



COSMO HD-100.110

*** COSMOHYBRID 490

1-C-Hybrid Assembly Adhesive

Examples for Application

- For assembly bonding
- Skirting, laying of laminate and cable ducts
- Stair construction and building trade
- Window and door construction
- Bonding of façades (cassette) - sandwich elements
- Glass bonding in furniture and display cabinet construction
- Solar systems and wind power plants
- Fixation of signs
- Apparatus and plant construction
- Automotive and vehicle body manufacturing
- Shipbuilding
- Diverse industrial fields

Special Properties

- Very low emission*
- elastic adhesive joint
- Workable at above 0 °C
- Solvent-free
- Compatible with natural stone
- Not foaming
- Low shrinkage
- Can be spread well
- Good adhesion characteristics to different surfaces
- High strength of adhesive joints
- Compensates the expansion of different materials
- Good UV-stability
- Can be over-coated with many paint systems
- Low flame-spread characteristics when hard-dry

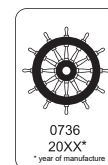
Certificates / Test reports

BG-Verkehr, Dienststelle Schiffssicherheit / Ship Safety Division

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

Approval No.: 118263-02

Applied quantity: max. 200 g/m²



The fire test as per IMO FTPC and approval of the system COSMO HD-100.110 were executed without pre-treatment of the surfaces to be glued with COSMO primers.

GEV

*Classified in the EMICODE class EC1^{PLUS} in compliance with the criterions of the GEV.

Licence No.: 4526



French VOC-Emission class A+

Technical Data

Basis	1-C-humidity-cross-linking silane-terminated polymer
Colour hard-dry	white
Density as per EN 542 at +20 °C	approx. 1.60 g/cm ³
Shore hardness as per DIN 53505	approx. 72 Shore A
Viscosity as per cone and plate (10 s ⁻¹) at +25 °C	approx. 75 000 mPa.s
Breaking elongation as per DIN 53504	approx. 75 %
Skin formation time - dry at +20 °C, 50 % r. H., applied quantity 500 µm-PE/PVC	approx. 9 min



Weiss Chemie + Technik
GmbH & Co. KG
Hansastraße 2
D-35708 Haiger

Tel.: +49 (0) 2773 / 815 - 0
Fax: +49 (0) 2773 / 815 - 200
Email: ks@weiss-chemie.de
Web: www.weiss-chemie.de



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Curing speed at +20 °C, 50 % r. H.	approx. 3 mm in 24 h
Curing time at +20 °C, 50 % r. H. until it reaches the final strength	approx. 7 d
Operation temperature range	-40 °C to +90 °C, temporary to +120 °C
Processing temperatures adhesive and substrates	from 0 °C to +30 °C
Tensile shear strength as per DIN EN 1465, Alu/Alu, 0.2 mm joint at +20 °C	ca. 4.5 N/mm ²

General Information

With increased air humidity or after the adhesive has been sprayed with water, the skinning time will be clearly shorter.

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.

Skinning, joining times, as well as the required press and following processing times can only be determined accurately by self-tests because they depend on material, temperature, applied quantity, air humidity, material humidity, thickness of adhesive film, press power, 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

The adhesive is applied one-sided as bead on one of the parts to be bonded.

If non-absorbing materials are bonded (material humidity <8 %), water must be "sprayed very finely" onto the adhesive to achieve complete curing.

The workpieces must be fit together and pressed within the skinning time.

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.

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!





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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).

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 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 not be exposed to temperatures of -30 °C to +35 °C.

Storage life in unopened original packagings: 12 Months

During the storage time, viscosity is decreasing.

Packaging

310 ml PE-Euro cartridge, net weight: 490 g

600 ml Alu/PP-tube bag, net weight: 950 g

Other trading units on request.

Industrieverband
Klebstoffe e.V.Weiss Chemie + Technik
GmbH & Co. KG
Hansastraße 2
D-35708 HaigerTel.: +49 (0) 2773 / 815 - 0
Fax: +49 (0) 2773 / 815 - 200
Email: ks@weiss-chemie.de
Web: www.weiss-chemie.de