Technical Data Sheet
Version 1. 10/2024

Epoxy Coat 5045 AR

Description:

DEVCON Epoxy Coat 5045 AR is a specially formulated acid-resistant coating designed for application as a protective coating system for metal surfaces and equipment, concrete walls etc. DEVCON Epoxy Coat 5045 AR is also suitable as a sealer for concrete floors and metallic equipment, where extreme chemical resistance is required. DEVCON Epoxy Coat 5045 AR resists a wide range of acids, including concentrated sulphuric acid, as well as alkalis and solvents.

Intended Use:

As a protective coating on metals against corrosion in the following industries / plant areas:

- Power and steel plants
- Mining industries
- Food industries
- Plating shops
- Chemical industries
- Wastewater treatment
- Battery manufacturers
- Bund walls
- Paper manufacturers
- Pharmaceutical industries
- Chemical containment

Features:

Easy to apply
Monolithic protection
High solids
Resists 98% sulphuric acid
Broad chemical resistance

Limitations:

Suitability of product is determined by the end user for their application and process.

Estimating Data

1L DEVCON Epoxy Coat 5045 AR = 3 m^2 (2 x 150 µm DFT coats)

Typical Physical Properties:

Technical data should be considered representative or typical only and should not be used for specification purposes.

Property	Typical Values
Colour	Grey
Mixing Ratio by Volume	1 Hardener to 3 Resin
Solids Content:	90% v/v
Application Temperatures	10°C to 30°C
Work Time @ 25°C	45 minutes
Tack Free Time @25°C	6 hours
Recoat Time @25°C	8 – 24 hours
Hardening Time @25°C	24 hours
Full Chemical Resistance	7 days
Maximum operating temperature	65° C
Tensile bond strength	2.7 MPa (concrete failure)

Surface Preparation:

Metal

1. In case of steel surfaces, abrasive blast to **ISO 8501-1 SA 3** (Thorough blast-cleaning) standard surface cleanliness and achieve surface free from grease, grease, oil, loosely adhering particles, cement laitance and other contaminants. Surface profile height of minimum 75-100 microns is recommended.
2. Rusted Surfaces – Accessible areas: It is suggested to blast - clean the metal surface to achieve **ISO 8501-1 SA 3** (Thorough blast-cleaning) standard surface cleanliness to achieve surface free from grease, grease, oil, loosely adhering particles, cement laitance and other contaminants.
3. Rusted Surfaces – Inaccessible areas: It is suggested to clean the metal surface to achieve **ISO 8501-1 SA 1** (Light brush blast-cleaning) standard surface cleanliness to achieve surface free from grease, grease, oil, loosely adhering particles, cement laitance and other contaminants. Convert the rust into a black layer using **DEVCON Corrosion Primer CP-10**.
4. For improved performance, a primer coating of **DEVCON Primer Pro 1030 AR** is suggested on the metal surfaces as a primer coating.
5. The surface should be free of grease, oil, and other contaminants.

Concrete

1. Remove prior coatings and all loose crumbly material and drummy areas. New concrete must be at least 28 days old. Remove any oil or grease contamination by washing with a suitable surface degreaser. Hose off with high pressure water. Captive blast clean to expose firmly adhered aggregate.
2. Neutralise surface by washing with fresh water and allow to dry.
3. Defects such as damaged concrete, blowholes, honeycombing and cracks should be repaired to ensure a monolithic pinhole-free coating system.

Surface preparation guidelines cannot cover all site or field contingencies, and it is always recommended that an on-the-spot adhesion test be performed as part of the Standard Quality Assurance audit for the project.

Mixing Instructions:

It is strongly recommended that full units be mixed, as ratios are pre-measured.

Proper homogenous mixing of resin and hardener at the correct ratio is essential for the curing and development of stated properties.

Precondition product to between 18 - 25°C before use.

Prior to mixing, the area should be reviewed so that a fixed volume of mixed material can be applied over a fixed area to ensure correct application rate.

Add Hardener to Resin and mix thoroughly using a stirrer fitted into a low speed (400 rpm) power mixer. Ensure that all the material on the sides, under the lip of the container and on the stirrer is incorporated.

Note: Take care to avoid air entrapment into the mix. Keep propeller below liquid line, as additional air can be added to mixture, resulting in air bubbles on the surface of the finished product.

Application Instructions:

DEVCON Epoxy Coat 5045 AR can be applied by brush, roller or airless spray in two coats (minimum) to achieve 300-micron DFT. Allow 8 to 24 hours between coats.

For optimum chemical resistance DEVCON Epoxy Coat 5045 AR should be cured for seven days at 25ºC before exposure to chemicals. Longer curing times should be allowed at lower temperatures.

Storage:

Store in dry conditions between 10°C and 30°C, away from sources of heat and naked flames. Protect from frost. When stored in original sealed containers, the minimum shelf life is two years.

Chemical Resistance:

Chemical resistance tested after 112 days, room temp. cure @ 25° C

Sulphuric Acid 98%	Good	Sodium Hydroxide 20%	Excellent
Sulphuric Acid 30%	Good	Sodium Hydroxide 50%	Very Good
Hydrochloric 32%	Very Good	Sodium Hypochlorite	Very Good
Nitric Acid 20%	Good	Ammonia Solution 10%	Very Good
Mineral Spirits	Excellent	MEK	Very Good
Acetic Acid 10%	Good	Hexane	Very Good
Lactic Acid 5%	Very Good	Toluene	Very Good
Phosphoric Acid 20%	Very Good	Ethyl Acetate	Very Good

Precautions:

DEVCON Epoxy Coat 5045 AR should not be applied at temperatures below 10˚C.
DEVCON Epoxy Coat 5045 AR should not be applied to surfaces known to suffer from rising damp.
DEVCON Epoxy Coat 5045 AR is not recommended for application over tiles.

Warranty:

ITW India Private Limited will replace any material found to be defective. Because the storage, handling and application of this material is beyond our control, we can accept no liability for the results obtained.

Order Information:

Please check with ITW India Private Limited on the available pack sizes

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