

# COSMO PU-200.280

\*\*\* COSMOFEN DUO

## 2-C-PUR Reaction adhesive

### Examples for Application

- Aluminium window and door manufacturing for bonding of corner connectors.
- Structural, force-locking bonding of the most varying material combinations, e.g. in the field of vehicle body manufacture.
- For bonding of Alu, HPL, GRK and other materials.
- Joint restoration of gypsum fibre boards.

### Special Properties

- Tough-hard adhesive joint
- Solvent-free
- Thixotropic, does not drop off
- Good weather-proofness
- Can be over-coated with many paint systems
- Can subsequently be powder-coated (30 min/+230 °C)
- If wood is glued, it achieves the durability class D4 as per DIN EN 204.
- Features easy handling of tandem cartridge with static mixer

### Certificates / Test reports

#### ift Rosenheim

Examination of tensile strength of bonded frame corners of aluminium composite sections at different temperatures after diverse storage conditions.

Test report No.: 50954109/1 of 25.06.2001

French VOC-Emission class A+

### Technical Data

<b>Basis:</b>	2-Component-PUR-reaction adhesive
<b>Colour</b>	
Hard-dry	Beige
Comp. A – COSMO PU-201.280	Beige-white
Comp. B – COSMO PU-205.280	Beige
<b>Density</b>	
as per EN 542 at +20 °C	approx. 1.52 g/cm <sup>3</sup>
<b>Shore hardness</b>	
as per DIN 53505	approx. 85 Shore D



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### Viscosity

at +20 °C

Mixture – COSMO PU-200.280	Low-viscous-pasty
Comp. A – COSMO PU-201.280	Low-viscous-pasty
Comp. B – COSMO PU-205.280	Low-viscous-pasty

### Mixing ratio

Parts by volume A : B = 1.0 : 1.0

### Pot life

of a 100 g batch at +20 °C approx. 60 min

### Processing time

of tandem cartridge with static mixer at +20 °C approx. 30 min

The processing times become shorter at +30 °C to approximately half of the time, at +10 °C, they become longer to approx. double of the time.

### Functional strength

e.g. bonding of corner angles at +20 °C approx. 6 h

### Curing time

at +20 °C, 50 % r. H. to ~75 % approx. 24 h

until it reaches the final strength approx. 7 d

### Minimum processing temperature

from +7 °C

### Tensile shear strength

as per DIN EN 1465, Alu/Alu, 0.2 mm joint

at +20 °C 18.0 N/mm<sup>2</sup>  
at +80 °C 9.0 N/mm<sup>2</sup>

### Applied quantity:

average approx. 20 g per corner angle

## Instructions for use

The surfaces of the workpieces to be bonded must be dry, and free from dust and grease.

Depending on the material surface, check if the bonding result can be improved by grinding or applying of primer.

Polyolefins (among others PE, PP) cannot be bonded without preparation, e.g. plasma- or corona treatment. If PS-hard surfaces are bonded, generally we recommend using a primer.

Reactivity and dosing behaviour are considerably influenced by the material temperature; under warm conditions, masses become faster and can be dosed significantly faster. At low temperatures <+7 °C, **homogeneously** heat the cartridges up to **max. +35 °C**.

The static mixing tube is screwed onto the open cartridge and the cartridge is inserted in the dosing gun.



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Avoid overloading of the tandem cartridge due to too high forces >3.6 kN. If the air pressure guns type SP-750.110 or SP-750.120 and a connected pressure of 6.8 bar are used, max. 2.2 kN can be reached, i.e. safety is ensured.

Depending on the type or brand of the air pressure gun, and when applying higher operating pressure, the cartridges can be damaged or become leaky due to the different forces caused by the pneumatic cylinders of the guns at usual application temperatures. For this reason, possibly the correct mixing ratios of the adhesive systems cannot be obtained; for instance Sulzer TS493X (Krøger), Schüco 296 704 allow max. 7.0 bar (max. 3.6 kN).

The first ~20g of the mixed adhesive (approx. walnut size) are not used for bonding for safety reasons (cartridge filling method)!

Within the processing time, apply the mixed adhesive directly from the static mixer into the section or onto the surface to be bonded and fit the parts together.

After they have been fit together, the parts must be fixed and pressed until functional strength has been reached.

Remove oozing adhesive when it is fresh.

In case of short interruptions of work, within the processing time, if dosed once more, new, fresh adhesive is filled in the static mixer. In this way, one static mixer can be used for a whole work day.

After work stoppages, make sure to change the static mixer within the specified time.

After the end of work, the used static mixer remains on the cartridge unit; if work starts again, the static mixer is to be replaced. If necessary, remove hardened adhesive from the cartridge nozzle. Now the safety shot, ~20g of adhesive, is required, before bonding can be continued!

Bonding of aluminium, copper, brass: only on chemically pretreated or varnished surfaces; these materials cannot be durably bonded to be age-resistant without appropriate pre-treatment of the surfaces to be glued.

Due to the difficult definition of aluminium surfaces and qualities, we generally recommend gathering sufficient information from the supplier to prepare the planned bonding process optimally; sufficient qualification tests are required.

If stainless steel is manufactured or processed, auxiliary aids, e.g. wax, oil, etc, are often used, that usually cannot be removed by simple wiping away; it turned out that after the cleaning with solvent-based cleaning agents a clearly better bonding result will be achieved after grinding, or better sand blasting, of the surface and following cleaning with solvent.

Galvanized sheet metals must generally be protected from humidity that is permanently acting on it "formation of white rust". In this case, it must be excluded that occurring humidity can get onto the bonding surface.

If permanent humidity impact is expected, the bonded joints/bonded surfaces must additionally be sealed/protected using a "suitable sealant".

Powder coatings with shares of PTFE cannot be bonded reliably without pre-treatment (e. g. plasma procedure).

Bonding of materials with different longitudinal extension must be assessed regarding their long-term behaviour, especially when they are exposed to fluctuating temperature ranges.

If solid wood is bonded, the adhesive should preferably be applied on the two surfaces to be bonded. The press pressure shall be >1 N/mm<sup>2</sup>.

If solid wood is bonded for outdoor application, perform appropriate tests to achieve optimum bonding depending on wood type, weathering intensity, surface protection and dimensions of adhesive joints.

The cured mass changes its colour due to UV radiation but not its strength in the cured bonded joint.

The adhesive can be coloured by adding of paste paints COSMO SP-620, usually up to 1%, however not more than 3%.

Paste paints COSMO SP-620 are added directly after dosing of the two components from the tandem cartridge, then they are mixed to be homogeneous with the adhesive.



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Pot-life, processing time, as well as the necessary pressing time or fixing time, can only be determined accurately by self-tests because they are strongly influenced by material characteristics, temperature, mixed quantity, applied quantity, and other criterions.. For processing, appropriate safety allowances shall be planned in addition to the specified guiding values.

### Important instructions

Only instructed personnel in specialist firms are allowed to use the product!

Our user instructions, processing guidelines, product- and performance data, and other technical statements are only general directives; they describe only the condition of our products (values, determination of values on the date of completion) and the performances do not represent a warranty in the sense of § 443 BGB. **Because of the wide variety of applications of the individual product and the relevant special conditions (e. g. processing parameters, material characteristics, etc.), it is up to the user to test it itself;** our free expert advice for application provided in speech, writing, and as test is nonbinding.

*Please, also consider the Safety Data Sheet!*

### Cleaning

Remove the fresh, not cured adhesive from the surfaces and the tools using COSMO CL-300.150.

Cured adhesive can only be removed mechanically.

### Storage

Store in the hermetically closed original packages, dry at temperatures of +15 °C to +25 °C, no direct sun radiation.

Storage life in unopened original packagings 12 Months.

### Packaging

2 x 190 ml tandem PP-cartridge, net weight: 550 g

2 x 310 ml tandem PP-cartridge, net weight: 900 g

### Accessories

COSMO SP-800.221 - Static mixer

COSMO SP-800.230 - Static mixer

COSMO SP-750.111 - Air pressure gun

COSMO SP-760.141 - Manual pressure gun

COSMO SP-750.121 - Air pressure gun

COSMO SP-760.151 - Manual pressure gun



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