



# COSMO® PU-200.180

\*\*\* COSMOPUR 890/805

## 2-C-PUR Reaction adhesive

### Examples for Application

- Manufacture of sandwich and parapet elements
- Bonding of surfaces
- Structural, force-locking bonding of the most varying material combinations, e.g. in the field of vehicle body manufacture
- Shipbuilding
- It is especially used in specialist firms in the field of stair restoration as high-strength, tough-elastic bonding and levelling compound for laying of step elements

### Special Properties

- Very low emission\*
- tough-elastic adhesive joint
- Solvent-free
- Thixotropic, does not drip off
- Compatible with natural stone
- Good adhesion characteristics to several types of material surfaces, e.g. PVC-hard, GRP (ground), Alu, HPL etc. on diverse insulating materials, e.g. PUR-, PS-foam and mineral wool after appropriate preparation of the surfaces
- Good weather-proofness
- Can be over-coated with many paint systems
- Low flame-spread characteristics when hard-dry according to IMO FTPC part 5

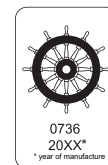
### Certificates / Test reports

#### BG Verkehr, Dienststelle Schiffssicherheit / Ship Safety Division

Approved for the application on ships, in accordance with module B

Approval No.: 118189-04

Applied quantity: max. 190 g/m<sup>2</sup>



The fire test as per IMO FTPC and approval of the system COSMO® PU-200.180 were executed without pre-treatment of the surfaces to be glued and with COSMO® primers, and without the addition of COSMO® accelerators und COSMO® paste paints.

#### GEV:

Classified in the EMICODE class EC1<sup>PLUS</sup> in compliance with the criterions of the GEV.

Licence No.: 12885



### Technical Data

Mixture COSMO® PU-200.180 (Component A COSMO® PU-201.180 + Component B COSMO® PU-265.120)

<b>Basis</b>	2-Component PUR reaction adhesive
<b>Colour hard-dry</b>	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. 50 Shore D
<b>Viscosity</b> at +20 °C	medium viscous-pasty
<b>Mixing ratio</b> parts by weight	A: B = 100 : 15
<b>Mixing ratio</b> parts by volume	A: B = 100 : 19.5
<b>Pot life</b> of a 100 g batch at +20 °C	approx. 115 min
<b>Processing time</b> depending on type of application at +20 °C	approx. 90 min
<b>Functional strength</b> depending on the application at +20 °C	approx. 7 h



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<b>Curing time</b> at +20 °C, 50 % r. H. until it reaches the final strength	approx. 28 d
<b>Processing temperatures</b> adhesive and substrates	from +7 °C until +30 °C
<b>Applied quantity</b>	depending on application
<b>Tensile shear strength</b> as per DIN EN 1465, Alu/Alu, 0.2 mm joint at +20 °C	approx. 13.0 N/mm <sup>2</sup>
<b>Tensile shear strength</b> as per DIN EN 1465, Alu/Alu, 0.2 mm joint at +80 °C	approx. 5.0 N/mm <sup>2</sup>

### Component A COSMO® PU-201.180

<b>Colour</b>	beige-white
<b>Density</b> as per EN 542 at +20 °C	approx. 1.57 g/cm <sup>3</sup>
<b>Viscosity</b> at +20 °C	highly viscous-pasty

### Component B COSMO® PU-265.120

<b>Colour</b>	brown
<b>Density</b> as per EN 542 at +20 °C	approx. 1.23 g/cm <sup>3</sup>
<b>Viscosity</b> at +20 °C	low viscous-liquid

## General Information

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.

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

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

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

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.

## Preparation

Acclimatise the product before the application.

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.

## Bonding

**Mixing manually:** The individual components are mixed to be homogenous in the described mixing ration using a mixing container and a drilling machine. The mixed adhesive is applied within the processing time using a toothed spatula. The parts to be bonded are put together within the pot life of the adhesive and are fixed/pressed until its functional strength has been reached.





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## 2-C-PUR Reaction adhesive

**Mixing method - dosing unit:** The individual components are mixed to be homogeneous in the described mixing ratio using the dosing unit. The mixed adhesive is applied on the surfaces to be bonded within the processing time. The parts to be bonded are put together within the pot life of the adhesive and are fixed/pressed until its functional strength has been reached.

If covering layers are laid, make sure that no air is enclosed, provide for air vent in the adhesive joint, if necessary.

Remove oozing adhesive when it is fresh.

The processing time, and with this the time to reach the functional strength of the adhesive system, can be reduced by adding the accelerator COSMO® SP-900.110, as required.

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

The accelerator COSMO® SP-900.110 and/or the paste paints COSMO® SP-620 can be added into the binder component together with the hardeners COSMO® PU-265 and with this, it can be mixed directly within the mixing process.

### Bonding of metals

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.

Due to their variety, age and, if necessary, additional treatment with oil or wax, anodized surfaces do not allow any general statement about wettability or bonding characteristics of these bonding surfaces.

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 stagnant 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.

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

### Bonding of wood

If solid wood is bonded, the adhesive should preferably be applied on the two surfaces to be bonded. The press pressure shall be  $>1 \text{ N/mm}^2$ .

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.

### 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

Storage of application devices in COSMO® CL-300.340 prevents/slows down the curing time of the adhesive.

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

The tools are cleaned with COSMO® CL-300.220 .

Cured adhesive can only be removed mechanically.



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**2-C-PUR Reaction adhesive****Storage**

Store the hermetically closed original trading units in a dry place at temperatures of +15 °C to +25 °C no direct sun radiation. While transported within the usual transport times, the product may be exposed to temperatures from -30 °C to +35 °C. Storage life in unopened original packaging 12 Months.

**Packaging**

Comp. A – COSMO® PU-201.180:  
5.7 l PP bucket, net weight: 3 kg  
200 l Metal clamping ring drum with inliner, net weight: 300 kg  
Comp. B – COSMO® PU-265.120:  
500 ml PE-bottle, net weight: 0.45 kg  
10 l metal canister, net weight: 12 kg  
200 l bung hole drum, net weight: 250 kg  
Other trading units on request.

**Accessories**

COSMO® CL-300.340 – immersion solution and equipment cleaner  
COSMO® CL-300.220 – cleaner for tools

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