

Technical Data Sheet



AB-COR[®] 930 UWS

2-C-EP-coating for application under water

Description:

2-component epoxy coating with **ABP - bionic technology**
free of toxic heavy metals, benzyl alcohol, coal tar, anthracene oil and plasticizers

Characteristics:

- applicable and hardening under water
- for the repair of small defects under water; in areas with early contact with water and on moist steel surfaces
- useable from a temperature above +4°C
- excellent corrosion protection
- only for manual application with special technique / surface preparation
- active water displacement of the substrate
- inert and harmless once cured

Application:

AB-COR 930 UWS is an innovative repair coating for steel constructions, which are continuously under water or under wet conditions. **AB-COR 930 UWS** is a unique product, which can be applied under water, displaces the water from the substrate and cures under this extreme conditions. By following the preparation and working instructions, **AB-COR 930 UWS** gets a good adhesion on the steel surface (> 7 MPa, ISO 4624, application and curing in salt water) and performs an active corrosion protection. By using special application technique, **AB-COR 930 UWS** is suitable as high-build system in one coat; multiple application is also possible.

N/B: **AB-COR 930 UWS** is only available in a dark grey colour. If required a coloured under water topcoat is available which can be applied on **AB-COR 930 UWS**. **AB-COR 930 UWS** is to be applied only by trained and authorized companies.

Layer thickness:

approx. 300 - 1000 microns DFT per layer (1 - 2 x) / depending on the object
Note: Avoid higher layer thickness, otherwise the water displacing from the substrate can be influenced.

Consumption:

depending on application conditions; theoretical approx. 2 kg/m² per 1 mm layer thickness

Resistant to:

- marine conditions
- water, seawater, brackish water
- wet heat up to +50°C (please consult us)
- neutral salt solutions
- dry heat up to +80°C

Technical Data:

Mixing ratio A : B	10 : 1 by weight
Density (23°C)	approx. 2.0 g/cm ³
Volume solids	approx. 100 %
Viscosity (23°C)	thixotropic

Details for application:

Pot life (10°C / 23°C / 30°C)	approx. 45 minutes / 30 minutes / 15 minutes
Substrate / water temperature	minimum 4°C up to maximum 25°C
Material temperature (optimum for mixing)	15 - 20°C (warm up the material if required!)
Maximum relative humidity of air	100 % / applicable under water
Curing time / overcoat (10°C / 23°C / 30°C)	approx. 18 hours / 8 hours / 6 hours
Curing time / mech. resistance (10°C / 23°C / 30°C)	approx. 5 days / 3 days / 3 days
All above values are approximate and may be used as a guideline for specifications	

Clean up tools:

To clean the tools we recommend to use **AB-COR 999** as cleaner immediately after application.

Packaging:

1 kg - pails (0.91 kg component A + 0.09 kg component B), other pails are available on request

Colour:

dark grey (component A dark grey, component B clear)
- due to raw material variations and manufacturing techniques, a slight colour / batch difference may occur -

Storage:

6 months, unopened in original drums under dry conditions and a temperature of 15 - 25°C.
At temperatures < 10°C crystallization is possible. Please consult us.

Surface preparation:

The steel surface that is to be coated must be dry and free of mill scale, debris, grease, fat, oil, dust, areas of corrosion / rust as well as other contaminants which may impair the adhesion (see DIN report 28 "corrosion protection for steel constructions by using coating systems – testing the surface regarding to invisible contaminants before application"). Welding beads must be removed, welding seams and welding overlaps must be smooth in accordance with DIN EN 14879-1. Surface preparation by blast cleaning (with tough grit) in accordance with DIN EN 12944-4 (ISO 8501-1/-2), preparation grade Sa 2½. Use only approved blasting abrasives with angular grain. Average roughness R_{YS} (R_Z) ≥ 50 microns respectively „middle (G)“ in accordance with DIN EN ISO 8503-2 (ISO 8503-2). A surface preparation by wet blasting or high pressure water jetting (if required under water) is also possible. In case of a repair coat the edges of the existing coating must be prepared by grinding and cleaning. Apply the new coating overlapping. Please consult us for an application under water!

Preparation of material (use without thinner!):

Brush / spatula:

The temperature of the components must be at least 20°C. Stir the components thoroughly and mix in the correct ratio using a suitable low speed electric mixer (300 - 400 rpm) for at least 3 minutes or until a completely homogeneous mixture has been achieved. Put the mixed material into a clean container and mix again for at least 1 minute more. Mix and apply only complete pails / sets. Unmixed material must be kept away from water!

Application method:

Application	Brush / spatula
The components are delivered in separated containers in the correct mixing ratio. The components must be mixed homogeneously with a suitable mixer (<u>do not add any thinner!</u>). Immediately after surface preparation, the coating must be applied onto the steel surface. Apply AB-COR 930 UWS carefully with a brush (special bristle material, bristle length approx. 2 - 3 cm) into the substrate. Smooth the coating with a brush or spatula. Please consult us in case of processing under water / application by divers.	Recommended for small areas, repairs or to precoat edges, etc. Prior to application, the surface must be prepared by grinding or blasting P _{Sa} 2 ½ and cleaning. Care must be taken to apply sufficient material in order to achieve the specified film thickness. Repeat the coats until sufficient film thickness is obtained. Before recoating with itself, the area is to be properly cleaned.

Note!

In case of application under water the water on the substrate must be displaced to get a good adhesion and to perform the corrosion protective characteristics. Due to the displacing the coating can show after hardening an uneven surface or some pores on top. In case of too high layer thickness the displacing will be reduced. In case of higher demand, we recommend to apply another coating layer after the first coat is hardened.

The coating system is to be applied only by trained and authorized employees / companies.
Please consult us!

In exposure to weathering **AB-COR 930 UWS** tends to chalking and discolouring. In case of higher demand, please consult us. The a. m. information are recommendations only and may be adjusted depending on the conditions of the object.

Resistance:

Mechanical	Thermal	Chemical
<ul style="list-style-type: none"> • impact resistant • high abrasion resistant 	<ul style="list-style-type: none"> • wet heat up to +50°C • dry heat up to +80°C 	<ul style="list-style-type: none"> • marine conditions • water, seawater, brackish water • neutral salt solutions

Due to the fact that the resistance of the coating can be affected by various factors (medium, temperature, concentration, layer thickness, etc.) we recommend to consult us prior to application.

Health and safety:**GISCODE: RE30**

While **AB-COR 930 UWS** is a solvent free coating, it is common practice when used in enclosed areas to circulate the air during and after the application until the coating is cured. The ventilation system should be capable of preventing any solvent vapour concentration from reaching the lower explosion limit for any solvents that may be present. Avoid inhalation of the vapours. Wear suitable protective clothing, gloves, eye / face protection and suitable respiratory equipment. Adequate ventilation of the working areas is recommended. After contact with skin, wash immediately with plenty of water and soap. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. When using do not eat, drink, smoke and keep away from sources of ignition. For additional references to safety-hazard warnings, regulations regarding the transport and waste management please refer to the relevant Safety Data Sheet.

AB-COR 930 UWS; 2.00/07.01.19. Before use, please check that this is the actual edition of the Technical Data Sheet. The information contained in this Technical Data Sheet is of a general nature and is provided in good faith and we accept no liability for errors or omissions. Because use and application of this product are out of our control and depend, concerning substrate, load and method of application, on the particularities of the individual case, our advice, verbal, written or based on tests, does not exempt the applicator from testing the suitability of the products for the intended use.

AB-Polymerchemie GmbH

Tjüchkampstraße 21 - 24
D - 26605 Aurich
Tel.: +49 (0)4941 - 604360
Fax.: +49 (0)4941 - 6043643
info@ab-polymerchemie.de
www.ab-polymerchemie.de