



2-C-MS-Adhesive

Examples for Application

- In the field of aluminium window and door construction, for bonding corner joints (suitable for classic and injection bonding methods)
- For bonding of corner joints of aluminium facing formworks, folding shutters and frames for insect screens
- For bonding of corner joints to mount frames, carcasses and cabinets, e.g. for showcases, switch cabinets and panels
- For assembly bonding
- Bonding of façades (cassette) - sandwich elements
- Corrosion protection of blank aluminium sections
- Sealing, e.g. of mitres, butt joints in aluminium construction

Special Properties

- elastic adhesive joint
- Solvent-free
- Compatible with natural stone
- Not foaming
- Low shrinkage
- Good adhesion characteristics to different surfaces
- Surface can be smoothed well
- Fast and controlled full hardening
- High strength of adhesive joints
- Compensates the expansion of different materials
- Good weather resistance outdoors
- Good UV-stability
- Can subsequently be powder-coated

Certificates / Test reports

French VOC-Emission class A+

Technical Data

Mixture COSMO® HD-200.201 (Component A COSMO® HD-201.201 + Component B COSMO® HD-205.201)

Basis	Two-component MS Reaction Adhesive
Colour hard-dry	grey
Density as per EN 542 at +20 °C	approx. 1.50 g/cm ³
Shore hardness as per DIN 53505	approx. 48 Shore A
Viscosity Mixture – COSMO® HD-200.201 as per plate-plate (2 s ⁻¹) at +25 °C	approx. 170 000 mPa.s
Mixing ratio parts by volume	A: B = 1.0 : 1.0
Breaking elongation as per DIN 53504	approx. 270 %
Pot life of a 100 g batch at +20 °C	approx. 40 min
Processing time with static mixer at +20 °C	approx. 15 min
Functional strength depending on application at +20 °C	approx. 4.5 h
Curing time at +20 °C, 50 % r. H. until it reaches the final strength	approx. 7 d
Operation temperature range	from -40 °C to +100 °C
Subsequent powder coating after reaching the final strength	20 min/to +180 °C
Processing temperatures Adhesive and substrates	from +7 °C to +30 °C
Tensile shear strength as per DIN EN 1465, alu/alu, 0.2 mm joint at +20 °C	approx. 2.0 N/mm ²
Tensile shear strength as per DIN EN 1465, alu/alu, 0.2 mm joint at +80 °C	approx. 1.6 N/mm ²

Component A COSMO® HD-201.201





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Colour

white

Component B COSMO® HD-205.201**Colour**

grey

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.

Paint the bonded workpieces only after the adhesive has cured completely; if they are painted too early, formation of paint bubbles cannot be excluded.

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

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 cartridges must be checked for damage before processing. If there is any visible damage, they should no longer be used.

Safety glasses must be worn during processing.

At an operating pressure of max. 8.0 bar, the air pressure guns COSMO® SP-750.112 and COSMO® SP-750.122, will achieve a working power of 3.3 kN.

Avoid overloading of the tandem cartridge due to too high forces >3.6 kN. If the air pressure guns type COSMO® SP-750.111 or COSMO® SP-750.121 and a connected pressure of 8.6 bar are used, max. 2.8 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 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 of PVC, ABS, PC, PET, GRP on the basis of polyester or polyamide and powder-coated surfaces should only be done after pre-treatment of the bonding surfaces with the activator COSMO® CL-310.110 by wiping.

Bonding of concrete, cellular concrete, sandstone and building brick should only be done after pre-treatment of the bonding surfaces with the activator COSMO® CL-310.110 by brush (up to 50 ml/m²).

Bonding

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

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

The adhesive mixture from the static mixer is directly applied onto the bonding surface and the parts are fit together within the processing time.

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





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Remove oozing adhesive when it is fresh.

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, approx. 20 g of adhesive, is required, before bonding can be continued!

If more than 48 hours are between the end of work and the predicted reuse of the cartridge COSMO® HD-200.201, we recommend the use of the seal COSMO® SP-820.110 in order to avoid hardening in the opening area of the cartridge.

For this purpose, the static mixer used is unscrewed, the closure is pressed in flush into the cartridge opening and fixed hand tight by screwing on with a new static mixer. When using again, remove the closure and as usual, when using a new static mixer, discard the first 20 g of the mixed adhesive (approx. size of a walnut).

The closure can be reused; in doing so, take care that the closure is used with the same colour matching to the components. When reusing the closure several times, it must be cleaned using COSMO® CL-300.150.

Bonding of metals

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.

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 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.

If metals are bonded with absorbent materials (e.g. wood, building materials, etc.), humidity can be transported slowly through the absorbent material, through the bonded joint, to the metallic surface and here, it can cause corrosion damages on the metal. Therefore, the metallic bonding surface must be equipped with an appropriate corrosion protection, e. g. varnish, powder coating!

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

Important instructions

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

For PVC-bonding, also read our technical information "Testing and evaluation of PVC-bonding with STP/MS adhesives of the product series COSMO® HD".

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 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





COSMO® HD-200.201

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Packaging

2 x 310 ml tandem PP-cartridge, net weight: 890 g

Other trading units on request.

Accessories

COSMO® – SP-200.120 – Set for COSMO® HD-200-tandem cartridges with static mixer COSMO® SP-800.221 and closure COSMO® SP-820.110

COSMO® SP-750.121 - Air pressure gun

COSMO® SP-760.151 - Manual pressure gun

