Technical Data Sheet

AB-COR® 955 SW plus

2-C-EP-corrosion protection coating
for hydraulic steel engineering

Description:

2-component epoxy coating
VOC < 1 %, free of heavy metals, benzyl alcohol, coal tar, anthracene oil and plasticizers

Characteristics:

- extended application
- excellent corrosion protection
- very high abrasion resistance
- high tolerance to early water stress
- excellent surface gloss (even at high relative humidity)
- suitable for single-layer application
- excellent adhesion strength
- no shrinkage by migration of plasticizer
- inert and harmless once cured

Application:

AB-COR 955 SW plus is a highly abrasion resistant, economical coating which is especially suitable as corrosion protection of steel constructions for hydraulic engineering, e.g. flood gates, steel sheet piles and weir plants. The special setting of the **AB-COR 955 SW plus** enables an extended processing window for processing with airless spray equipment (with a flow heater if required). **AB-COR 955 SW plus** is therefore optimally designed for applications under elevated ambient temperatures and required increased sag resistance, making it particularly suitable for single-layer application. **AB-COR 955 SW plus** does not require a primer coating to achieve the best possible corrosion protection. In case of need (tender) it is possible to apply an epoxy zinc primer.
For manual application we offer the specific formulations **AB-COR 955 SW-H** (optimized quality for application by hand) and **AB-COR 955 SW Spachtel** (filler) as a special setting.

Layer thickness:

approx. up to 1500 microns / depending on the object and application parameters also beyond that; minimum 1 x 600 microns (a non-porous application must be ensured)

Consumption:

theoretical: approx. 1 kg/m² at 600 microns DFT
practical: approx. 1.4 kg/m² at 600 microns DFT

The information relating to practical consumption / coverage is calculated to include 30 % loss.
The practical consumption / coverage depends on the conditions of the substrate. We recommend to apply a test area.

Resistant to:

- industrial and marine conditions
- water, seawater, brackish water
- mineral oil, aliphatic hydrocarbons
- wet heat up to +50°C (please consult us)
- neutral salt solutions
- diluted acids
- oil, fat, lubricants and fuels
- dry heat up to +100°C

Technical Data:

Mixing ratio A : B	7 : 1 by weight resp. 4 : 1 by volume
Density (23°C)	approx. 1.60 g/cm³
Volume solids	approx. 100 %
Viscosity (23°C)	approx. 5500 mPa·s ± 1000

Details for application:

Pot life (20°C / 23°C / 30°C)	approx. 35 minutes / 30 minutes / 20 minutes
Substrate temperature	minimum 10°C up to maximum 40°C
Material temperature (flow heater if required)	20°C - 30°C
Maximum relative humidity of air	85 %
Dew point - substrate temperature	minimum +3°C above dew point
Duration to overcoat with itself „**wet to wet**“ approx. after 15 minutes (with regard to the maximum layer thickness)	10°C: 12 - 48 hours max. 3 months* 23°C: 6 - 48 hours max. 3 months* 30°C: 3 - 24 hours max. 3 months* *see note / overcoat
Curing time / foot traffic (10°C / 23°C / 30°C)	24 hours / 12 hours / 6 hours
Curing time / mech. resistance (10°C / 23°C / 30°C)	72 hours / 48 hours / 24 hours
Curing time / chem. resistance (10°C / 23°C / 30°C)	7 days / 5 days / 3 days
All above values are approximate and may be used as a guideline for specifications	

Clean up machine:

To clean and flush the spray equipment / machine we recommend to use **AB-COR 999** - cleaner with a temperature of approx. 30 - 40°C.

Packaging:

16 kg - pails (14 kg component A + 2 kg component B), other pails are available on request

Colour:

silk grey (other colours are available on request)
- due to raw material variations and manufacturing techniques, a slight colour / batch difference may occur -

Storage:

12 months, unopened in original drums under dry conditions and a temperature of 15 - 25°C. At temperatures < 10°C crystallisation 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_{Y5} (R_Z) ≥ 50 microns respectively „middle (G)“ in accordance with DIN EN ISO 8503-2 (ISO 8503-2). Prior to, during and after surface preparation, application and curing the substrate temperature must be minimum +3°C / 3K above the dew point (see dew point table). In case of doubt the surface cleanliness must be measured regarding soluble contaminants in accordance with EN ISO 8502-6 (Bresle method) and EN ISO 8502-9 prior to coating.

Preparation of material:

Airless spray resp. brush / roller: 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.

Application method (use without thinner!)**:**

Airless spray	**Brush / roller**
Efficient airless spray equipment, e. g. Graco King Xtreme Pressure ratio: minimum 1 : 68 Spray hose: approx. 30 m ⅜“ + 2 m ¼“ Inlet pressure: 3 - 5 bar Nozzle size: 0.43 - 0.64 mm (0.017” up to 0.025”) Spraying angle: 30 - 80° We recommend to remove the high pressure filters and to pump the material directly without a siphon tube.	Recommended for small areas, repairs or to precoat edges, only. Repeat the coats until sufficient film thickness is obtained. Normally a film thickness of 250 - 300 microns per coat can be obtained by this method. For increased visual demands the optimized for manual application version **AB-COR 955 SW-H** is available.

Attention! To ensure a proper application at low temperatures a hose insulation and a flow heater have to be used.

N/B: Please use a plural component airless spray equipment, if a longer spray hose distance (> 30 m) and an independent application time / pot life is required.

If required, a primer layer with an epoxy zinc primer can be applied.
In exposure to weathering, **AB-COR 955 SW plus** tends to chalking and discolouring. In case of higher demand, we recommend to use **AB-PUR 720** or an **AB-COR** - topcoat (1 - 2 x).
The a. m. information are recommendations only and may be adjusted depending on the conditions of the object.

Resistance:

Mechanical	**Thermal**	**Chemical**
• impact resistant • highly abrasion resistant	• dry heat up to +100°C continuously, short-term up to +150°C • wet heat up to +50°C continuously, short-term up to +70°C	• industrial and marine conditions • water, seawater, brackish water • oil, fat, lubricants and fuels • diluted acids, alkalis • 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.

***Note / overcoat:** 3 months have been realised at the laboratory. The surface must be free from contamination and adhesion-disturbing substances and not having been exposed to UV radiation / weathering. Otherwise the surface must be cleaned by sweep blasting. Dust deposits must be removed with a suitable cleaning agent (no water).

Health and safety:
GISCODE: RE30
While **AB-COR 955 SW plus** is a (nearly) 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. 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.

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