrete formwork smooth	free of dust
Concrete wet, polished	free of dust
GFK	828 Basic Cleaner
Glass	828 Basic Cleaner
Mirror coating*2	828 Basic Cleaner
PC Makrolon Makroform 099	828 Basic Cleaner   Primer 100
PET	828 Basic Cleaner   Primer 100
PMMA Röhm sanitary grade	828 Basic Cleaner   Primer 100
Polyacrylic PMMA XT 20070 Röhm*1	828 Basic Cleaner   Primer 40
Polystyrene PS Iroplast	828 Basic Cleaner   Primer 100
PVC Kömadur ES	828 Basic Cleaner   Primer 100
PVC soft	828 Basic Cleaner   Primer 100
Steel DC04	828 Basic Cleaner
Steel hot-dip galvanised	828 Basic Cleaner
Stainless steel	828 Basic Cleaner
Tile	828 Basic Cleaner
Zinc	828 Basic Cleaner

\* On substrates not listed in this table, the processor must always carry out preliminary tests to check the suitability of the product. This table is based on adhesion tests carried out on test specimens from Rocholl under laboratory conditions. In practice, adhesive properties depend on a variety of external influences (weather, contamination, etc.). Therefore, this table is for guidance only and does not constitute a binding statement. The tests carried out above refer only to adhesive properties and are not indicative of compatibility with the substrates mentioned.

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

\*2: Compatibility with a wide variety of mirror coatings from different manufacturers is regularly tested in our laboratory. Due to the manufacturing processes of different manufacturers, which are not known to us in detail, and depending on the existing substrate and bonding variants, preliminary tests are recommended.

5. Processing

**General information:** 4290 can be processed at substrate and ambient temperatures between +5 °C and +35 °C. The ideal processing temperature is about +20 °C. The viscosity of the uncured material is temperature-dependent, meaning that viscosity increases at low temperatures and decreases at high temperatures. In addition, a variety of external influences, such as humidity, UV exposure, chemical influences, high temperatures, etc., must be taken into account. These and other factors can have a significant effect on the material properties of the product and its shelf life. The expiry date stated on the product must be strictly adhered to, as the product properties can no longer be guaranteed if this date is exceeded. Good ventilation must be ensured during processing and curing.

**Processing:** Before application, the processor must ensure that all materials that come into contact with the product do not cause any incompatibilities. After pre-treating the substrate, taking into account the flash-off time when using a primer, open one cartridge of component A and one cartridge of component B and screw on the supplied Y-piece on both cartridges. Insert this unit, with the cartridges now connected, into the press. We recommend our RH620 2-component hand press or our RM620 2-component pneumatic press as application tool. Carry out the first squeezing process until both components are visibly emerging from the cartridges. Only then should the supplied static mixer be screwed onto the Y-piece. Discard the first approx. 5 cm of the now mixed strand, as the two components may not yet be 100 % evenly mixed. During further processing, ensure that the mixture remains consistent and correct. For machine processing, component B must be stirred in advance. When mixing using a 2-component dosing and mixing system, the dosing ratio is 1:1. Component A does not react with air humidity and is stable under normal conditions (+23 °C | 50% RH). Component B, on the other hand, is sensitive to air humidity and must therefore be protected from moisture. 4290 must be applied evenly and without bubbles. It is essential to ensure perfect contact with the adhesive surfaces or edges.

**Removal:** Uncured 4290 can be removed with 502 Surface Cleaner or 504 Universal Cleaning Wipes, while cured material can only be removed mechanically. If it comes into contact with the skin, it must be cleaned immediately.

## **6. Application restrictions**

- Not suitable for underwater or natural stone applications.
- Avoid contact with bitumen-containing and plasticiser-releasing materials, such as butyl, EPDM, neoprene, etc.
- Do not use for structural bonding of structural glazing elements.
- Without pre-treatment, no adhesion to plastics with low-energy surfaces, such as PE, PP or PTFE.
- Not suitable for permanent sealing and bonding of copper and brass.

## **7. Safety notices**

All safety notices and instructions are listed in the current safety data sheet available on [www.ramsauer.eu](http://www.ramsauer.eu).

## **8. Liability for defects**

All information, in particular suggestions for the processing and use of our products, is based on our knowledge and previous experience. Depending on the specific circumstances, in particular with regard to the substrate, processing and environmental conditions, the results may differ from our specifications. Therefore, no guarantee can be given for the quality of the results achieved, which are influenced by the aforementioned circumstances. No legal claims of any kind can be asserted against Ramsauer GmbH & Co KG on the basis of this information or verbal advice, provided that we are not guilty of intent or gross negligence. Ramsauer GmbH & Co KG guarantees that its products will retain their technical properties as specified in the technical data sheets until their expiry date. Product users must observe the latest technical data sheet, which can be downloaded from our website at [www.ramsauer.eu](http://www.ramsauer.eu). Our current General Terms and Conditions apply. These are also available on our website. With the publication of a new version or revision of a technical data sheet, all previous versions of the respective product lose their validity.