

ACS EPOXY PROTECT 900[®]

Phenolic Epoxy Resin Based,
Two-Component High Protective Coating



■ Description

ACS EPOXY PROTECT 900[®] is a phenolic epoxy resin based, two component, solvent free, low viscosity, high build protective coating material cured with modified polyamines.

■ Place of usage

- In metal or concrete storage tanks and ponds for drinking and operating water.
- Indoors and outdoors, in vertical and horizontal applications.
- As a high chemical-resistant coating on all industrial floors, on steel, concrete, cement or epoxy mortars.
- Protection of marine steel and concrete structures against sea atmosphere.
- In fuel storage and transport tanks as inner coating.
- As a protective coating against corrosion and chemicals in treatment plants.
- In power plants water-cooling systems as wear-resistant inner coating.
- In paper plants.
- In beverage and fruit juice industries.
- Printing houses
- Hotels, kitchens and laundry rooms.

- Beer, wine and raisin industry.
- Milk, cheese and yoghurt industry.
- Meat and fish industry.
- Drug, paint, paper, battery, fertilizer industry.
- Canned food industry.

■ Advantages

- Does not contain benzyl alcohol and nonyl phenol.
- Solvent free.
- Suitable for low viscosity automatic paint application machines.
- Flexible structure.
- Easy to apply with a roller or using spray method.
- Impermeable.
- Resistance to petroleum products such as crude oil, diesel, gasoline and jet fuel.
- High corrosion and abrasion resistance.
- Compatibility with drinking water.
- High chemical resistance.
- Curing on moist surfaces.
- Creates a surface structure that does not allow formation of germs.
- Easy to clean and create hygienic environments.

TECHNICAL CHARACTERISTICS

ACS EPOXY PROTECT 900 [®] Component A	Phenolic Epoxy Resin
ACS EPOXY PROTECT 900 [®] Component B	Epoxy Hardener
Color	Gray, Oxide Red, Cream
Density	1,30 ± 0,05 kg/lit (A+B /at 20°C)
Volatile Solid Matter	%100 (A+B)
Mixing Ratio	5:1 (A:B -by weight)
Applying Time(+30°C)	30-40 minutes
(+20°C)	50-60 minutes
Waiting Between Layers	Min. 12-14 hours / Max. 7 days (20°C)
Theoretical Spreading	2,56 m ² /kg (300 mikron dry film thickness)
Full Cure Time	5-7 day / 20°C
Ambient Temperature	+8°C -+ 35°C
Flash Point	> 55°C
Voc	0 gr/ml
Taber Abrasion Resistance	80 mg (full cure)
Application Methods	Airless Spray, Roller, Brush
Thinner	Not diluted
Recommended Application Thickness	300 - 1000 mikron dry film thickness

* dry film thickness NOTE: The above values are given at + 23 ° C and 50% relative humidity environment. High temperatures shorten the time, low temperatures prolong the time.

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APPLICATION PROCEDURE / SURFACE PREPARATION

Surfaces on which **ACS EPOXY PROTECT 900®** should be clean, dry and free from solid particles before priming.

Concrete surfaces: The compressive strength of the concrete floors to be applied should be 25 N / mm² and shear test and pull-off tests' values should be minimum 1.5 N / mm². All loose particles should be cleaned from cement grout and surface should be defatted. Damaged surfaces should be repaired beforehand. Residues, rough and shiny screed should be cleaned with tools such as sand blaster, surfacer and the surface should be roughened and wiped. The entire surface must be cleaned from dust with an industrial vacuum cleaner.

Metal surfaces: Oil and grease should be cleaned with detergent or steam, salt and other contaminants should be removed with high pressure water jet. After cleaning scrape the surface according to St2 - St3 level of ISO 8501 standard until 50-70 micron surface profile is obtained. Priming is not required after scraping, apply **ACS EPOXY PROTECT 900®** directly. On large surfaces where scraping process takes longer then one day, scraped surface at the end of each day must be protected with **ACS EPOXY STEEL PRIMER®** and when the process is finished **ACS EPOXY PROTECT 900®** is applied on **ACS EPOXY STEEL PRIMER®**.

Retouching: Make sure that the surface to be retouched is clean, dry and free from all contamination. Retouching should be done in a short time after scraping at St 2½ level according to ISO 8501 standart.

MIXING

ACS EPOXY PROTECT 900® is a two-component product; mix as much as can be used in one use according to the mixing amount information. In order to obtain a homogeneous mixture product temperature should be not less than 15 ° C. A component contains pigment. Mix A component with epoxy / polyurethane resin mixer with 300 - 400 rpm mechanical stirrer for 3 - 4 minutes until it is homogenous without letting air in. Then empty all of component B into component A and make sure that there is no product left in the ingredient B package. Components A and B should be mixed with mechanical stirrer for 3-4 minutes until homogeneous.

MIXING AMOUNT

ACS EPOXY PROTECT 900®	Component A	Component B
Mixture Amount	20 kg	5 kg
Mixture Density	1,30 kg/liter	

APPLICATION METHOD

Ready for use **ACS EPOXY PROTECT 900®** mix is applied at desired dry film thickness; control thickness with wet film thickness gauge. Note that there will be a 5-10% difference between wet film and dry film thickness. Before applying ready-to-use mixture welding seams, sharp edges on metal surfaces should be smoothed out. In applications performed indoor use a clean air vented mask. At least 12-14 hours (20 °C), maximum 7 days

is a new coat application time. It is very important that the second layer is applied within the above-mentioned period. To avoid downflow apply 1000 mikron wet film of **ACS EPOXY PROTECT 900®** at a time. While using airless spray it is recommended to do application at 250 - 300 bar pressure and using 0,021 - 0,027 inch nozzle. Roller and brush application is recommended only in small areas during touch ups. Recommended consumption for 2 layers of **ACS EPOXY PROTECT 900®** is 600- 800 gr/m². New coat application time is minimum 12 - 24 hours (20°C). It is very important to apply the second coat in the application period mentioned above. **ACS EPOXY PROTECT 900®** reaches mechanical and chemical resistance in 5-7 days.

DRYING INFORMATION

(300 micron dry film thickness)	Touch-dry	Fullcure
5 °C	36 hours	96 hours
15 °C	16 hours	72 hours
25 °C	10 hours	36 hours
35 °C	7 hours	24 hours

TIPS TO NOTICE

- If time of waiting between layers of **ACS EPOXY PROTECT 900®** is over clean the surface; if the surface has been left in a dirty environment for a long time wash it with water jet and wait until it dries.
- When used in drinking water tanks, please apply to **ACS A PLUS** Technical Service before use.
- **ACS EPOXY PROTECT 900®** If **ACS EPOXY PROTECT 900®** is exposed to unexpectedly low temperatures during the pre-reaction time or is exposed to rain or dew during drying of the applied paint, hardener exudation may occur, leading to whitening, speckle formation as expected from all epoxy systems.
- In applications on direct sunlight the surface temperature should not exceed 50 °C.
- In very windy weather application should not be carried outdoor as the consumption increases.
- The relative humidity of air should be highest % 80, the application temperature (ambient and surface) should be between 5 °C and 35 °C. Also should not be applied in extremely hot, rainy or windy weather.
- Surface temperature should be 3 °C above the dew point. (Ask our company for the table of Ambient temperature - Ambient humidity - Ambient temperature.)
- The materials to be used at the appropriate temperatures should be brought and stored in the application area 1-2 days prior to the application and adjust the ambient conditions.
- In extremely cold conditions, heaters should be used to increase the ambient and the workability of the product, the packages should be preconditioned to +20 °C - +25 °C to become ready to use. Epoxy and polyurethane based floor systems must be applied by specialists.
- The reaction and workability times of resin based systems depend on the ambient and substrate temperatures as

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well as the relative humidity. Under lower temperatures, the chemical reaction times are prolonged and this increases the pot life, coating interval and the working time. In addition to this, the consumption is increased as the viscosity increases. High temperatures ignite stronger chemical reactions and the above mentioned times decrease accordingly. After completion of the coating, the coating should not fall below + 8 ° C at an air temperature of at least 36-48 hours, and no direct water contact, snow on the newly applied product. Within this period, a contact with water may cause a surface carbonation and/or tackiness both of which will make the coating lose its characteristics; besides, whitening, spots, etc., may appear on the surface which is the reason of exudation.

CLEANING OF TOOLS

Tools and equipment can be cleaned with cellulosic or polyurethane thinner after application. Once cured **ACS EPOXY PROTECT 900®** can only be removed by mechanical means.

PACKAGING

Component A : 20 kg bucket Component B : 5 kg gallon

STORAGE

In unopened original package, it should be stored in a cool and dry environment at + 10 °C+ 25 °C temperature protected from the freezing. In short-term storing, maximum 3 palettes can be stowed on top of each other and delivery has to be according to first in first out system. In long-term storing, the palettes must not be stowed on top of each other.

SHELF LIFE

The shelf life is 12 months from the date of production under suitable storage conditions.

SAFETY

During the application, work clothes, protective gloves, goggles and masks should be used in accordance with the Occupational Health and Safety Rules. Due to the irritating effects of uncured materials, the components should not be allowed to come into contact with the skin and the eye. In case of contact, immediately wash with plenty of water and soap. If swallowed, seek medical advice immediately. Food and beverages should not be left at the application areas. Keep out of reach of children.



□ Responsibility

The technical information given in this publication is based on the present state of our best scientific and practical knowledge. **ACS A PLUS CONSTRUCTION SOLUTION YAPI ANONİM ŞİRKETİ** is only responsible for the quality of the product. **ACS A PLUS CONSTRUCTION SOLUTION YAPI ANONİM ŞİRKETİ** is not responsible for results that may occur because the product is used other than advised and/or out of instructions regarding the place and the method of use. This technical form is valid only till a new version is implemented and nullifies the old ones (06/2019)

