

# COSMO® Adhesives and Sealants

Transportation & Marine



**weiss**



**SECURE AND DURABLE CONNECTIONS**

Traditional bonding technologies like riveting, soldering, welding, or screwing are increasingly being replaced by modern adhesive systems, resulting in numerous advantages.

For example, adhesives do not change the specific properties of the respective parts to be joined, as is the case with welding. In addition, no holes that risk weakening the structure of the materials are required, for example, when screwing or riveting.

Glued joints also ensure a more even force distribution across the entire bonded surface, resulting in significantly higher overall strength. Weiss offers highly loadable adhesive systems for a wide variety of mobile applications, tailored to the special requirements of this market segment. Ensure the required high quality of your products with our adhesives and achieve strengths that guarantee a secure and durable connection of your joined parts, even under extreme loads.

**OUR EXPERTISE FOR YOUR BONDING PROCESSES**

- + Expert advice on the selection of adhesives
- + Suggestions for optimisation and rationalisation of your work flows
- + Training courses on adhesive handling and processing equipment technology



- 1 Refrigerated vehicles
- 2 Caravan construction
- 3 Ambulance vehicles
- 4 Delivery and mail transporters
- 5 Food and beverage trolleys
- 6 Fire engines
- 7 Rail vehicle construction
- 8 Ships & cabin construction
- 9 Bus manufacturing
- 10 Construction machinery
- 11 Tanker lorry
- 12 Cash-in-transit vehicles



**CERTIFIED ADHESIVES IN THE SHIPPING INDUSTRY**

In shipping, "all commercially used ships, yachts and boats" are only allowed to use tested and approved products. Weiss' quality management system complies with Module D (Production Quality Assurance) of Directive 2014/90/EU on marine equipment. Approved adhesive systems are subject to this system.

These special requirements of shipbuilding are demonstrably met by the adhesives marked with the steering wheel.





Surface bonding places specific demands on the adhesive system, depending on the technique used to apply the adhesive and choice of material. In order to support your individual process, we offer a variety of adhesive systems with different settings for viscosity, thixotropy, processing and pressing times.


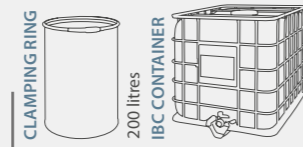
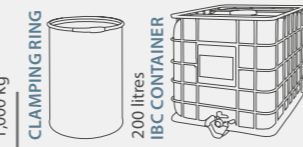
**Top features of 1-C-PUR**

- + joint-filling
- + no additional costs for mixing
- + less adhesive application
- + low investment machine order

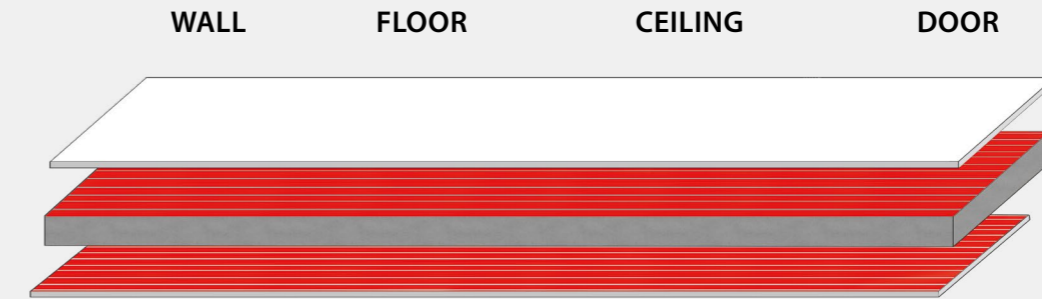
**Top features of 2-C-PUR**

- + highly flexible adjustable process time
- + low foaming
- + low pressing pressure required
- + defined adhesive joint possible

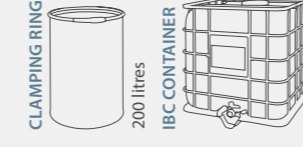
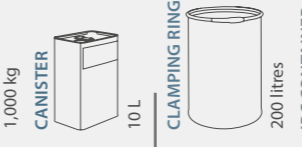
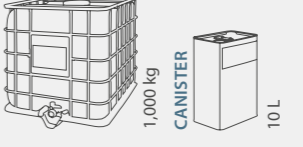
**1-C-PUR ADHESIVES**

	 <b>The slow one</b>	 <b>The low foamer</b>	 <b>The plastic professional</b>
<b>Product</b>	<b>COSMO® PU-160.440</b>	<b>COSMO® PU-160.690</b>	<b>COSMO® PU-160.530</b>
<b>Special property</b>	<ul style="list-style-type: none"> <li>• Long open time</li> <li>• Adheres to a wide variety of substrates</li> <li>• good adhesive strength in hot conditions</li> </ul>	<ul style="list-style-type: none"> <li>• low foaming compared to other 1-C-PUR adhesives of the COSMO® PU series</li> <li>• excellent penetration properties</li> </ul>	<ul style="list-style-type: none"> <li>• excellent adhesion to various plastics</li> <li>• very broad range of adhesion without primer</li> </ul>
<b>Viscosity (+25°C)</b>	approx. 4 000 mPa.s	approx. 3 800 mPa.s	approx. 6 500 mPa.s
<b>Skin formation time/pot life</b>	approx. 75 min	approx. 18 min	approx. 40 min
<b>Pressing time</b>	approx. 220 min	approx. 45 min	approx. 240 min
<b>Tensile shear stress, +20°C</b>	approx. 5 N/mm <sup>2</sup>	approx. 7.9 N/mm <sup>2</sup>	approx. 6 N/mm <sup>2</sup>
<b>Solvent-free</b>	✓	✓	✓
<b>Can be coated over</b>	✓		✓
<b>Steering wheel/fire retardant</b>	-	-	-
<b>Foaming</b>	✓	(✓) low	✓
<b>Density</b>	approx. 1.10 g/cm <sup>3</sup>	approx. 1.10 g/cm <sup>3</sup>	approx. 1.12 g/cm <sup>3</sup>

**EXAMPLES FOR APPLICATION**



**2-C-PUR ADHESIVES**

	 <b>The slow one</b>	 <b>The strong grip</b>	 <b>The fast one</b>
<b>Product</b>	<b>COSMO® PU-220.150</b>	<b>COSMO® PU-220.590</b>	<b>COSMO® PU-220.550</b>
<b>Special property</b>	<ul style="list-style-type: none"> <li>• Long open time</li> <li>• Adheres to a wide variety of substrates</li> <li>• Good bonding strength at heat</li> </ul>	<ul style="list-style-type: none"> <li>• Specialist in aluminium honeycombs</li> <li>• Tensile shear strength approx. 15 N/mm<sup>2</sup></li> <li>• light, structurally viscous</li> </ul>	<ul style="list-style-type: none"> <li>• fast curing time</li> <li>• Adheres to a wide variety of substrates</li> <li>• Good bonding strength at heat</li> </ul>
<b>Viscosity (+25°C)</b>	approx. 3 000 mPa.s	approx. 5 000 mPa.s	approx. 3 000 mPa.s
<b>Skin formation time/pot life</b>	approx. 100 min	approx. 27 min	approx. 12 min
<b>Pressing time</b>	approx. 5 h	approx. 110 min	approx. 60 min
<b>Tensile shear stress, +20°C</b>	approx. 16.0 N/mm <sup>2</sup>	approx. 16.0 N/mm <sup>2</sup>	approx. 18.0 N/mm <sup>2</sup>
<b>Solvent-free</b>	✓	✓	✓
<b>Can be coated over</b>	✓	✓	✓
<b>Steering wheel/fire retardant</b>	-	-	-
<b>Foaming</b>	-	-	-
<b>Density</b>	approx. 1.48 g/cm <sup>3</sup>	approx. 1.49 g/cm <sup>3</sup>	approx. 1.48 g/cm <sup>3</sup>



Our one and two-component adhesive systems are suitable for structural bonding of a wide variety of materials. Even under extreme loads, they offer a safe and durable connection, both in the trade and in industry.

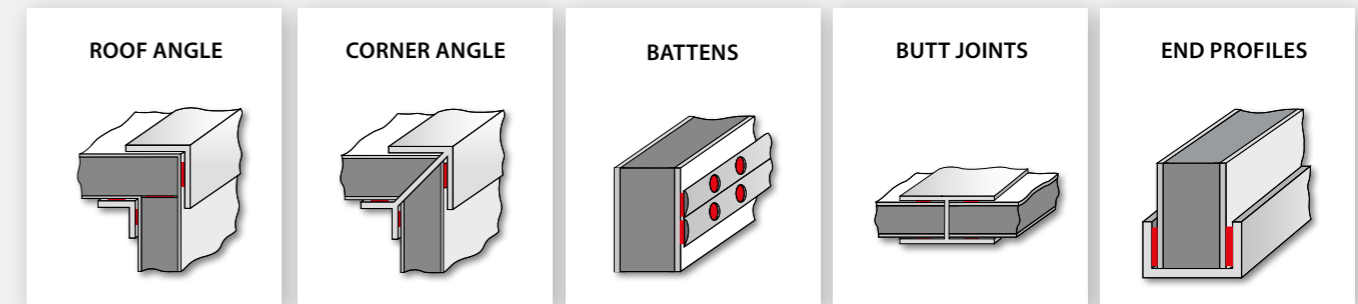
## TOP properties

- + high tensile and shear strength
- + long-term resistance to environmental influences
- + good adhesion to different materials
- + good resistance to dynamic loads

## 2-C-PUR ADHESIVES

	<b>The slow one</b>	<b>The one free from H-351</b>
<b>Product</b>	<b>COSMO® PU-200.180</b>	<b>COSMO® PU-200.500</b>
<b>Special property</b>	<ul style="list-style-type: none"> <li>• many certificates such as GEV EC 1, steering wheel</li> <li>• Adheres to a wide variety of substrates</li> <li>• good adhesive strength in hot conditions</li> </ul>	<ul style="list-style-type: none"> <li>• H 351-free, low labelling</li> <li>• light, structurally viscous</li> <li>• UV-resistant</li> </ul>
<b>Viscosity (+25°C)</b>	medium viscous-pasty	low-viscous-pasty
<b>Skin formation time/pot life</b>	approx. 115 min	approx. 21 min
<b>Pressing time</b>	approx. 7 h	-
<b>Tensile shear stress, +20°C</b>	approx. 13 <sup>N</sup> /mm <sup>2</sup>	approx. 17.0 N/mm <sup>2</sup>
<b>Solvent-free</b>	✓	✓
<b>Can be coated over</b>	✓	✓
<b>Steering wheel/flame retardant</b>	✓	-
<b>Foaming</b>	✓	✓
<b>Density</b>	approx. 1.52 g/cm <sup>3</sup>	approx. 1.42 g/cm <sup>3</sup>

## EXAMPLES FOR APPLICATION



## 1-C AND 2-C HYBRID SEALANTS AND ADHESIVES

	<b>The multi-talent</b>	<b>The controlled adhesive</b>	<b>The high-viscosity High Tack</b>
<b>Product</b>	<b>COSMO® HD-100.400</b>	<b>COSMO® HD-200.101</b>	<b>COSMO® HD-100.700</b>
<b>Special property</b>	<ul style="list-style-type: none"> <li>• very broad adhesion spectrum</li> <li>• good weather resistance &amp; UV stability</li> <li>• elastic adhesive joint</li> </ul>	<ul style="list-style-type: none"> <li>• fast and controlled full hardening</li> <li>• good weather resistance &amp; UV stability</li> <li>• High strength of adhesive joints</li> </ul>	<ul style="list-style-type: none"> <li>• very broad adhesion spectrum</li> <li>• Excellent smoothing properties</li> <li>• Excellent dosability</li> </ul>
<b>Viscosity (+25°C)</b>	approx. 600 000 mPa.s	approx. 150 000 mPa.s	approx. 1 200 000 mPa.s
<b>Skin formation time/pot life</b>	approx. 12-15 min	approx. 30 min	approx. 9 min
<b>Pressing time</b>	-	-	-
<b>Tensile shear stress, +20°C</b>	approx. 3.1 N/mm <sup>2</sup>	approx. 4.0 N/mm <sup>2</sup>	approx. 2.7 N/mm <sup>2</sup>
<b>Solvent-free</b>	✓	✓	✓
<b>Can be coated over</b>	✓	✓	-
<b>Steering wheel/flame retardant</b>	-	-	-
<b>Foaming</b>	-	-	-
<b>Density</b>	approx. 1.54 g/cm <sup>3</sup>	approx. 1.49 g/cm <sup>3</sup>	approx. 1.53 g/cm <sup>3</sup>

# An overview of our range of products

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



## **COSMO® Adhesives**

*Durably firm bond joints*

**COSMO® CA** (Cyanoacrylates)  
**COSMO® PU** (Polyurethane adhesives)  
**COSMO® CL** (Cleaning agents)  
**COSMO® SL** (Diffusion 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
- + Composite panels
- + Fire protection
- + Advertising industry

### **Do you have any questions?**

**Our Service Center  
Adhesives and Sealants Division**

+49 (0) 2773 / 815 - 274



## **COSMO® Composite Panels**

*Unlimited possibilities for design*

**COSMO® Therm** (heat-insulating)  
**COSMO® Silent** (sound insulating)  
**COSMO® Protect** (penetration-resistive)  
**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  
Composite Panels Division:**

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**Our Service Center  
Façade Division:**

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## **PUDOL Cleaning and maintenance products**

*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 area
- + Clothing care
- + Food 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:**

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senses*

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