

High performance urethane coating system

General properties

FC-210 Ambercoat coating system is a plural component coating system that provides corrosion protection for cathodically protected steel pipes. Its high abrasion resistance coupled with outstanding adhesion and water impermeability makes it a superior choice for pipe protection.

FC-210 Ambercoat is designed for immersion service in temperatures up to 65°C and dry service in temperatures up to 90°C. **FC-210 Ambercoat** allows applications to be performed in difficult conditions that require fast turnaround time.

Coating system data

| | | |
|---|--|------------|
| Shelf life | 5 years after production | |
| Application temperature | -40 to 65°C | |
| Substrate temperature | -5 to 95°C | |
| Application humidity | 0 to 90% | |
| Service temperature | -40 to 90°C | |
| Volume solids | 100% | |
| Mixing ratio (by volume) | 3 part Component A, 1 part Component B | |
| Density | 1.5 ± 0.1 g/cm ³ Comp. A 1.24 ± 0.01 g/cm ³ Comp. B | |
| | | |
| Hardness (Shore D) | | |
| At 23°C | Min 75 | ASTM D2240 |
| | | |
| Adhesion test (pull off method) | | |
| At 23°C | >20 MPa | EN 10290 |
| | | |
| Elongation | %≤7 | ISO 527 |
| | | |
| Adhesion test (Resistance to removal) | | |
| At 23°C | Rating 1 | EN 10290 |
| | | |
| Impact resistance | | |
| At 23°C | > 9 J | EN 10290 |
| At -5°C | > 4.5 J | |
| | | |
| Specific electrical insulation resistance | | |
| 23 °C/100 days | >10 ⁸ Ωm ² | EN 10290 |
| 80 °C/30 days | >10 ⁷ Ωm ² | |
| | | |
| Cathodic disbondment | | |
| At 23°C, for 28 days | <6mm | EN 10290 |
| At 80°C, for 2 days | <8mm | |
| | | |
| Flexibility | Pass | EN 10290 |
| | | |
| Indentation resistance | | |
| At 23°C | <0.1mm | EN 10290 |
| At 80°C | <25% | |

Application data

General Application Steps

1. Remove oil, grease and loosely adhering deposits.
2. Abrasive blast the surface to NACE No.2/SSPC-SP10 near-white metal, ISO 8501 Sa 2.5
3. Apply FC-210 Ambercoat at the specified film thickness.
4. Allow to cure.
5. Visually or electrically inspect the coating for deficiencies.
6. Repair any deficiencies.

Surface Preparation

Steel surfaces shall be clean and free of dirt, oil, or other contaminants prior to abrasive blasting. Slivers, rough welds or other defects in the steel shall be ground out prior to abrasive blasting. Abrasive blasting shall be carried out to a near-white metal blast using clean abrasive. Abrasive blast clean the surface to NACE No.2/SSPC-SP 10 near-white metal, ISO 8501 Sa 2.5.

During the blasting operation and until the final coating procedure has been finished, the temperature of the steel shall not be less than 3°C/37°F above the dew point.

Application Procedures

FC-210 Ambercoat shall be applied to blasted steel surfaces using plural component spray equipment such as an **ICAT 2001** or equivalent. The ratio of the pump shall be 3 parts A (Base) to 1 part B (Curing Agent).

FC-210 Ambercoat Base (Part A) shall be preheated to a temperature of no less than 35°C/95°F while being agitated. A transfer pump with a fluid-to-air ratio of no less than 10:1 is recommended to feed the plural component pump. Inline heaters shall be used on the Base (Part A) side to raise the temperature to 60°C/140°F upon application.

FC-210 Ambercoat Curing Agent (Part B) shall be transferred to the plural component pump with a minimum 5:1 fluid-to-air pump and should be at a minimum temperature of 15°C/60°F. Agitation is not required unless preheating is done to attain this temperature.

The hose bundle leaving the plural component pump shall be heat traced and insulated to maintain the material temperature. The base (Part A) line shall be 3/8 inch ID and have a minimum operating strength of 5000 psi. The curing agent (Part B) shall be 1/4 inch ID and



have a minimum operating strength of 6000 psi. A maximum length of 50 meters (55 yards) shall be used. The mixing block shall have a material shut off valve prior to entry and must have a solvent flush attachment that will allow the mixing block and whip hose to be flushed of material.

The whip hose shall be 3/16 inch ID and no more than 5 meters (5.5 yards) in length. The gun shall be a high pressure airless spray gun with a minimum pressure rating of 3000 psi. The tip size shall be a minimum of 0.027 inches and a maximum of 0.040 inches.

Repair Procedure

Repairs to the coating shall be performed in one of 2 ways:

Small Area Repairs - Areas of damage in the coating up to 1000 cm² (155 in²) may be fixed by grinding out the defective area using an angle grinder or similar tool fitted with an abrasive disc and abrading the surrounding area

to attain a transitional bond with the undamaged coating. The entire area may then be coated by brush or roller using **FC-210 Ambercoat Brush Grade** material.

Large Area Repairs - Areas larger than those above are recommended to be prepared in the same manner and then repaired by spray application.

Storage, handling and Safety Precautions

Keep material in dry place, away from direct sun light, with temperature between 10-45°C. Read and understand all Health Hazard, Precautionary, and First Aid statements found in the Material Safety Data Sheet (MSDS) prior to handling or use.

Ordering information:

For additional information, application assistance, prices, or to place an order, contact your **ICAT** sales Representatives.

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