

FOCUS on Weiss
Innovations made by Weiss



Together toward success

A strong partner

weiss

Quality, service and high delivery reliability are the basic pillars of the success of our group of companies. We have continuously improved and further developed our portfolio in the last years; this also includes the acquisition of new companies. By now, about 325 employees at four sites participate in the success of our group.



Company

By pooling the core competences of our business segments of adhesives and sandwich panels under a single roof, we are able to offer solutions from one source to our customers that are efficient and of high technical quality.

We are among the leading manufacturers in these two business segments in Europe and moreover, we also increasingly sell our products outside of Europe, such as in China, Russia and the USA.

Company history

Since the company's foundation in 1815, Weiss has grown from a small hide-glue producer to an internationally acting, industrial company for modern adhesive systems and composite panels. With a passion for quality and the aspiration to meet our customers' high expectations, we are a recognised and reliable partner on the market.

! Weiss is the only enterprise that produces adhesives and composite panels.

Powerful product range

Business area Adhesives

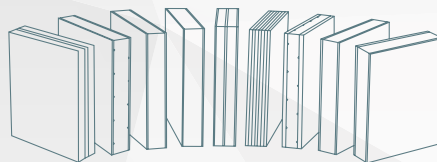


Durably firm joints

Traditional bonding technologies like riveting, soldering, welding, or screwing are more and more replaced by modern adhesive systems, resulting in many advantages.

Our product range includes more than 400 variants of surface and construction adhesive and superglues, as well as special adhesives for a wide variety of applications.

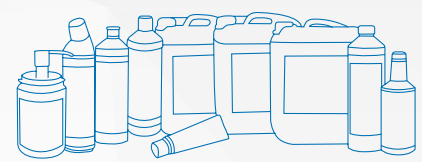
Business area Composite panels



Unlimited possibilities for design

Composite panels made by Weiss leave nothing to be desired. Because there is a large number of top coats and core materials available as well as the possibility of combining and processing them in many different ways, a vast number of creative designs results for the finished element.

PUDOL Cleaning and care agent



Cleanliness refreshes the senses

PUDOL stands for convincing quality of special products in the field of commercial cleaning. In addition to a complete range of cleaning and care products for different applications, we are offering a comprehensive service with interesting solutions and benefits.

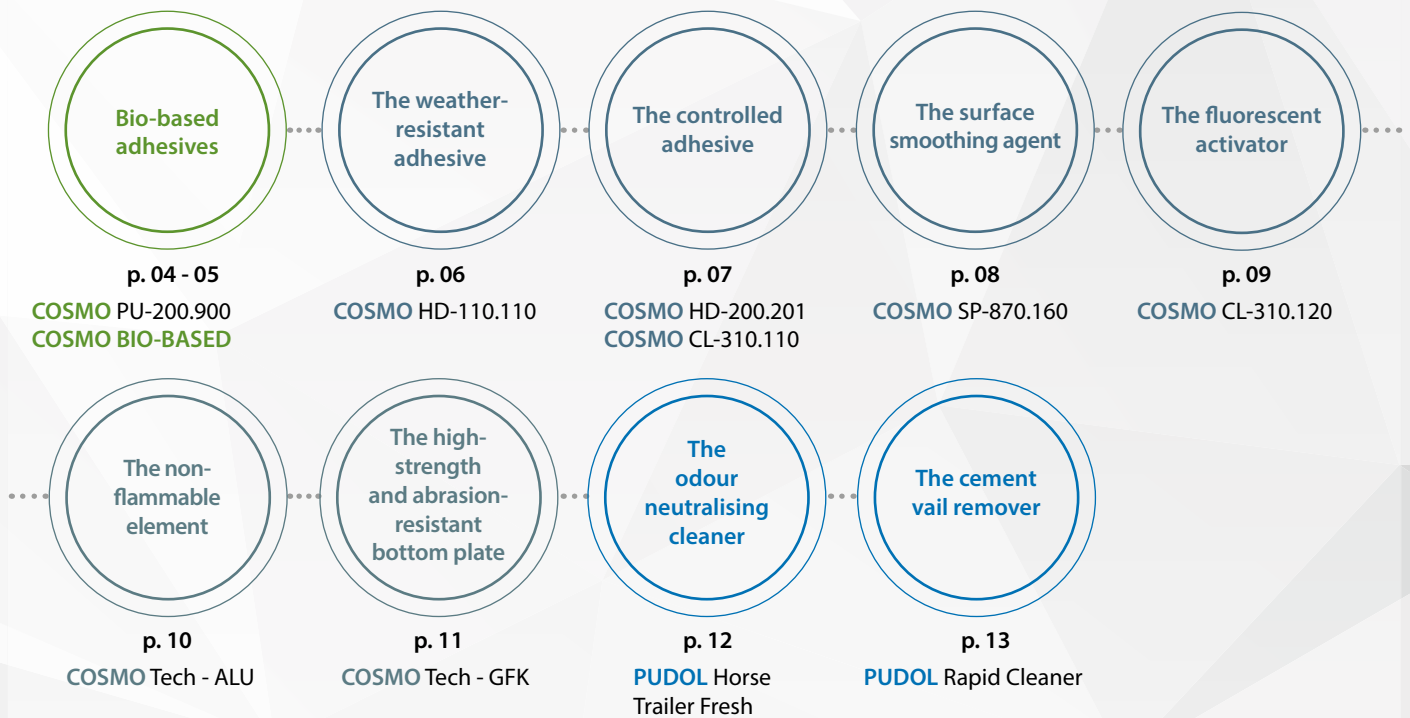


A subsidiary
of the Weiss Group

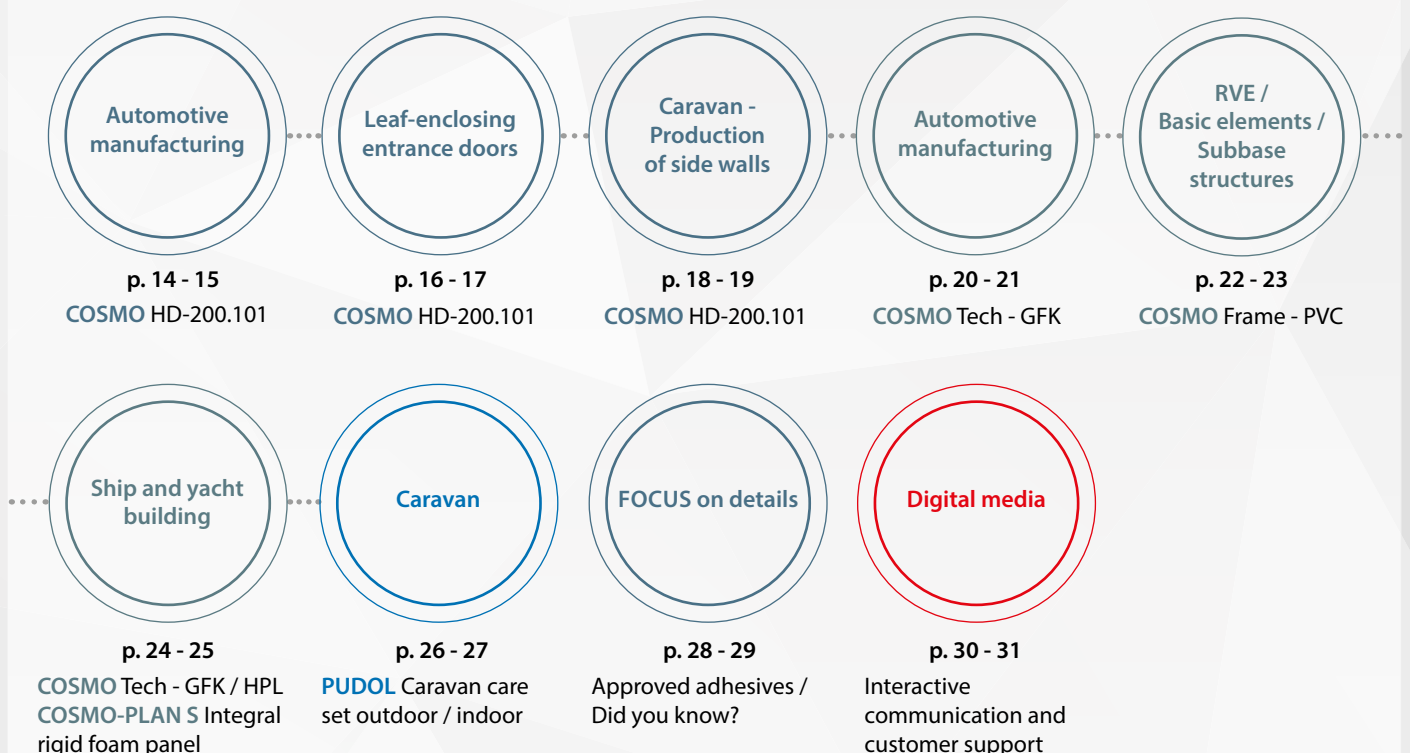
Agenda

Weiss is offering highly loadable adhesive systems and composite panels tailored to the special requirements of the most diverse applications. On the basis of our long-term experience and the intensive exchange of experience with our customers in industry and trade, we have the possibility to continuously develop our products. With this, we are able to provide innovative application solutions to our customers and partners.

FOCUS on innovations



FOCUS on applications



Bio-based adhesives

Our **bio-based adhesives** actively contribute to the protection of the environment. As innovative products, they have been developed with particular regard to our limited resources, without losing sight of the top quality that we take for granted. Most of the raw materials included are climate-neutral, which reduces CO₂-emissions. Environmental and limited resources will be protected for further generations. By substituting fossil resources, we have succeeded in developing adhesives which contain a defined amount of bio-based products and in this way we save the environment.

The environment-friendly adhesive

COSMO PU-200.900 2-C-PUR reaction adhesive

Applications:

- For bonding of corner joints in aluminium windows and door construction
- For the structural and force-locking joint of different material combinations, e.g. in the field of vehicle body manufacture
- Bonding of e.g. aluminium, HPL, GRP and other materials
- Hard pointing of wall elements

Examples for application:



Bonding of corner angles in the field of aluminium window construction – classic method



Bonding of corner angles in the field of aluminium window construction – injection method



Manufacture of vehicle bodies

! This corresponds with: COSMO Tech - GFK composite panels for automotive manufacturing

Depending on the installation situation, different requirements on our lightweight building units can result. Therefore, specific material combinations are required.

With **COSMO Tech - GFK** we are offering you diverse options in form of ceiling elements, side walls and bottom plates (see page 20-21). Please contact us!

Please find our contact details on p. 32.

Special properties:

- ~ 60% bio-based carbon content
- H351 (R40) no marking required
- Solvent-free
- Thixotropic, does not drop off
- UV colourfast
- Good weather-resistance
- Can be over-coated with diverse paint systems
- Features easy handling of tandem cartridge with static mixer

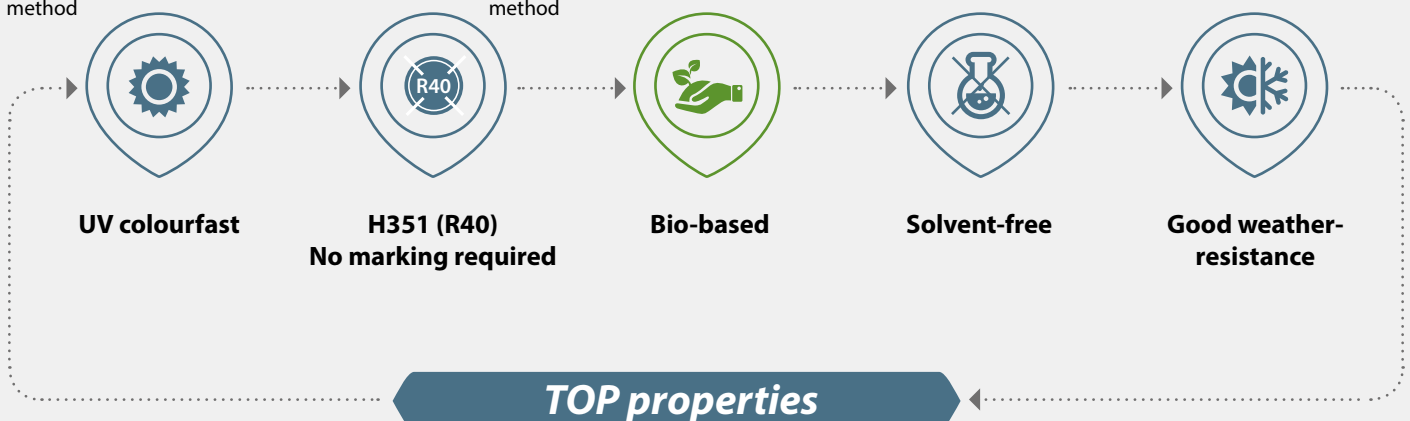
Packaging:

- 2 x 310 ml tandem cartridge



PUR
BASIS

! Available soon

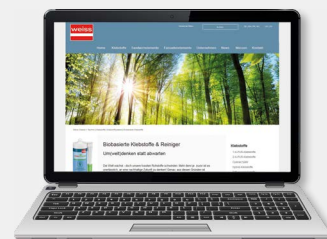




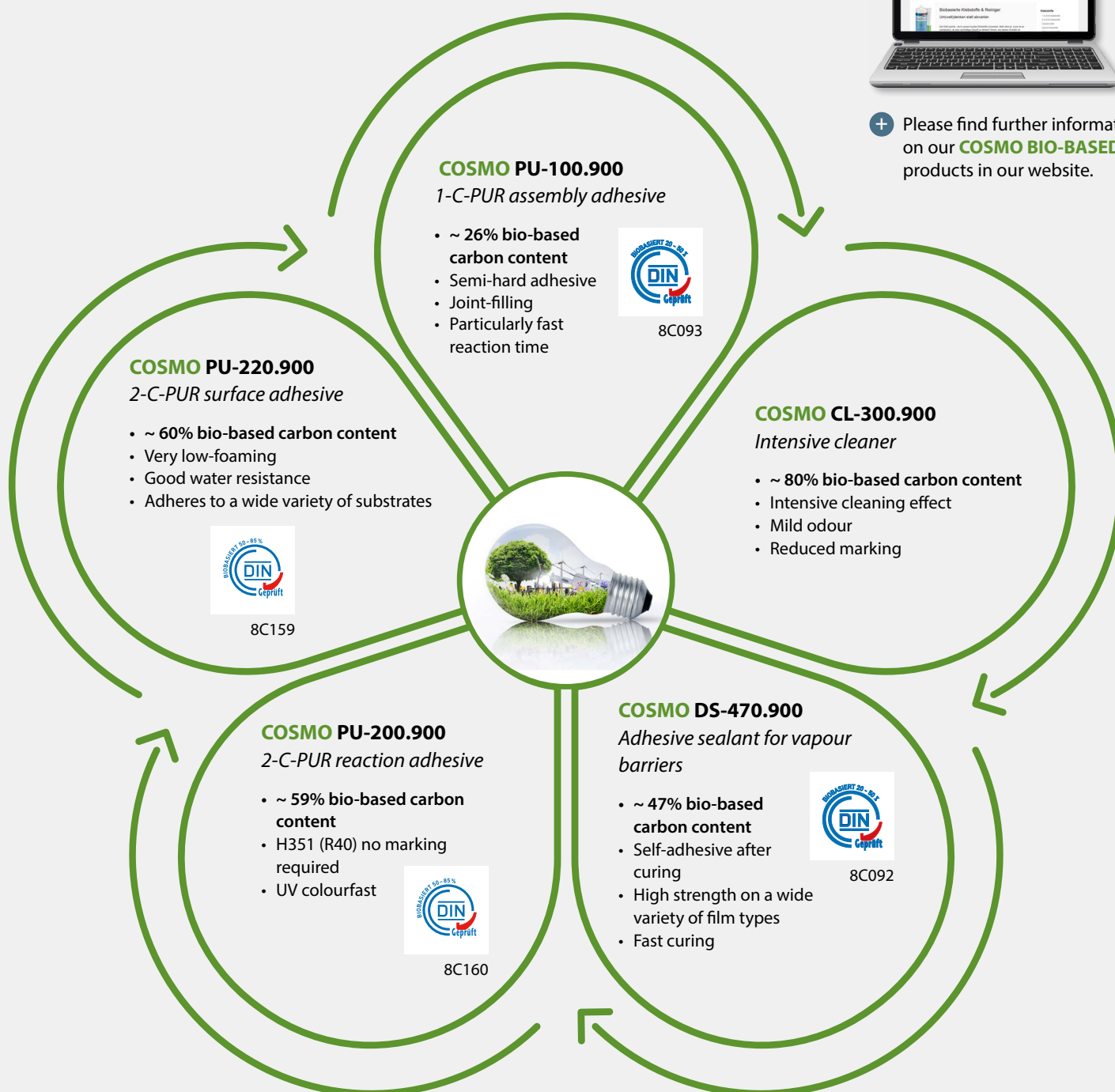
The bio-based product range

Our bio-based adhesives and cleaners include a defined content of raw materials from renewable sources. Simultaneously, we could further optimise the properties.

COSMO BIOBASED



+ Please find further information on our **COSMO BIO-BASED** products in our website.



Airtight bonding

In the last years, the topic of "airtight, windtight and rain-resistant building envelope" has become more and more importance because of the continuously rising energy costs and the increasing environmental pollution. With this, the preservation of building stock also plays an important role, because this effectively prevents expensive repairs of structural damages. However, the means used in this context, such as vapour barriers, window joint tapes and roof underlays / façade webs, are only effective if they are bonded permanently and securely to the respective substrate. The **COSMO Airtight bonding** system creates such solid and permanent bonds and provides the necessary reliability you need.

The weather-resistant adhesive

COSMO HD-110.110

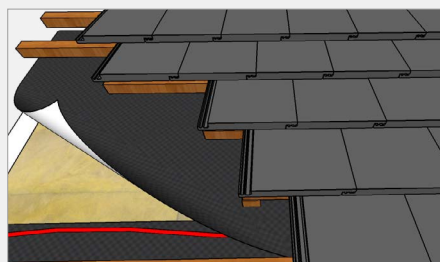
1-C-STP reaction adhesive

Applications:

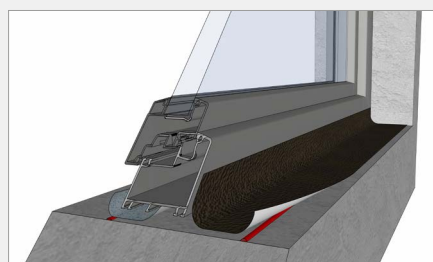
For airtight, windtight and raintight bonding of:

- Vapour barriers and diffusion barriers
- diffusion-tight and moisture diffusing seal tapes for window and door assembly
- Underroof sheets, underlays, roof-underlays and façade-sheets

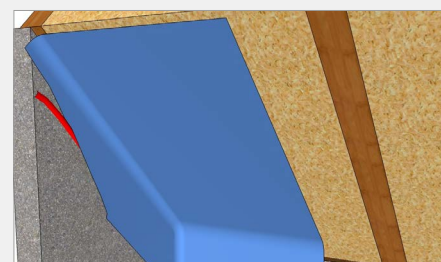
Examples for application:



Bonding and sealing of overlapping areas and joints of underroof sheets, underlays, roof-underlays and façade-sheets



Bonding of joint tapes on window and door jambs outside - ideal for the RAL assembly



Connection bonding for vapour checks/barriers on rough and mineral substrates, as an example

! This corresponds with: Façade elements for your building project

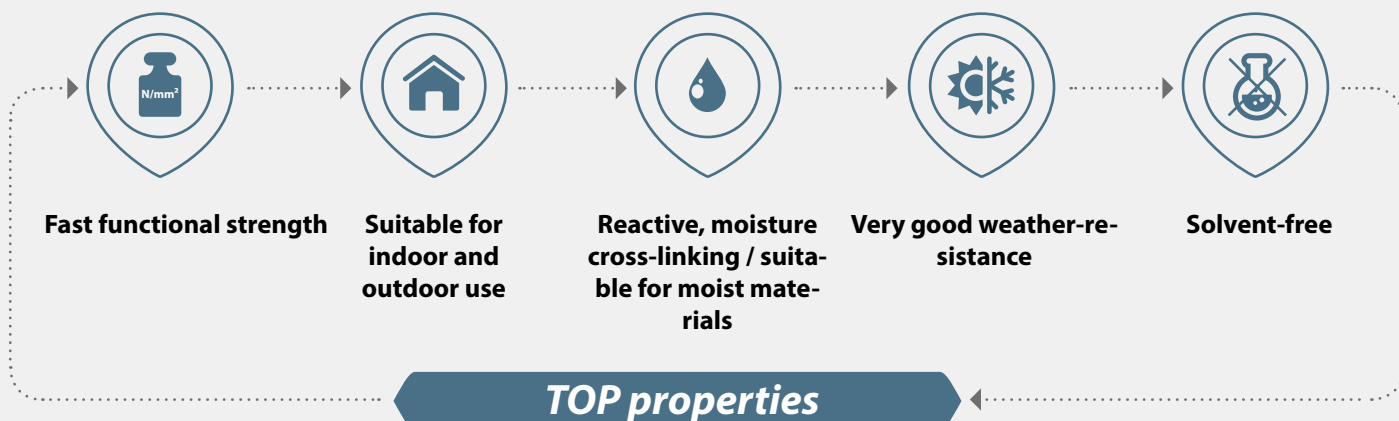
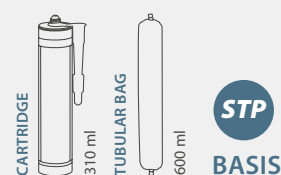
With our **façade elements** we are offering you a variety of appearances with our façade and balustrade elements, window and door panels of glass and metal. Please contact us! Please find our contact details on p. 32.

Special properties:

- Reactive, moisture cross-linking
- Permanently elastic self-adherent adhesive joint
- Achieves the required airtight connections / final sealings of building envelopes as per DIN 4108-7 / -11
- Easy application at low temperatures
- Very fast functional strength
- Frost resistance down to -26°C
- Solvent-free
- Fast rainproof

Packaging:

- 310 ml cartridge
- 600 ml tube bag





Hybrid-polymer adhesives

For a decade, we have been paying our attention to hybrid-polymer adhesives, also called **MS**, **STP** or **SPUR**. We are continuously extending the number of important variants that have been developed on the basis of this basic formula. All hybrid-polymer adhesives have a low impact on the person working with the product in common, as they **DO NOT CONTAIN** ingredients such as isocyanate, solvents and other strongly sensitising substances that are dangerous to health. The statement "Primer on board" is also to be taken literally, since no additional primer is needed for many materials – such as aluminium –, as opposed to other systems, for example on the basis of PUR. Furthermore, all these products are excellently weather-resistant, for example they are resistant to UV radiation, moisture, frost, and heat. Since we feel that the tendency towards hybrid adhesives is clearly undiminished, we are continuously broadening our portfolio in order to meet the requirements of the market or actively shape future needs already now.

The controlled adhesive

COSMO HD-200.201

2-C-STP construction adhesive

Applications:

- Used for bonding and sealing
- Assembly bonding
- Skirting, laying of laminate and cable ducts
- Stair construction and building trade
- Bonding of façades- (cassette-) composite panels
- Glass bonding in the manufacture of furniture and display cabinets
- Solar and wind power plants
- Fixation of signs
- Apparatus and plant construction
- Diverse industrial fields

! This corresponds with: COSMO Tech - GFK composite panels for automotive manufacturing

Depending on the installation situation, different requirements on our lightweight building units can result. Therefore, specific material combinations are required.

With **COSMO Tech - GFK** we are offering you diverse options in form of ceiling elements, side walls and bottom plates (see page 20-21). Please contact us! Please find our contact details on p. 32.

Special properties:

- Ideal for wide adhesive joints
- Elastic adhesive joint
- Full process control
- Fast and controlled curing
- Good tear resistance
- Adding moisture to the adhesive joint is not necessary
- Adheres to a wide variety of substrates
- High weather-resistance
- H351 (R40) no marking required

Packaging:

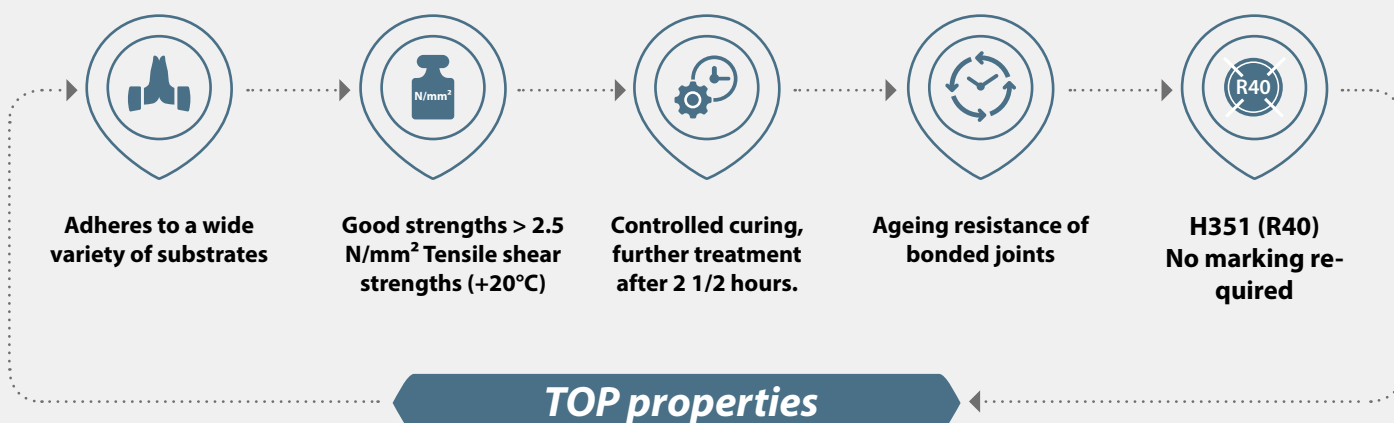
- 2 x 310 ml 1 : 1 tandem cartridge



Alternative to
COSMO HD-200.101
1 : 1 in the tandem
cartridge

For the preparation of bonding we recommend our activators COSMO CL-310.110/120.

! Please find further information on **COSMO CL-310.120** (p. 9), **COSMO CL-310.110** and diverse applications of **COSMO HD-200.101** on p. 14-17.



Intermeshing solution

With the surface smoothing agent **COSMO SP-870.160** we fully complete our Hybrid product line. To give bonding and sealing joints of our **COSMO HD- series** an optimally good appearance, to avoid washing out of the sealing joint and mould stains cannot get a chance, the smoothing agent **COSMO SP-870.160** has been developed. With intensive tests on the most diverse materials, e.g. lacquers, plastics and, certainly, our Hybrid series **COSMO HD**, exposed to humid UV radiation for more than 1,000 hours, the properties of the smoothing agent referring to non-aggressivity were tested and verified. The effect is proven for manual smoothing with wood spatula as well as plastic spatula.

The surface smoothing agent

COSMO SP-870.160

Applications:

For smoothing of sealing / bonding joints of the HD series.

Special properties:

- No washing out of the sealing material
- It avoids mould / water stains
- Optimised joint appearance
- Good smoothing behaviour
- It minimizes wetting of the auxiliary smoothing tools
- colourless
- Optimum wetting of the adhesive sealing surfaces

Packaging:

- 1,000 ml PE bottle



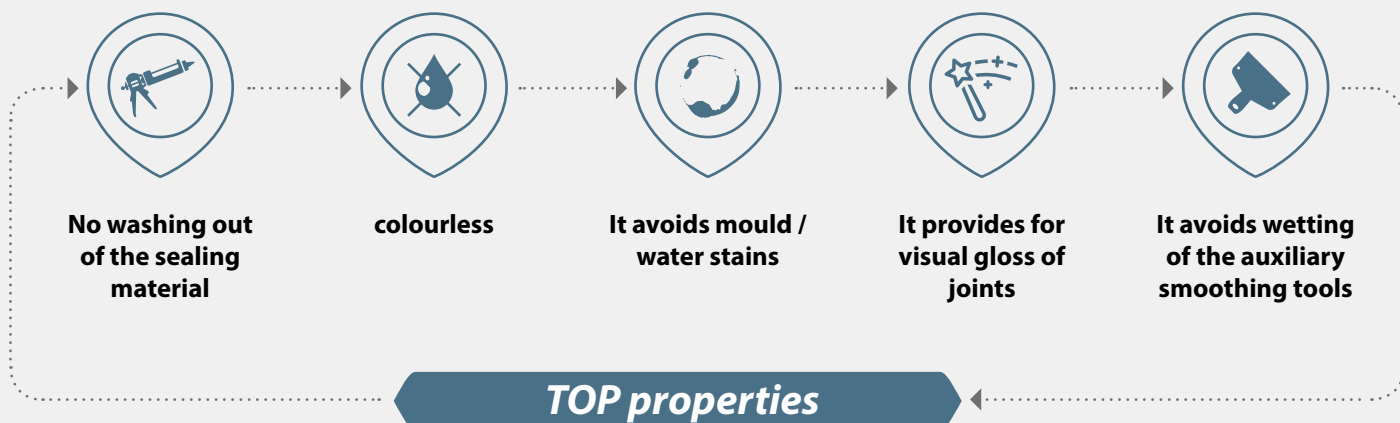
Examples for application:



Smoothing of sealing / adhesive joints



Manual smoothing by means of plastic spatula





Create defined and perfect bonded surfaces

It is not always visible to the eye if plastic materials can be bonded well. Some cannot be bonded at all. For the highest possible reliability of the joint, we are offering our **COSMO CL-310.120** activator for diverse surfaces.

Particularly with regard to adhesive standard DIN 2304, the definition of the bonding process is becoming increasingly more important. Part of this clear determination is always also an absolutely defined and flawless bonding surface. This is possible by using this activator.

The fluorescent activator

COSMO CL-310.120

Activator

Applications:

- Activation of bonding areas before bonding with **COSMO HD**
- Activation of non-absorbent, porous and smooth substrates
- Activation of mineral surfaces

Special properties:

- Fluorescent
- It cleans and activates the bonding surface
- It particularly improves the adhesion to PVC and powder-coated surfaces
- Noticeable improvement of the bonding on the basis of ABS, polycarbonate, GRP on the basis of polyester or polyamide
- Significantly improves the ageing resistance of adhesive joints with concrete, aerated concrete, sandstone and building brick

Packaging:

- 250 ml aluminium bottle
- 1,000 ml aluminium bottle



Examples for application:



„Normal light“

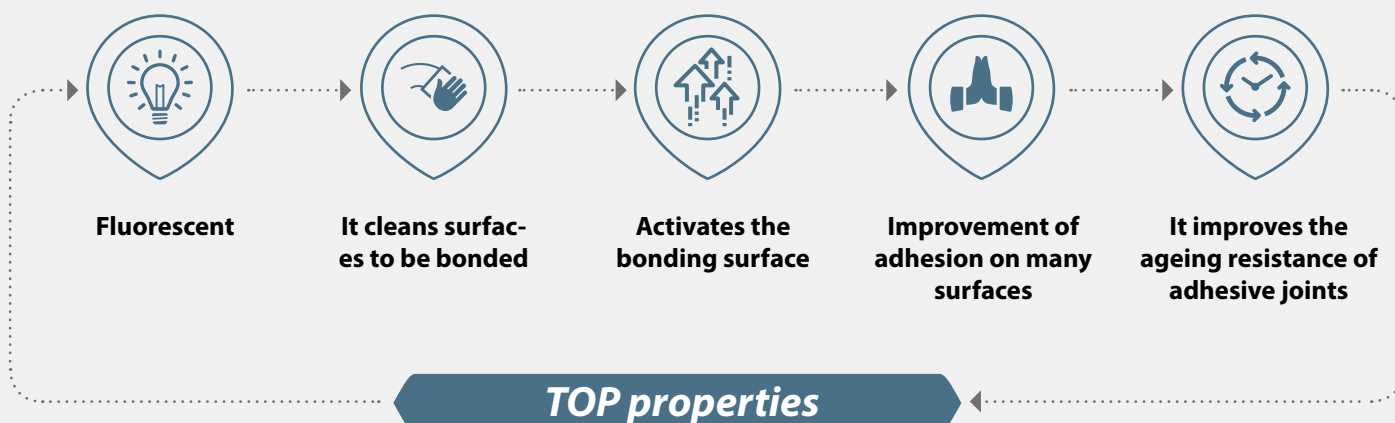
Surfaces that cannot be distinguished - treated, not treated



Fluorescent

"Black light"

Full process control, clear visualisation of preparation by fluorescent material content.



FOCUS on innovations

COSMO Composite panels & Façade elements

Composite panels and façade elements for fire protection

In the building industry, the requirements on fire protection have been tightened continuously within the last years. With our successfully tested façade and composite panels we satisfy this endeavour to more safety and so we are offering an ideal solution for the indoor and outdoor area of your building project.

The non-flammable element

! This corresponds with: fire-resistant adhesives

COSMO Tech - ALU



Aluminium on both sides,
MIN-core

Applications:

- Façades
- Balustrade elements
- Wall elements
- Ceiling elements

Special properties:

- Building material class A2-s1, d0 (DIN EN 13501)
- Thermal conductivity group 040
- Non-flammable
- Melting point > 500 °C
- Loadable by pressure

Examples for application:



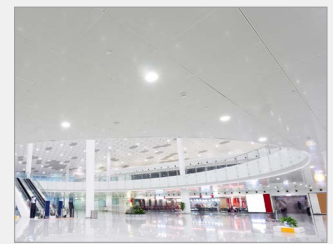
Façades



Balustrade elements



Wall elements



Ceiling elements

Top coats:

Aluminium
Wet coating: All RAL colours are possible.
Powder lacquer on request. Surfaces protected by film.

Core material:

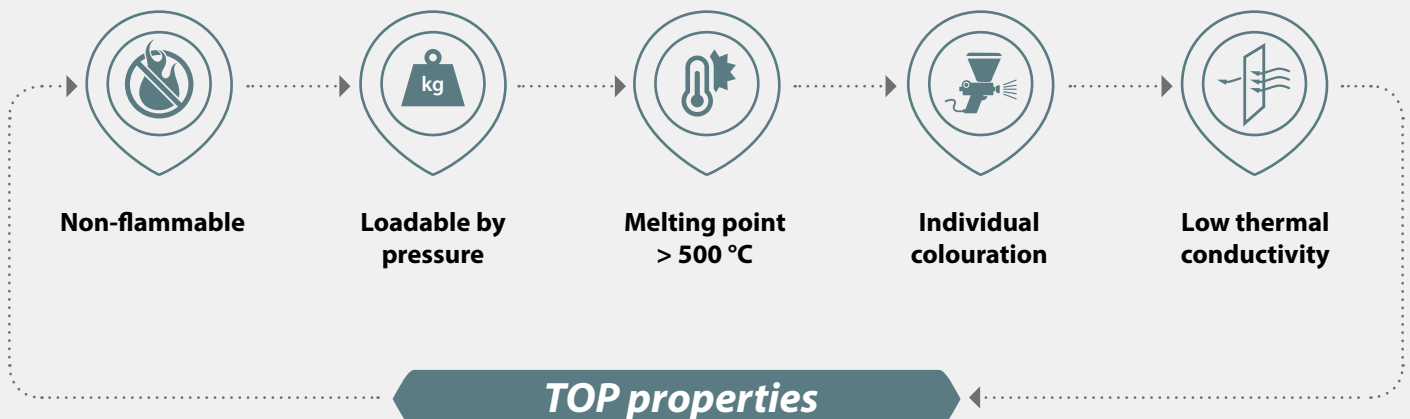
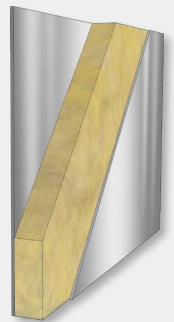
Mineral fibre insulating material (MIN)
Building material class A1 as per DIN EN 13501

Tests:

- Reaction to fire test as per DIN EN 13501-1+ A1: 2013
Tested for thicknesses of 24-40 mm
- LNE certified – certification number: P17538

Formats (mm):

- 3,000 x 1,500 mm, can be cut to size individually
- Other formats and designs on request





Increased resource efficiency with composite panels for light-weight constructions

With our solutions for the light-weight construction in the field of automotive manufacturing we are meeting the current economic and ecologic requirements on resource efficiency and sustainability. With high mechanical strength the weight can be reduced clearly, to allow higher payload and with this, to increase efficiency. Our composite panels are going to become more and more wear-resistant. Due to our experience in using the most diverse core and cover materials we are able to offer customer-specific solutions for the respective demand profile.

The high-strength and abrasion-resistant bottom plate

COSMO Tech - GFK

Applications:

- Sales vehicles
- Trailer structures
- Coffers structures
- Loading platforms
- E-mobility

Special properties:

- High loadability due to excellent pressure and bending force
- Low fatigue behaviour
- Long-term water resistant
- Resistant to deformation
- Resistant to wearing
- Profile of properties individually settable

Examples for application:



Loading platforms

Top coats:

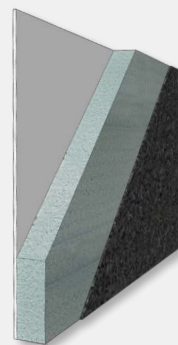
- GRP with smooth or anti-slip surface
- Unidirectional or bi-axial GRP laying design
- CFK

Core material:

- Polymer foam
- Glued plywood
- Honeycomb cores
- Mixture from different cores

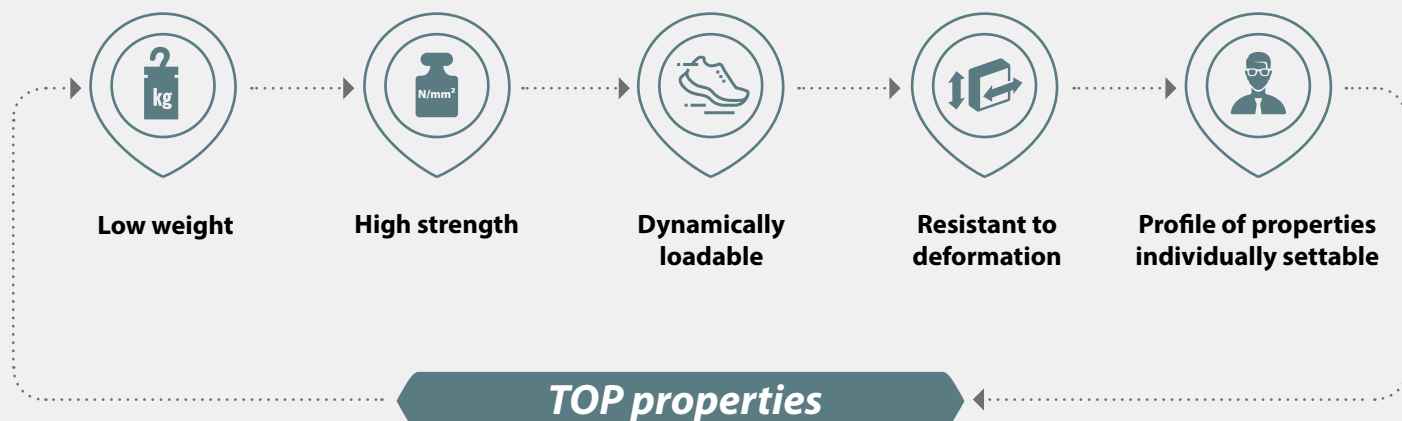
Formats (mm) (length x width):

After consultation with the customer individually producible.



! This corresponds with: the controlled 2-C-STP Construction Adhesive

For bonding of our elements for assembly and sealing bonding in the field of automotive and vehicle body manufacture we recommend our **2-C-STP Construction Adhesive COSMO HD-200.101** (see page 14-15). Please contact us! Please find our contact details on p. 32.



FOCUS on innovations

PUDOL Cleaning and care agent

PUDOL FRESH

Cleaning agent for cleanliness and fresh air

The odour neutraliser

PUDOL Horse Trailer Fresh

Microbiological cleaning solution

! This corresponds with: Adhesives and composite panels for the professional construction of trailers

With our **COSMO Lightweight construction Elements** and **COSMO surface adhesives** we are offering you diverse possibilities for your trailer body. Please contact us! Please find our contact details on p. 32.

Applications:

For the basic cleaning of horse trailers

Special properties:

- 100% biological micro-organisms
- Intensive removal of unpleasant odours and hazardous bacteria
- Reduction of fly infestation
- Improvement of hygiene
- It prevents the formation of acrid ammonia gases
- No allergic reactions

Packaging:

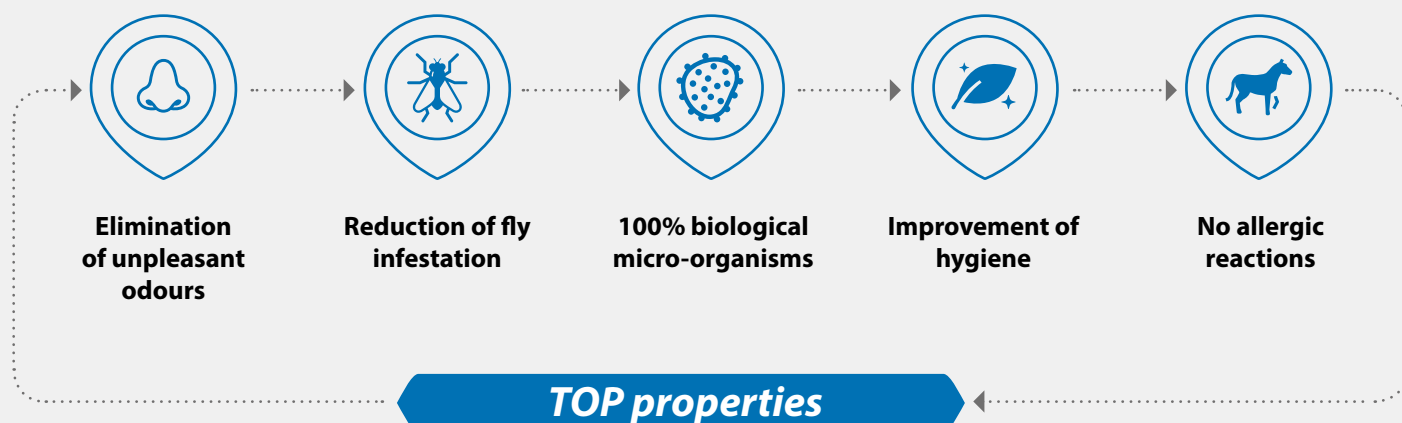
- 1 l bottle
- 5 l canister



Examples for application:



Cleaning of horse trailers





PUDOL POWER

Powerful cleaning agent for extreme pollution

The cement vail remover

PUDOL Rapid Cleaner

Special cleaners

Applications:

- It removes rust, urine- and mineral scale on tiles, bathtubs, and façades, in outdoor and indoor swimming pools
- Final cleaning of buildings, cleaning of stone and concrete façades
- Cleaning of drinking water storage containers (elevated tanks)

Special properties:

- More than 98% of the surfactants used are biologically degradable
- Acid cleaner with high efficiency
- It removes rough pollution
- It does not leave calcareous stains
- Free from hydrochloric acid

Packaging:

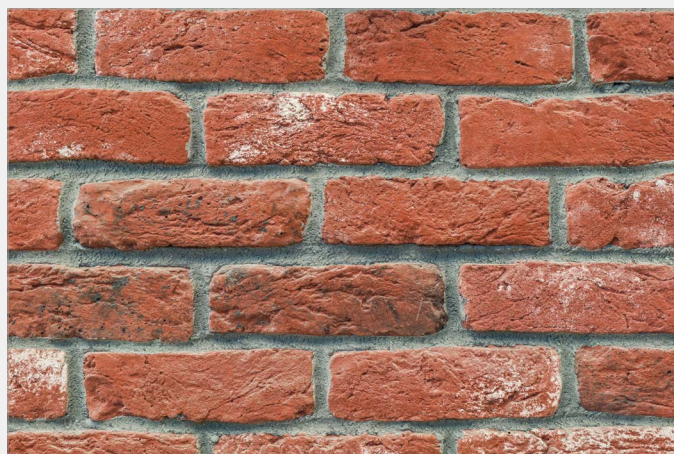
- 1 l bottle
- 5 l canister



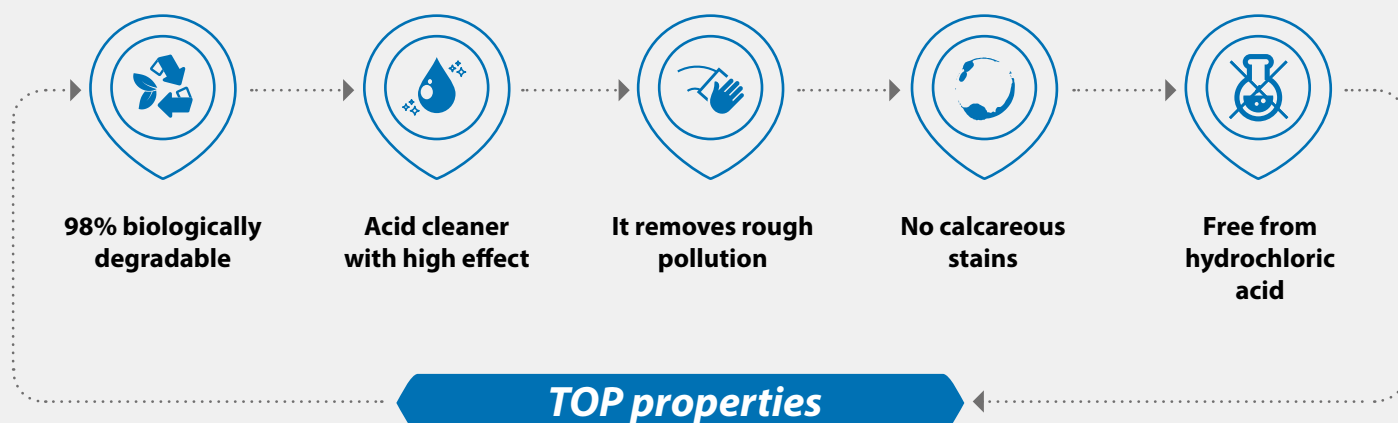
Examples for application:



Final site clearing



Cleaning of stone and concrete façades



Already introduced in the Innovations brochure 2018:

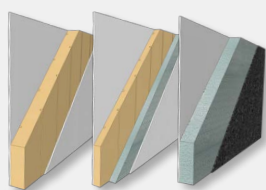
2-C-STP Construction Adhesive **COSMO HD-200.101**

After nearly one year after the introduction, the state shows that the 2-C-STP Constructions Adhesive **COSMO HD-200.101** is a total success in which more and more customers trust. New projects could be implemented successfully, so that, in the meantime, the adhesive is not only being used for bonding of corpuses in the operator's cabin of motor caravans or in rail vehicles, but also for rear coach doors and bonding of frames in trucks and special vehicles and it is indeed used for bonding in the assembly of sports boats! The **COSMO HD-200.101** completely convinced our customers, among others, in the intensive test mainly with its long-term behaviour and weather resistance under extreme conditions like the KATAPLASMA test*.

The reservations regarding these more cost-intensive 2C system compared to a 1C system could be eliminated by faster and safer process times which is a clear advantage referring the requirements of DIN 2304.

We are sure that **COSMO HD-200.101** is the technical benchmark in the 2C-STP sector. Also our customers agree with this estimate. Check this statement thoroughly! We would like to send you samples.

* KATAPLASMA-Test: based on DVS 1618, but with extended test parameters: 14 cycles à 8 hours at -40°C, 8 hours at +20°C, 8 hours at +80°C



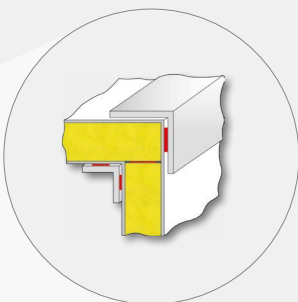
This corresponds with: COSMO Tech - GFK composite panels for automotive manufacturing

Depending on the installation situation, different requirements on our lightweight building units can result. Therefore, specific material combinations are required. With **COSMO Tech - GFK** we are offering you diverse options for the structure of ceiling elements, side walls and bottom plates (see page 20-21). Please contact us! Please find our contact details on p. 32.

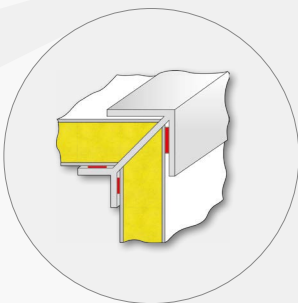




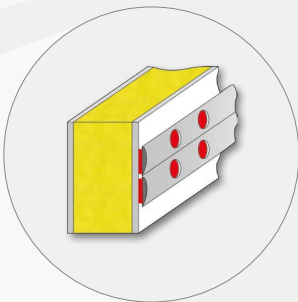
ROOF ANGLES



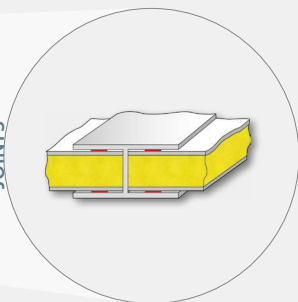
CORNER ANGLES



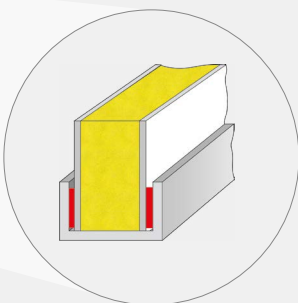
STRIPS



CROSS BUTT JOINTS



END PROFILES



The controlled adhesive

COSMO HD-200.101

2-C-STP construction adhesive

Applications:

- Used for bonding and sealing in automotive and vehicle body manufacture
- Assembly bonding
- Skirting, laying of laminate and cable ducts
- Stair construction and building trade
- Bonding of façades (cassettes) - composite panels
- Glass bonding in the manufacture of furniture and display cabinets
- Solar and wind power plants
- Fixation of signs
- Apparatus and plant construction
- Diverse industrial fields

Special properties:

- Ideal for thick adhesive joints, without curing problems
- Elastic adhesive joint
- Full process control
- Fast and controlled curing
- High tear resistance
- Adding moisture to the adhesive joint is not necessary
- Adheres to a wide variety of substrates
- High weather-resistance
- Can be coated over
- H351 (R40) no marking required

For the preparation of bonding we recommend our activator COSMO CL-310.110

Applications:

- Activation of bonding areas before bonding
- Activation of non-absorbent, porous and smooth substrates
- Activation of mineral surfaces

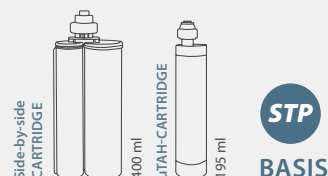
Special properties:

- It cleans and activates bonding surfaces
- It improves bonding on PVC, ABS, PC, and GRP on the basis of polyester or polyamide and on powder-coated surfaces
- It improves the ageing resistance of adhesive joints with concrete, aerated concrete, sandstone and building brick

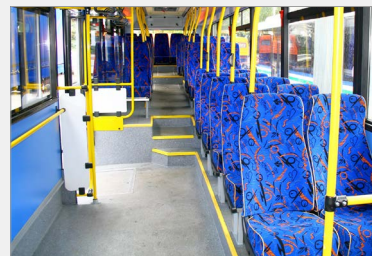
! As an alternative you will find the fluorescent activator **COSMO CL-310.120** for the preparation of bonding on page 9.

Packaging:

- 195 ml 2 : 1 uTAH cartridge
- 400 ml 2 : 1 side-by-side cartridge



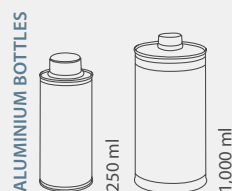
Other examples for application:



Manufacture of busses and trains

Packaging:

- 250 ml aluminium bottle
- 1,000 ml aluminium bottle

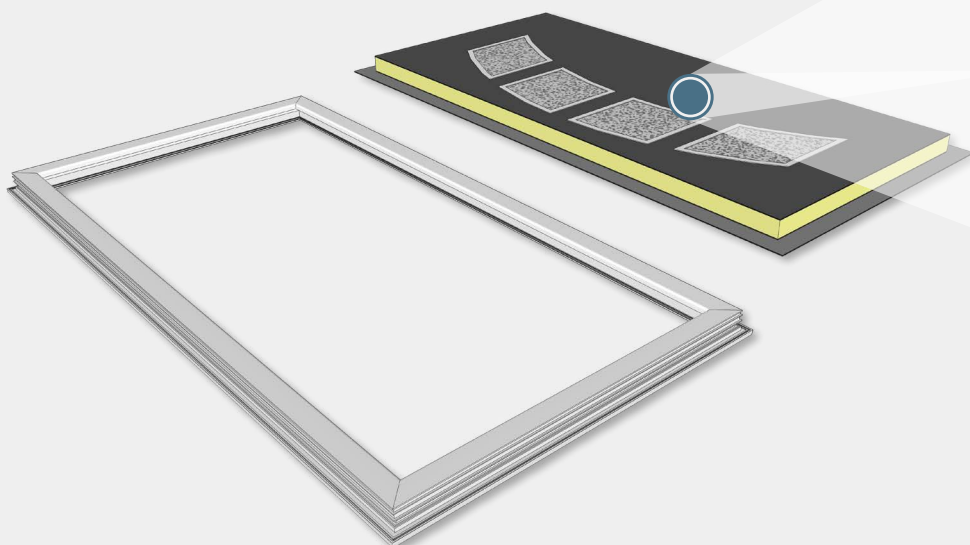
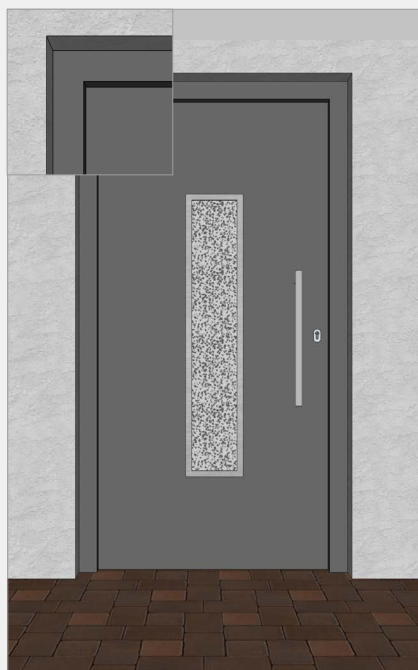


The Controlled one for leaf-enclosing entrance door panels

2-C-STP Construction Adhesive COSMO HD-200.101

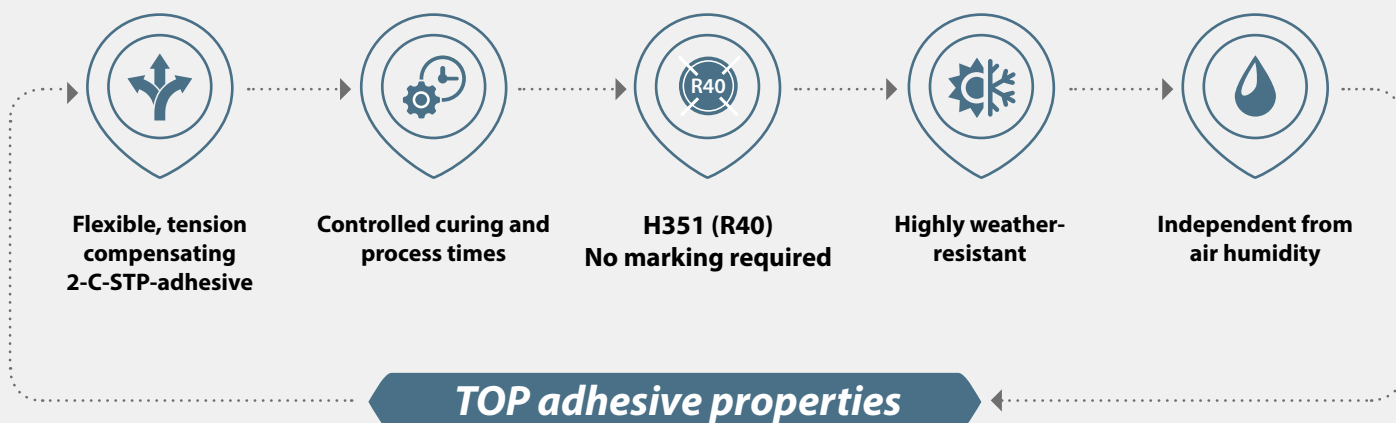
For many years, in addition to the classic door designs with insert panel, the market of windows and doors has been offering the possibility of making leaf-enclosing door panels with attachment panel. This type of door design gains more and more acceptance in the market due to its attractive appearance, safety-related advantages, improved heat-resistance, as well as its less demand on care compared with the classical variants.

For the production of this kind of door 1- and 2-component MS- and polyurethane-based adhesives are used for joining of top coat and section frame. In the course of the continuous further development of our adhesive systems, since not long ago, Weiss has been offering the 2C-STP construction adhesive **COSMO HD-200.101** as optimum product solution for this application. Due to its characteristic properties as flexible, controlled curing hybrid adhesive, it has just turned out to be an optimum product selection compared with the 1C-adhesives.



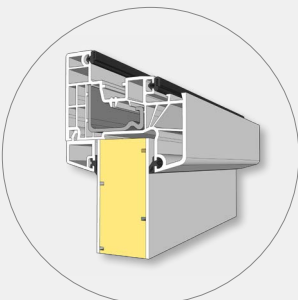
Attachment panel

(Leaf-section frame not visible)

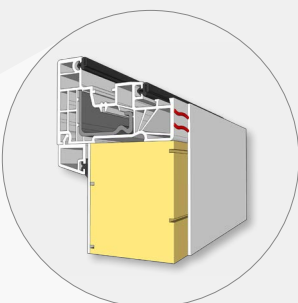




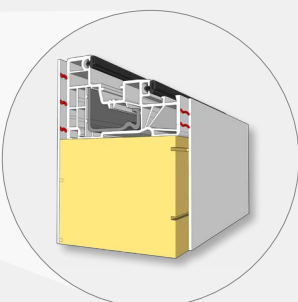
INSERT PANEL



SINGLE-SIDED ATTACHMENT PANEL



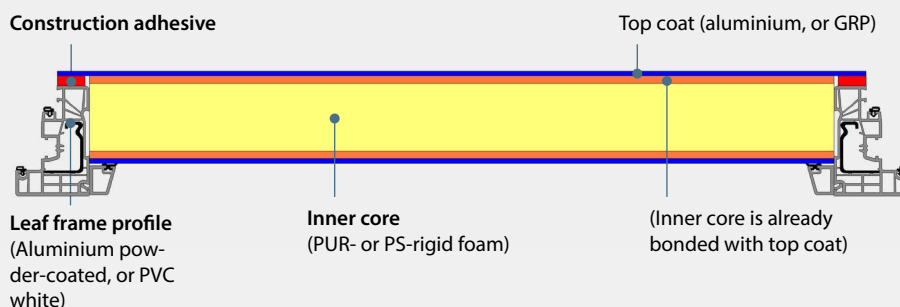
DOUBLE-SIDED ATTACHMENT PANEL



Creation of attachment panels

- 1 Cleaning and activation/preparation of surfaces
- 2 Application of adhesive on section frames
- 3 Placing and fixing of door panels on frames
- 4 Curing of adhesive

Construction adhesive



Section and top coat materials

- Plastic materials (PVC white, PVC film, GRP and others)
- Metals (aluminium bright/painted, steel bright, and others)
- Inorganic, not metallic materials (ceramics)

Challenges for bonding technologies when bonding of leaf-enclosing entrance door panels

1 Risk of frame distortion and deformation of materials when using:

- Dark-colours section materials
- Hard or semi-hard adhesives > compensation of shearing forces not possible

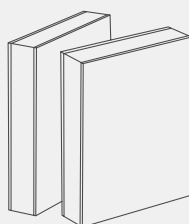
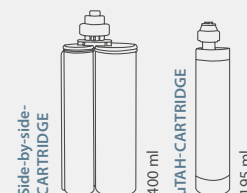
2 Uncontrolled curing of 1-C-adhesives

! For the preparation of bonding we recommend our activators **COSMO CL-310.110** and **COSMO CL-310.120**.

The solution: The controlled adhesive

COSMO HD-200.101

- Flexible, tension compensating 2-C-STP-adhesive
- Controlled curing and process times (2C-technology)
- Independent from air humidity
- No additional application of moisture required
- H351 (R40) no marking required
- Highly weather-resistant



This corresponds with: Door panel components for leaf-enclosing entrance door panels

With our **Door panel components** (top coats and core materials) we are offering you unlimited function and design possibilities for your leaf-enclosing entrance door panels. Please contact us! Please find our contact details on p. 32.



Process-optimised 1-C-PUR surface adhesives

COSMO PU-160.540 and COSMO PU-160.530

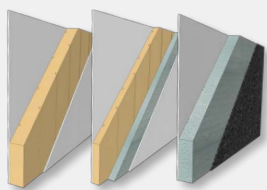
With the two 1-C-PUR adhesives **COSMO PU-160.530** and **COSMO PU-160.540** we have two adhesives in our range of products that can cover nearly all facets of surface bonding.

The **COSMO PU-160.530** is always used in industrial fields where a variety of substrates that are hard to bond, like PVC, ABS, PS, PC or also metals and mineral substrates with fluctuating qualities can occur.

Briefly said: the safety backup for your bonding on site.

Due to its very good adhesion to many materials and qualities, this adhesive ensures a maximum of safety and gives more space for your process control.

If it shall be a specialist for the construction of side walls, e.g. on the basis of **GRP/XPS/GRP**, a fast **COSMO PU-160.540** with a skinning time of 9 minutes has established itself. The optimum full curing from +35°C provides for fast reaching of functional strength. With this, a controlled, lean and fast production is accomplished. These are important criterions for a cost-efficient manufacture of side wall elements.



This corresponds with: COSMO Tech - GFK composite panels for automotive manufacturing

Depending on the installation situation, different requirements on our lightweight building units can result. Therefore, specific material combinations are required. With **COSMO Tech - GFK** we are offering you diverse options for the structure of ceiling elements, side walls and bottom plates (see page 20-21).

Please contact us! Please find our contact details on p. 32.





The surface specialists

COSMO PU-160.540

1-C-PUR adhesive

Applications:

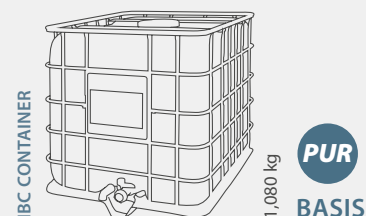
- Manufacture of sandwich and balustrade elements
- Bonding of surfaces
- Production of side walls of caravans

Special properties:

- Fast skinning time
- Tough-elastic adhesive joint
- Good penetration properties in EPS
- Solvent-free
- Expands (foams) during the curing process
- Good adhesive properties to GRP top coat and inner cores like XPS-, EPS- and PUR foams
- Good weather-resistance
- Compared to other 1-C-PUR adhesives of the COSMO PU series, it faster cures fully at temperatures of $>+35^{\circ}\text{C}$
- Faster process times possible

Packaging:

1,080 kg IBC container



COSMO PU-160.530

1-C-PUR adhesive

Applications:

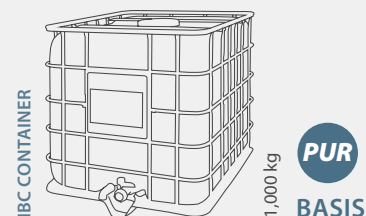
- For universal use
- Manufacture of sandwich and balustrade elements
- Bonding of surfaces
- Diverse industrial fields

Special properties:

- Long processing time
- Outstanding variety of application possibilities
- Elastic adhesive joint
- Solvent-free
- Expands (foams) during the curing process
- Goo adhesion properties with PVC, ABS, PS, PC, metals and mineral substrates
- Good bonding strength at heat
- Good weather-resistance
- Can be over-coated with many paint systems

Packaging:

1,000 kg IBC container



! COSMO PU surface adhesives for diverse application segments

When composite panels are manufactured, very special requirements are put on the adhesive system used because different technologies are applied for the application of adhesive and a large number of materials or material combinations are used. To be able to support you with the suitable adhesive in your individual production processes, we have developed a wide variety of systems with the most different characteristics referring viscosity, thixotropy, processing and pressing times.

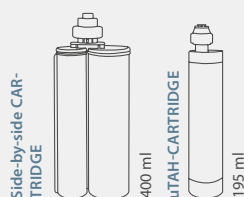
FOCUS on applications

COSMO Composite panels

The versatile element for automotive manufacturing

COSMO Tech - GFK

Depending on the installation situation, different requirements on our lightweight building units can result. Therefore, specific material combinations are required.



This corresponds with: the controlled 2-C-STP Construction Adhesive

For the assembly and sealing bonding of our elements in the field of automotive manufacture we recommend our **2-C-STP Construction Adhesive COSMO HD-200.101** (see page 14-15). Please contact us! Please find our contact details on p. 32.





Ceiling elements

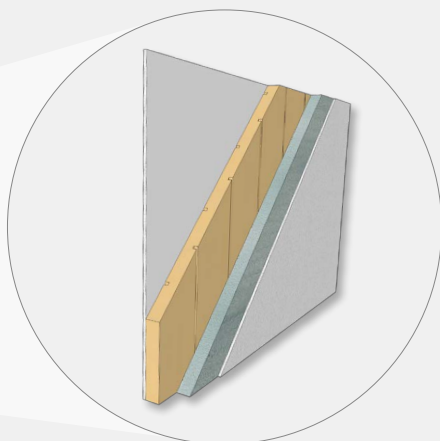
The core requirements on a ceiling element are low weight and high mechanical stiffness.

Exemplary design of elements:

GRP smooth / XPS and/or PUR core / GRP with/without gel coat

Properties:

- High pressure and bending strength
- Long-term water resistant
- Swelling-resistant, i.e. no changes of dimensions
- Minimum absorption of humidity



Side walls

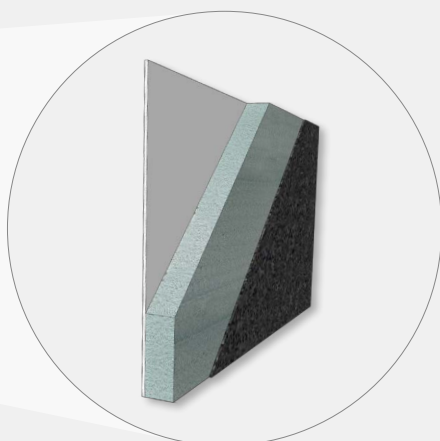
The side walls ensure the stability of the whole Coffe structure. Depending on the application, however, further properties, e.g. good durability of insulation, could be relevant.

Exemplary design of elements:

GRP smooth / XPS, PUR and/or TK core / GRP with/without gel coat

Properties:

- Screwable in combination with TK core
- Individual design as per specification



Floor elements

Despite of low weight, a bottom plate must have high strength and good wearing resistance. These requirements can be met depending on the application by selecting of suitable core materials or top coats.

Exemplary design of elements:

GRP anti-slip / XPS, PUR and/or TK core / GRP smooth

Properties:

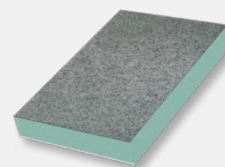
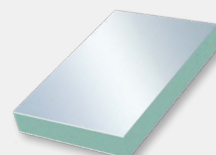
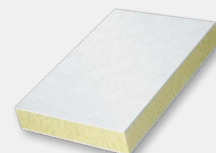
- High pressure and bending strength
- Long-term water resistant
- Slipping class 13
- Environmentally-friendly inserts (, TK is 100% recyclable)
- Swelling-resistant, i.e. no changes of dimensions
- Minimum absorption of humidity

The interior finishing

For the application inside of the vehicle we recommend our **COSMO Plan S** Integral rigid foam panel (see page 27).

Formats (mm):

Dimensions on request.



SECOND SOURCE

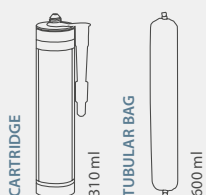
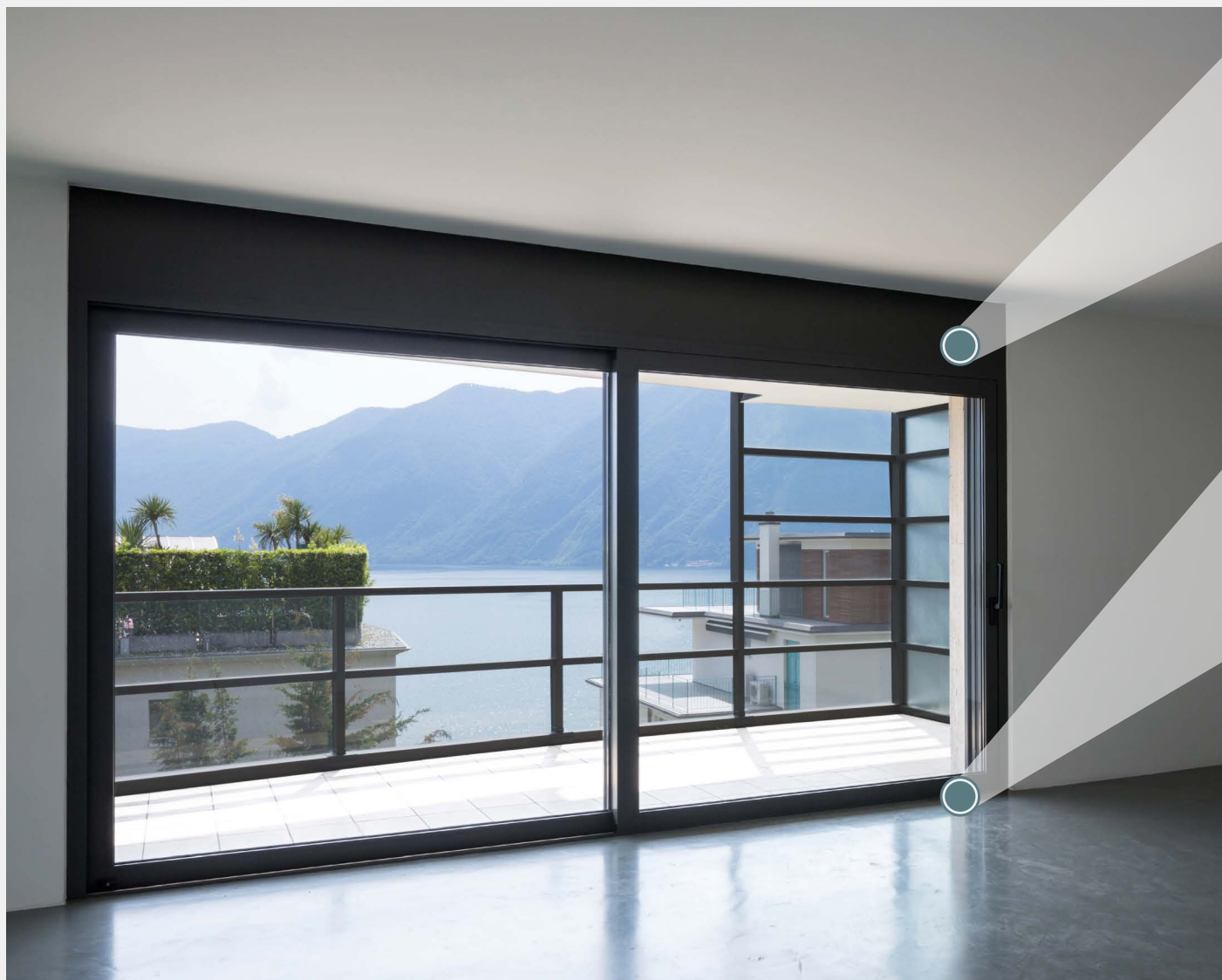
FOCUS on applications

COSMO Composite panels

Frame widening elements (RVE), basic elements as well as substructures

COSMO Frame - PVC

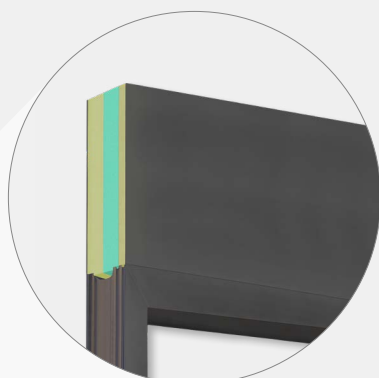
Thermally insulated composite panels for widening the profile (frame widening), for substructures (lifting and sliding doors) or window connection sections in window construction.



This corresponds with: the versatile assembly adhesive

For easy and safe bonding of elements to each other as well as to frame sections, we recommend our sealing assembly adhesive **COSMO HD-100.400**. Please contact us! Please find our contact details on p. 32.





COSMO Frame - PVC



Thermally insulated composite panels for widening the profile in window construction.

Top coats:

PVC compact panels, white with protective film

Core material:

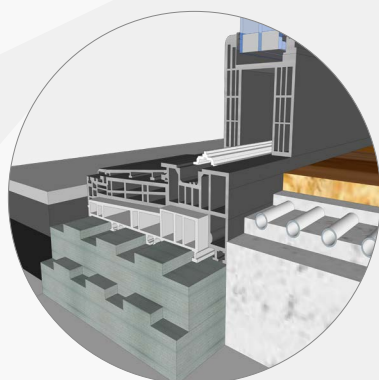
- Polystyrene-rigid foam, extruded (XPS)
- Screwable cores

Option:

With heavy film insert

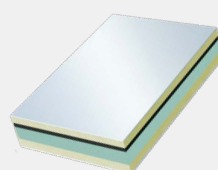
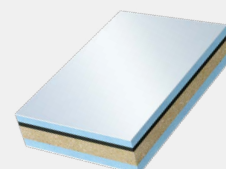
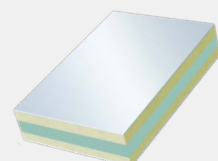
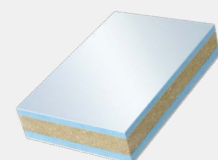
Properties:

- Noise insulating
- Moisture-resistant
- Weather-resistant
- UV resistant
- Free from CFC- and HCFC
- Suitable for sawing, milling, grinding, slot cutting, screwing and drilling
- Resistant to swelling and deformation



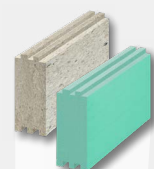
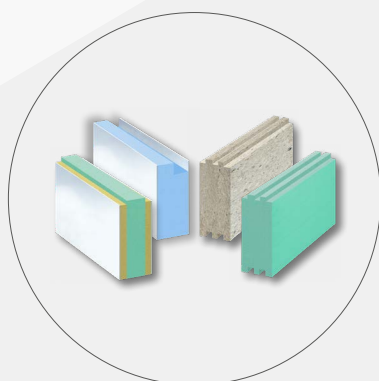
Formats (mm):

- 3,000 x 1,500
- 4,000 x 1,500

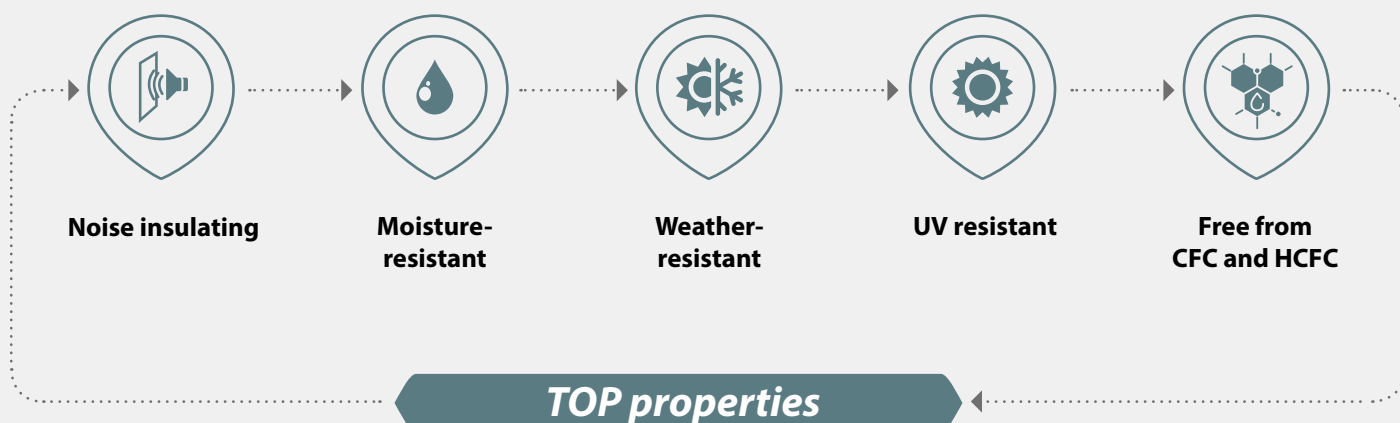


Processing of edges with groove and tongue

Markets and requirements change over time. While many processors preferred doing the profile furring and edge work themselves in the past, at present, requests for profiled off-the-shelf goods are increasing. In order to meet these wishes and requirements, we have invested in an ultra-modern edge-working centre. With it, we are able to process all standard material combinations.



SECOND SOURCE



COSMO Composite panels

COSMO Tech - GFK / HPL and COSMO-Plan S Integral hard foam panel

A circular inset image showing the interior of a modern tram or train. The view is from a passenger's perspective, looking down a long, brightly lit corridor. The ceiling is white with a curved, ribbed design. Large windows on the right side offer a view of a blue body of water and a distant shoreline. The floor is dark and reflective. A small, circular, blue-lit light fixture is visible on the ceiling.

Room elements
Ceilings, walls & floors

Module and furniture construction

A circular inset image showing the interior of a boat. It features a wooden table with a metal trash can and a small table lamp. There are white cushioned seats and a kitchen area with a sink and stove. The boat has a white hull and a dark interior.



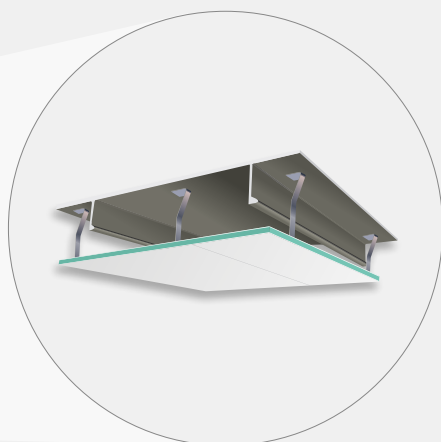
COWI Kalkula

WATER

Transportation & Marine

The quality assurance system of Weiss complies with module D of the 2014/90/EC (directive on marine equipment). The approved adhesive systems are subject to this quality assurance system. These special requirements of shipbuilding are arguably met by the following adhesives marked by the steering wheel.





COSMO Tech - GFK



The sandwich element for light-weight construction for ceilings, walls and floors.

Top coats:

Glass-fibre reinforced plastics (GRP)

Core material:

- Thermoplastic plastic material (TK / DNV-GL certified)
- Also available in XPS

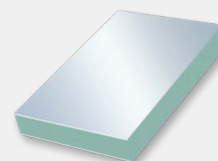
Properties:

- High pressure and bending strength
- Long-term water resistant
- Environmentally-friendly inserts (, TK is 100% recyclable)
- Swelling-resistant, i.e. no changes of dimensions
- Minimum absorption of humidity

Formats (mm)

Length x Width:

- 2,000 x 1,800
- 4,000 x 2,000
- 2,300 x 1,250
- 2,000 x 1,250
- 3,000 x 1,800
- 3,000 x 1,500
- Other dimensions on request



COSMO Tech - HPL



The sandwich element for light-weight module and furniture construction like tables, cabinets and seating elements.

Top coats:

- High-pressure laminated panels (HPL / IMO certified)
- Also available as film top coat, e.g. for wall designs in cabins and corridors

Core material:

- Thermoplastic plastic material (TK / DNV-GL certified)
- Also available in XPS

Option:

High pressure laminated panel (flame resistant / IMO certified) with silicate (non-flammable / IMO certified)

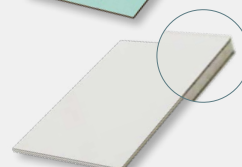
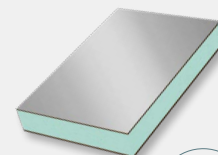
Properties:

- High pressure and bending strength

Formats (mm)

Length x Width:

- 2,800 x 1,860
- 2,800 x 2,070
- Other dimensions on request



HPL on both sides, silicate
Dimensions on request.



COSMO-PLAN S Integral rigid foam panel

The white surfaces have a noble satin effect. They are ideal for ceiling elements as well as for the use in sanitary areas.

Properties:

- Good processing properties
- Fine, smooth surface
- Weather & UV-resistant
- Versatile use
- Pressure resistant according to DIN EN ISO 844: >3 MPa
- Shore D according to DIN EN ISO 868: ~75

Formats (mm)

(Length x Width x Height):

- 3,000 x 1,250 x 8-30
- 3,000 x 1,560 x 10/19

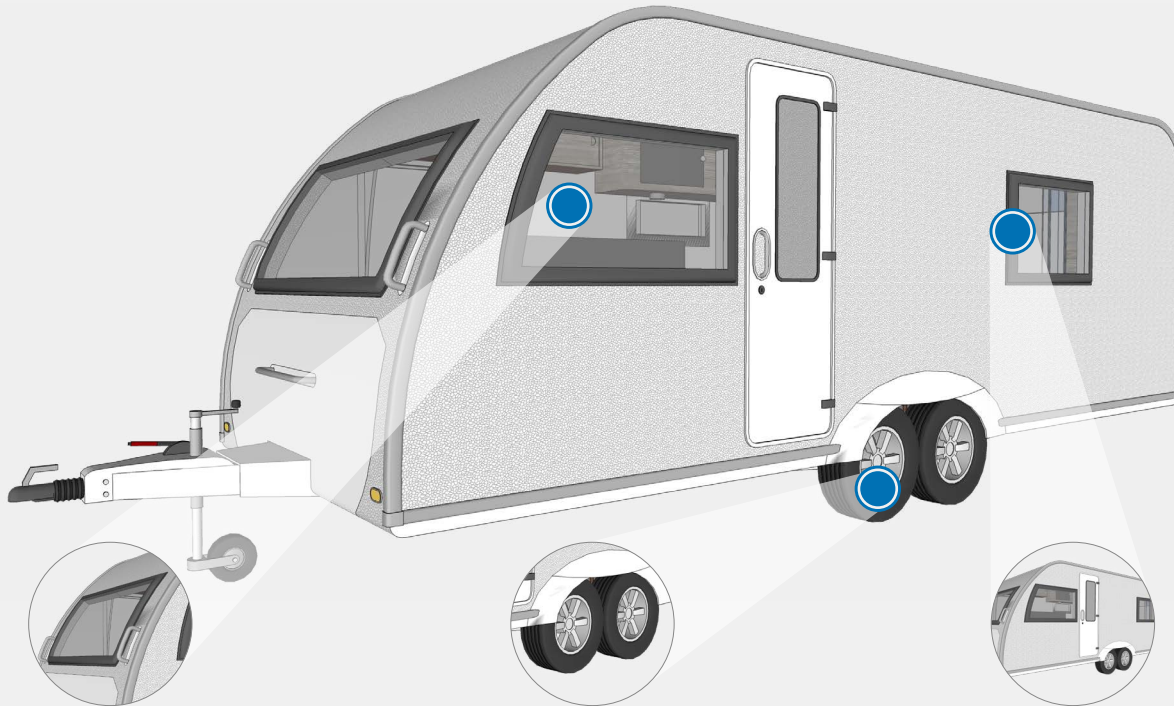


FOCUS on applications

PUDOL Cleaning and care agent

PUDOL Caravan care set – Outdoor

The professional combination set consisting of our Caravan Shampoo, Professional Rim Cleaner and Multi-Cloth, including bucket and sponge for cleaning and maintaining the outside of caravans.



Packaging:

- Combined set:
- 2 x 200 ml bottle
 - 1 x multi-cloth bucket
 - 1 x sponge
 - 1 x bucket



1 Caravan shampoo SOFT

Applications:

As an addition for manual washing of caravans. Also suitable for cleaning of panes as well as plastic parts inside and outside.

Special properties:

- Highly concentrated
- Mild to surfaces
- Neutral shampoo with good dirt-dissolving and degreasing features
- Strongly foaming
- Does not attack plastics
- Mild for the hands
- Water runs off smoothly
- It dries free from striation

2 Professional Rim Cleaner POWER

Applications:

A special cleaner for all lacquered aluminium and steel rims.

Special properties:

- Highly concentrated
- It is strongly dirt-dissolving and degreasing, also for intractable pollutions like brake dust or oil residues.

3 Multi-Cloth POWER

Applications:

Cleaning cloth for universal use when on the way for thorough and fast cleaning of the most surfaces without the need for water, soap and cleaning tools. Thoroughly and carefully removes strongest pollutions, e.g. brake dust, oils, and grease.

Special properties:

- Water-free cleaning
- Strongly wear-resistant fleece, lint-free
- Multi-purpose



This corresponds with: the surface specialists for the caravan construction

For bonding of our composite panels in the production of side walls for caravans we recommend our surface specialists **COSMO PU-160.540** und **COSMO PU-160.530** (see page 18-19). Please contact us! Please find our contact details on p. 32.





PUDOL Caravan care set– indoor

The professional combination set consisting of our Orange Cleaner, Microsoft Care System and Multiclean including bucket and microfibre cloth for cleaning and maintaining the inside of caravans.



Packaging:

- Combined set:
- 3 x 200 ml bottle
 - 1 x microfibre cloth
 - 1 x bucket



1 Orange cleaner FRESH

Applications:

Multipurpose cleaner for colour spots, spots from chewing gum, spots on upholstery, carpet floorings, clothes, from ballpoint pens, ink, nail varnish and rubber abrasion on floorings. It has a concentrated effect as odour neutraliser, e.g. in WCs, in garbage bins or in all places where unpleasant odours can occur.

Special properties:

- Highly concentrated
- Odour neutralising



2 Microsoft System Care CARE

Applications:

It is suitable, e.g., for the following surfaces: All metals, plastics, Resopal, polyester, ceramics, porcelain, glass, enamel, stainless steel, chromium, copper, brass, nickel and silver.

Special properties:

- Highly concentrated
- Acid-free
- It contains slightly smelling solvents
- It protects from corruptions and prevents tarnishing of metals, water stains, fingerprints and sticking of dust on materials
- Water drips off
- It does not leave any scratches or grooves



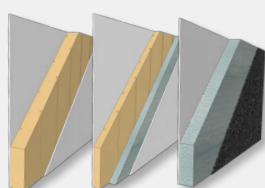
3 Multiclean POWER

Applications:

Alkaline power cleaner and degreaser

Special properties:

- Highly concentrated
- Strong dirt-dissolving and degreasing effect
- Solvent-free
- Free from CFC
- Non-flammable
- It has optimum wetting and emulsifying effect
- Moderate foam development



This corresponds with: COSMO Tech - GFK composite panels for automotive manufacturing

Depending on the installation situation, different requirements on our lightweight building units can result. Therefore, specific material combinations are required. With **COSMO Tech - GFK** we are offering you diverse options for the structure of ceiling elements, side walls and bottom plates (see page 20-21). Please contact us! Please find our contact details on p. 32.

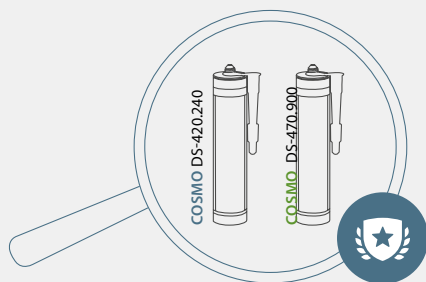


FOCUS on details

COSMO Adhesives

Approved adhesives

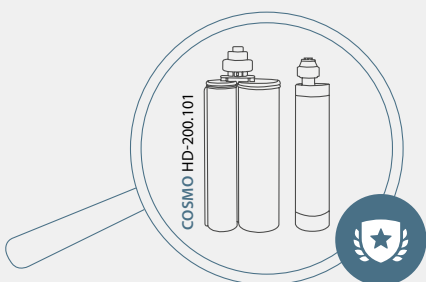
„So test therefore who join forever“, this saying is probably older than the modern adhesive application as such. However it describes the gist very well. To create a prognosis or evaluation of the respective application of adhesive, tests are required that, on the one hand, allow a practical statement for the particular application and, on the other hand, make it possible to provide a fast estimation of suitability with respect to the long-term/ageing behaviour. We engage external accredited institutes to confirm and certify many product properties.



Diffusion barriers - Adhesive sealants for meeting the DIN 4108-11

The new standard describes and defines the minimum requirements on the durability of adhesive joints with adhesive tapes and adhesive compounds for the creation of airtight layers.

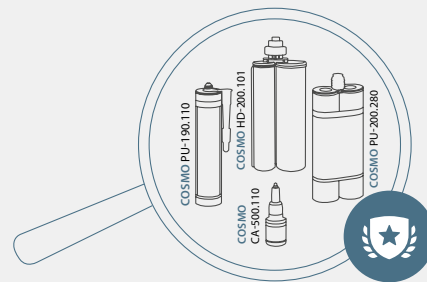
It is an important milestone for the market segment of air- and windtight building envelope, so that in future, mostly certified products are allowed to be used for this sensitive range of applications. The adhesive sealants of **Weiss** also meet the required quality standard with their sheets.



Salt spray test as per DIN EN ISO 9227-NSS:2017

Tested by the ILAK, our adhesives **COSMO HD-100.410**, **COSMO HD-100.400** and **COSMO HD-200.101** have confirmed the corrosion protection effect as per test conditions. This is why bonding or sealing is only as good as the not-corroded surface of the bonded material.

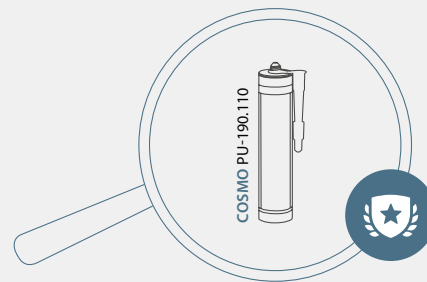
Always on our focus – ageing resistance and durability of our adhesives in the bonding application. Your safety.



Certified quality by the ift Rosenheim as per EN 14351-1

In 2017, the ift Rosenheim has tested Weiss products, e.g. **COSMO HD-200.101**, **COSMO PU-200.280** or **COSMO CA-500.110** etc., on manufactured windows elements and has successfully confirmed the performance properties as per EN 14351-1.

On one-wing turn/tilt windows with bottom light window the following was tested: Air permeability, resistance to wind load; water tightness, operating forces, continuous functioning, reveal and hinge obstacle test, mechanical load and impact resistance.



„Ballistic Resistance of Body Armor NIJ“ Standard -010106 passed

Bullet-resistant elements of Aramid scrims and epoxy-resin plates bonded with **COSMO PU-190.110** could pass the bullet test „Ballistic Resistance of Body Armor NIJ Standard -010106“ with best results. The ballistic test with 5 projectiles within an area (multi-hit) did not cause any delamination of the compound element.

Other adhesives based on PUR or epoxy failed at this special demanding test.



Did you know?

Sometimes only one thing matters, but when it is outstanding, this will cause that all other parameters join the end of the queue. Weiss is continuously developing its existing product portfolio to optimise the composition and properties of our adhesives and to adapt them to your application requirements as the best possible solution. With this, in the long-term, new findings and thus advantages compared with comparable products become visible that we want to introduce to you below as product examples.



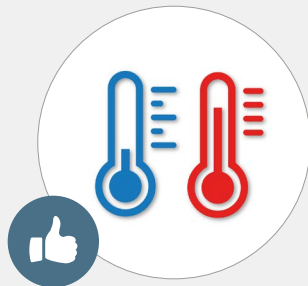
Visual inspection based on colour change with **COSMO DS-420.240**



With this adhesive sealant for vapour barriers you can directly check the curing behaviour by observing the changing colour of the bead.

Using the "wet-in-wet method" the film/sheet can be pressed into the adhesive bead by means of a relief loop. The colour change immediately shows the status of the curing process of the bead. As soon as it looks blue-transparent, it will be hardened completely.

To accelerate the hardening process preferably the film/sheet should be pressed on in a V-fillet. With this, the outer flanks are nearly pressed down to 0 to faster achieve the required strength. In the middle, the bead provides the 1 mm airtight layer and needs, depending on the environmental conditions, the relevant time for curing completely.



Passing of high temperature peaks with **COSMO HD-100.450**

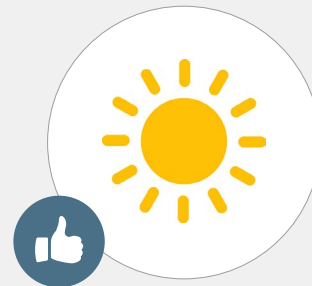


Compared with other hybrids of our portfolio and competitive products on the market, this adhesive is able to resist high temperature peaks of +210 °C for 30 minutes without any considerable functional restrictions. The adhesive bead remains intact.

This property is important with subsequent power coating of the bonded materials, especially referred to the currently increased powder coating temperatures. As recently as a few years ago, powder-coating took place at approx. +180°C. Currently the application recommendations have been increased to approx. +200°C for a variety of powder coating materials. The trend line referring to temperature is rising further.

Usually, the adhesives will decompose nearly completely at these high temperatures of +200°C. Certainly this always depends on the time period during which the annealing temperature can act on it.

Due to this advantage, the **COSMO HD-100.450** has maximum reserves which cannot be provided by its competitors.



UV-stability / Colour stability of MS-/ STP-Polymers



Generally, it is standard in the market to state the UV-resistance of the respective MS/STP adhesive referred to 1,000 hours of intensive radiation / interval watering, or for instance in a SUNTEST device.

Roughly, these 1,000 hours refer to weathering with Central European standard climate for 1 year.

Currently, with our **COSMO HD-100.400** (colour white) we are reaching a service life of more than 5,000 hours in the SUNTEST. Compared with many other products, with this value we are one of the market leaders and can set high quality standards.

Consider that a high UV stability always is also an index for a generally high stability of the adhesive system against many external effects.

For this reason, for us, safe bonding always needs a long-term assessment.

! Do you need more detailed information about further products? Please contact us! Please find our contact details on p. 32.

Digital media

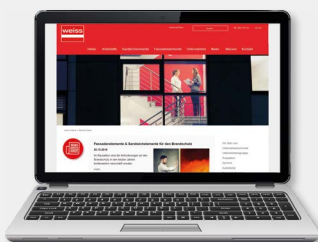
Interactive communication

Always up to date

Since 2018, **Weiss** has been appearing on the scene with a newly revised website. We are happy to bring our products and fields of application closer to you at the **www.weiss-chemie.de** and to keep you informed about the latest developments.

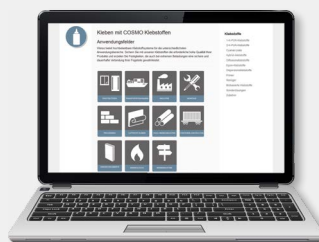


Current issues



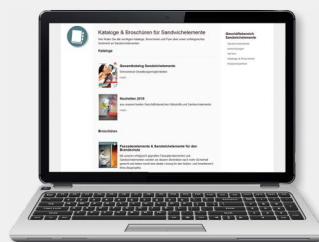
- + By our slide show and our News column you are always informed on current topics and remain up to date.

Fields of Application



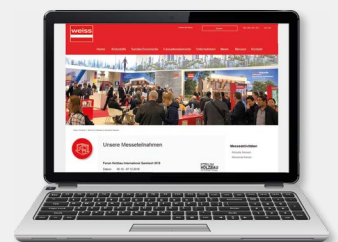
- + The reorganisation of our Fields of Application enables you to intentionally look for application solutions and conveniently to navigate to your search target.

Service / Downloads



- + In our Product / Application area, you will directly find the appropriate contact person. In addition, you can easily download all print media as well as data sheets.

Trade fairs

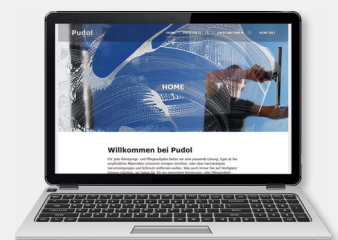


- + Visit us at our booths at the national and international trade fairs and obtain information online about all details and facts referring our participations in trade fairs.

PUDOL – Cleaning and care agent

- + **PUDOL** stands for convincing quality of special products in the field of commercial cleaning. In addition to a complete range of cleaning and care products for different applications, we are offering a comprehensive service with interesting solutions and benefits. Visit our website: **www.pudol.de**

Cleanliness refreshes the senses





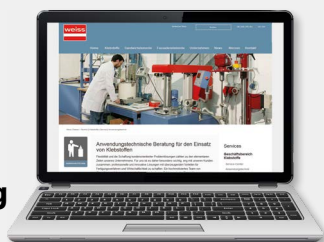
Customer support

Flexibility and the creation of customer-oriented problem solutions count among the elementary objectives of our company. Therefore, it is very important to us to provide professional and innovative solutions with convincing advantages for production methods and with high efficiency in close cooperation with our customers.

A highly motivated team of application engineers, materials testers and chemists with long-term experience in development, modification, materials science, building physics and application of adhesives and composite panels is on hand with help and advice for you.



Application engineering Adhesives



- 01** + Support with creating the requirements specification
- 02** + Expert advice on the selection of adhesives
- 03** + Optimisation tips for the design of the bonding surfaces
- 04** + Rationalisation proposals for work flows
- 05** + Recommendation of suitable dosing units as well as application and pressing technology
- 06** + Optimisation of workplaces when using adhesives
- 07** + Training for workers and specialist dealers; technical lectures
- 08** + Creation and modification of adhesives in our Research and Development department



Test possibilities in our application technology and internal research and development department

- +** With our own test facilities we are not only able to test in compliance with DIN and EN standards but we can also evaluate your components (component sizes) under operating conditions in a practice-oriented way. In addition, we ensure the high quality of our products on the basis our cooperation with the most diverse testing institutes.



Application engineering Composite panels



- 01** + Individual element construction
- 02** + Application-specific material components
- 03** + Project-related proposals for solutions
- 04** + Selection of materials in accordance with construction-physical requirements and conditions



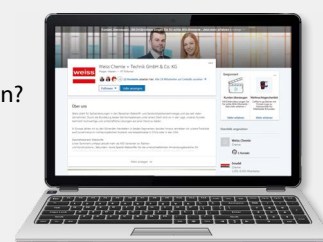
Test possibilities in our Technical Centre

- +** **Materials tests:**
 - Storage at alternating climate
 - 3-point bending rigidity
 - Perpendicular tensile strength
 - Colour measurement
 - Storage in water
 - Determination of U-values
- !** Furthermore, we are working together with famous testing institutes that are responsible for fire protection and sound insulation.



Are you also a member of LinkedIn? Then follow us. Regularly we are posting interesting news. You will find us at:

Weiss Chemie + Technik GmbH & Co. KG.



An overview of our range of products

Experience quality on a whole new level, with the powerful products by Weiss:



COSMO Adhesives

Durably firm joints

COSMO CA (Cyanoacrylates)
COSMO PU (Polyurethane adhesives)
COSMO CL (Cleaning agents)
COSMO SL (Dispersion adhesives)
COSMO HD (Hybrid adhesives)
COSMO EP (Epoxy-resin adhesives)
COSMO DS (Dispersion adhesives)
COSMO SP (Service products)

Fields of application

- + Windows and doors
- + Transportation / Marine engineering
- + Industry
- + Assembly
- + Dry construction
- + Airtight bonding
- + Wood / Furniture industry
- + Container construction
- + Sandwich elements
- + Fire protection
- + Advertising industry

Do you have any questions?

Our Service Center
Business area Adhesives:
+49 (0) 2773 / 815 - 255
+49 (0) 2773 / 815 - 274



COSMO Composite panels

Unlimited possibilities for design

COSMO Therm (heat-insulating)
COSMO Silent (sound insulating)
COSMO Protect (penetration resistant)
COSMO Design (grooved)
COSMO Tech (individual)
COSMO Frame (frame widening)

Fields of application

- + Window and façade
- + Door construction
- + Industry
- + Automotive manufacturing
- + Trailer construction
- + Partition panel construction
- + Gate construction
- + Container construction
- + Energy conservation
- + Fire protection
- + Burglar resistance
- + Sound proofing

Do you have any questions?

Our Service Center
Business Area Sandwich Elements:
+49 (0) 2773 / 815 - 321

Our Service Center
Business area Façade:
+49 (0) 5245 / 9241 - 21



PUDOL Cleaning and care agent

Cleanliness refreshes your senses

PUDOL SOFT
Mild cleaning agent for sensitive materials
PUDOL CARE
Maintenance product for high gloss and hygiene
PUDOL POWER
Powerful cleaning agent for extreme pollution
PUDOL FRESH
Cleaning agent for cleanliness and fresh air

Fields of application

- + Flooring
- + Sanitary installations
- + Clothing care
- + Foodstuff industry
- + Household and gastronomy
- + Windows and glass
- + Dishwasher
- + Carpet and upholstery
- + Industry and workshop
- + Cars
- + Skin cleaning
- + Skin protection

Do you have any questions?

Our Service Center PUDOL:
+49 (0) 2743 / 9212 - 0



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Web: www.weiss-usa.com

PUDOL



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Weiss Group*

Cleanliness refreshes the senses

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