

APCOTHERM 800 CUI



PRODUCT DESCRIPTION

Single pack, patented technology specially engineered with Titanium catalyzed inorganic ceramic copolymer infused with MIO pigments. It is an air drying high temperature resistance coating system for protection of carbon steel & stainless steel surfaces from atmospheric corrosion, corrosion under insulation and corrosion on buried high temperature vessels & underground pipelines.

This high performance surface tolerant coating forms an inert multi-polymeric after curing which is resistant to a wide range of operating temperature between -196 °C to +800 °C based on the material of construction

FEATURES AND RECOMMENDED USE

- Designed to prevent corrosion under insulation (CUI) of carbon steel and stainless steel
- Suitable for exposure in corrosive environments which includes insulated or un-insulated steel pipeline, process equipment's, vessels, etc.
- 650 °C is the continuous dry operational & 800°C intermittent temperature resistance for stainless steel surfaces
- 650 °C is the continuous dry operational & 750°C intermittent temperature resistance for carbon steel surfaces
- Suitable to apply on hot steel surface application up to 200 °C during shut down & maintenance
- Suitable for use in thermal shock / rapid cycling in dry or dry/wet service temperature up to -196 °C
- Outstanding weathering resistance and durability along with good chemical resistance
- Tested in accordance with ISO 12944-6 for corrosion category C5
- Tested and evaluated for suitability to CUI resistance as per Houston Pipe Test
- Tested and evaluated for suitability to underground wet soil conditions for buried piping & vessels

TECHNICAL DATA

Colour	Dark Grey
Gloss	Flat
Volume Solids	Approx. 75 %
Recommended DFT / Coat	100 - 250 µm
Theoretical Coverage Capacity	7.5 sq.mtr/ ltr @ 100 µm DFT 5.0 sq.mtr/ ltr @ 250 µm DFT
Drying time at 30°C	Surface dry : 1 hour Hard dry : 5 hours
Over coating interval at 30°C	Min. : 8 hours

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

Surface conditions of carbon steel for insulated and non-insulated service:

- Surface must be free from oil, dirt, grease and all other contaminants
- Steel, abrasive blast clean to min. Sa 2 1/2 (ISO 8501-1: 200) or SSPC –SP10.
- Alternative methods to abrasive blast cleaning include : ISO-ST2 (SSPC-SP2), ISO-ST3 (SSPC-SP3), SSPC-SP-15, or SSPC-SP WJ-2 or WJ-3 with dry surface
- A blasting profile of (Rz) 50-75 microns is recommended

Surface conditions of stainless steel for insulated and non-insulated service:

- Surface must be free from oil, dirt, grease and all other contaminants
- Steel, abrasive blast clean to min. Sa 2 1/2 (ISO 8501-1: 200) or SSPC –SP10.
- Use of non-metallic blast cleaning media to clean stainless steel surface
- A blasting profile of (Rz) 50-75 microns is recommended

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

- Apcotherm 800 CUI is supplied in single pack. If settling is observed in the drum, loosen the settled material with the help of hand stirrer followed by power driven stirrer (at lower RPM) for quick homogenous mixing.
- Thinner should be added after mixing the components and post the induction time. Addition of excessive thinner will lead to reduced sag resistance.

Application at ambient condition

Airless Spray	
Recommended thinner	: T-131
Volume of thinner	: 0 – 5%
Nozzle orifice	: 0.38 – 0.53 mm (15-21 Thou)
Nozzle Pressure	: 10 – 13 MPa (= approx. 100 – 130 atm; 1400 – 1800 p.s.i.)
Cleaning Thinner	: T-131
Air Spray	
Recommended thinner	: T-131
Volume of thinner	: 10 - 15%
Nozzle orifice	: 1.5 – 3.0 mm
Nozzle Pressure	: 0.2 – 0.3 MPa (=approx. 2 – 2.5 atm)
Cleaning Thinner	: T-131

Application at high temperature

Airless Spray	
Recommended thinner	: T-130
Volume of thinner	: 0 – 5%
Nozzle orifice	: 0.38 mm (15 Thou)
Nozzle Pressure	: 10 – 13 MPa (= approx. 100 – 130 atm; 1400 – 1800 p.s.i.)
Cleaning Thinner	: T-130
Air Spray	
Recommended thinner	: T-130
Volume of thinner	: 10 - 15%
Nozzle orifice	: 1.5 – 3.0 mm
Nozzle Pressure	: 0.2 – 0.3 MPa (=approx. 2 – 2.5 atm)
Cleaning Thinner	: T-130
Brush	
Recommended thinner	: T-130
Volume of thinner	: 10 - 15%

Cleaning:

- Do not allow the product to remain in hoses, gun or spray equipment. Clean all equipments immediately after use with Thinner as mentioned above. 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 of in accordance with appropriate regional legislation.

Product Characteristics

- The maximum performance is achieved after complete curing
- 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 µm is achieved in one coat and multiple coats will be required to achieve the total specified thickness
- Typical system of two coats at 125 µm is recommended for optimum performance. By brush application, three-coat system to give a total dry film thickness of 200 µm is recommended. The total system thickness should not exceed beyond 300 µm to avoid cracking at high temperature service
- When Apcotherm 800 CUI is applied over zinc silicate primer, avoid applying excessive thickness which may cause blister & adhesion loss. Ensure that zinc silicate is thoroughly cured prior application of Apcotherm 800 CUI
- Due to the flexible nature of Apcotherm 800 CUI, pull off adhesion is not recommended. Adhesion should be checked by using cross-cut adhesion method as per ASTM D 3359
- Premature exposure to ponding water will cause a colour change
- Application of stripe coat on welded/edges/crevice's area to be done prior full coat application

PACK SIZE	5 L
STORAGE	Shelf Life: At least 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: Not less than 27°C VOC: Approx. 330 ± 20 gm/ ltr as per USA-EPA Method 24 Product Weight: Approx. 1.85 ± 0.05 kg/ ltr

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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