



Material Technologies
Solving Tough Problems

CorrosionGard™-50S

Corrosion Protection for Structural Steel

- Single layer surface tolerant formulation
- Excellent outdoor performance
- Resistant to severe dust abrasion
- Application by air spray, roll or brush
- Simple inspection and maintenance

Product Description

CorrosionGard™-50S is a dual component, surface tolerant corrosion protection system, for the structural steel of industrial plants.

The surface preparation of structural steel in industrial and marine environments is always exposed to airborne contamination. Conventional coatings tend to blister and delaminate in these cases. CorrosionGard™-50S has great performance on steel surfaces exposed to these severely contaminated environments.

Applications

The main areas of application are on the external surfaces of:

- Steel structures and vessels in metal smelters cement plants and waste incinerators.
- Steel structures and equipment in power generation plants and oil refineries.
- Steel structures and components in piers and marine facilities.

Performance

CorrosionGard™-50S is an outstanding coating in the areas exposed to airborne contamination during the surface preparation and application. The particles that reach the surface and later are covered with a coating, tend to swell by osmosis and produce blisters that lead to cracks and delamination.

CorrosionGard™-50S will resist severe chemical corrosion in external applications in industrial and marine environments due to its tough impervious thermoset nature and a strong bond to the substrate.



Spray application of CorrosionGard™-50S

Installation

CorrosionGard™-50S is a two component system. The material is mixed before use and is applied by air spray, roll or brush on a sandblasted, dry steel surface. The pot life is 1 hour and after 6 to 12 hours, it cures into a hard coating. At this stage it can be inspected for thickness and integrity and any defect can be recoated.

The formulation as supplied has zero % volatile organic compounds. Recommended temperature for application is 50°F to 120°F (10°C to 50°C). Coverage at 25 mils dry film thickness is 50 ft²/gallon.

Use denatured alcohol for viscosity adjustment and equipment cleaning.

Additional Information

The shelf life of CorrosionGard™-50S will be at least one year. The material shall be stored in a cool and dry area in the original unopened containers.

The formulation can be irritating, avoid excessive exposure to inhalation and body contact. Use in well ventilated areas, for indoor applications use forced ventilation.

See the corresponding MSDS sheets.

Product Properties

| Physical properties (Cured at 25°C for 7 days) | Test Method | Typical Value |
|---|-------------|----------------------|
| Hardness, Shore D | ASTM D-2240 | >75 |
| Taber abrasion, mg. (CS-17, 1Kg., 1000 cycles) | ASTM D-4060 | <200 |
| Adhesion to steel, psi. | ASTM D-4541 | >2000 |
| Impact resistance, in-lbf | ASTM D-2794 | > 50 |
| Acid & Salt spray weathering,mm of corrosion | 3L&T M-14 | 0 mm after 24 months |
| Chemical properties (weight gain, 1 week immersion) | | |
| HCl 10% | ASTM D-471 | < 1.5 % |
| H3PO4 54% | ASTM D-471 | < 0.5 % |
| H2SO4 10% | ASTM D-471 | < 0.5 % |
| H2O | ASTM D-471 | < 0.5 % |

Application

| | |
|--|---|
| Application methods | Air spray, roll or brush |
| Vertical dry film thickness, single coat | 20 to 30 mils (0.50 to 0.75 mm) |
| Coverage at 25 mils dry film thickness | 50 sq.ft.(4.7 sq.mt.)/gallon |
| Surface preparation | Sand blast, SSPC SP-10, NACE 2 (Near white metal) |
| Surface profile | > 3.0 mils (>75 microns) |
| Coating inspection time | After 12 to 24 hours |
| Recoating interval | Up to 24 hours after initial application |
| Solvent for viscosity adjustment | Denatured alcohol |
| Maximum dry film thickness | 50 mils (1.25 mm) |

Handling Properties

| | |
|---------------------------------------|--|
| Shelf life | 1 year |
| Shipping and storing temperature | 10°C to 40°C (50°F to 104°F) |
| Mixing to redisperse fillers | >3 minutes at high speed, no sediments |
| Pot life after mixing | > 1 hr. at 25°C (77°F) |
| Cure time to tack free | 6 to 12 hours |
| Final cure time | 7 days at 25°C (77°F) |
| Surface temperature for application | 10°C to 50°C (50°F to 122°F) |
| Air relative humidity for application | <90%, 5°C above dew point |

Ordering Information for CorrosionGard™-50S

Product is supplied as two components in 6 gallon kits.

| Description | Part A | Part B | Total Volume | Net Weight | Minimum Order |
|-----------------------|------------------|------------------|--------------|--------------|---------------|
| CorrosionGard™-50 Kit | Pail 4 GI(15.2L) | 2 cansx1GI(7.6L) | 6 GI(23L) | 104 lb(47Kg) | 12 Gallons |

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