

APCODUR CF 641 CS

Epoxy coating for containment and reactor building

PRODUCT DESCRIPTION

Two component, high build, epoxy coating for containment and reactor building

FEATURES AND RECOMMENDED USE

- Radiation resistance coating for internal lining of reactor building innuclear power projects, and equipments/ structures installed incontainment area
- High performance coating for protection of steel in aggressive conditions
- Self-priming, can be applied directly on steel and concrete
- Good degree of flexibility and elongation
- Good corrosion and chemical resistance
- Low volatile organic content

TECHNICAL DATA

Colour	Silver Grey & Vellum. Other shades on request
Gloss	Glossy
Volume Solids	Approx. 90%
Recommended DFT / Coat	75 -150 microns
Theoretical Covering Capacity	12sq.mtr/ ltr @ 75 microns DFT 6.0 sq.mtr/ ltr@ 150 microns DFT
Drying Time at 30°C	Surfacedry : 4 hours Hard dry : 16 hours Full cure : 7 days
Overcoating interval at 30°C	Min. : 16hours Max. : 72 hours, provided surface is dry and clean from all contamination

The data given is for guideline only. The physical values are subject to normal manufacturing tolerances, colour and testing variances

The volume solids indicated are as per ASTM D 2697 air drying method.

The actual drying time/ overcoat interval may be shorter or longer, depending on film thickness, ventilation, humidity, temperature etc.

The information provided above is at 30°C and 65% relative humidity

DIRECTIONS FOR USE

Surface Preparation

General:

- Surfaces must be dry, clean and free from contaminants
- Ensure removal of dirt, dust, oil and all other contaminants that could interfere with adhesion of the coating. Oil and grease should be removed as per SSPC-SP1 solvent cleaning
- Surface should be checked and treated in accordance with ISO 8504 prior to priming

For New Concrete Surface:

Ensure that the concrete surface is cured for minimum 3 months. Preferably the surface has to be prepared by light blasting. In case, blasting is not practical, wire brushing/ power tool cleaning has to be adopted to remove laitance and other loose particles, followed by etching the surface to get a good profile by treating white dilute (10%) Hydrochloric Acid. Remove acid and contaminants by liberal wash with fresh water. Ensure that acid solution does not retain and penetrate through the joints of the concrete surface. Allow the surface to dry thoroughly before applying primer

For Old Concrete Surface:

Remove the surface contaminants like grease, oil etc., by solvent wiping or by 10% caustic solution. Preferably the surface has to be prepared by light blasting. In case, blasting is not practical, wire brushing/ power tool cleaning has to be adopted to remove laitance and other loose particles, followed by etching the surface to get a good profile by treating with dilute (10%) Hydrochloric Acid. Remove acid and contaminants by liberal wash with fresh water. Ensure that acid solution does not retain and penetrate through the joints of the concrete surface. Allow the surface to dry thoroughly before applying primer

For Metal Surface:

New hot-rolled steel: Blast cleaned to min Sa 2.5 of Swedish specification

Blast Cleaning:

- Steel, abrasive blast clean to min. Sa 2 1/2 (ISO 8501-1: 200) or SSPC –SP6. In case oxidation has occurred between blasting and application of ApcodurCF 641CS, the surface should be reblasted
- A blasting profile of (Rz) 50-75 microns is recommended

Note:

- Concrete surface should be thoroughly dry before application of primer and has a major influence on the performance
- Apcodur CF 641 CS (with required dilution) is recommended as a primer coat over concrete surface at 50 microns DFT

Application Conditions

- Substrate temperature should be at least 3°C above dew point but not above 50°C
- Relative humidity should be below 85%
- Good ventilation is required in confined areas to ensure proper curing

Mixing

- Apcodur CF 641 CS is supplied in two packs. Stir the base and hardener separately. If settling is observed in the base or hardener, loosen the settled material with the help of hand stirrer followed by power driven stirrer (at lower RPM) for quick homogenous mixing
- Mix hardener gradually into the base under continuous stirring as per the mixing ratio. Once the unit has been mixed, it should be consumed within the working pot life. In case of part mixing (which should be avoided), close the lids of containers tightly to avoid contact with atmospheric moisture
- Thinner should be added after mixing the components and post the induction time. Addition of excessive thinner will lead to reduced sag resistance

Mixing Ratio (by volume)	Base : Hardener 2 : 1
Induction Time	15 minutes
Pot Life at 30°C	2 hours

Application

Air Spray	
Recommended thinner	T 142
Volume of thinner	10 - 20%
Nozzle orifice	0.58 - 0.71 mm (23 – 28Thou)
Nozzle pressure	20 – 24MPa (= approx. 200 – 240 atm; 2800 – 3400 p.s.i.)
Recommended thinner	T 142
Airless Spray	
Recommended thinner	T - 142
Volume of thinner	10 - 20%

Cleaning

- Do not allow the product to remain in hoses, gun or spray equipment. Clean all equipments immediately after use with Thinner T 142. It is recommended to periodically flush out spray equipment during the course of the working day. The frequency of cleaning will depend on amount sprayed, temperature and time gap
- All surplus material and empty containers should be disposed off in accordance with appropriate regional legislation

Product Characteristics

- Maximum film build in one coat is best attained by airless spray. Air spray (pressure pot) may require a multiple cross spray pattern to achieve optimum film build. By brush application 50-75 microns is achieved in one coat and multiple coats will be required to achieve the total specified thickness
- The maximum performance is achieved after complete curing
- As common to all epoxy, the product will chalks and discolour on exterior exposure. However these phenomenon are not detrimental to anti-corrosive performance

PACK SIZE	20 ltrs (Base : 13.34 ltrs & Hardener : 6.66 ltrs)
STORAGE	Shelf Life: Atleast 12 months @ 30°C for original unopened pack, subject to inspection thereafter. Store in a cool, dry place and in accordance with local regulations
REGULATORY INFORMATION	Flash Point: Base : Not less than 30°C Hardener : Not less than 30°C VOC: Approx. 100gm/ ltr (depending on shades) as per USA-EPA Method 24 Product Weight: Approx. 1.45 kg/ ltr (depending on shades)

SAFETY INFORMATION

- As a general safety measure, inhalation of solvent vapours or paint mist and contact of liquid paint with skin & eyes, should be avoided. Forced ventilation should be provided when applying paint in confined spaces or stagnant air. Even when ventilation is provided, respiratory, skin and eye protection are always recommended when spraying paint
- Please refer our Material Safety Data Sheet prior to using the product



Disclaimer: To the best of our knowledge the information provided herein are true and accurate at the date of issuance. Since we have no control over the quality or condition of the substrate or the various factors affecting the use and application of the product, we do not accept any responsibility or liability arising out of use of the product.

The company reserves the right to modify data contained herein without prior notice. Any change in data would normally be followed by issue of a new data-sheet. The user should check with the nearest sales office of the company and confirm the validity of the information, prior to using the product.

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