



Material Technologies
Solving Tough Problems

FlueGardTM-225SQC

Sprayable Quick Cure

Polymeric Alloy for Protection from Severe Corrosion

- Resistant to SO₃, SO₂, HCl, CO₂ and NO_x gases
- Excellent performance up to 225°C (437°F)
- Resistant to abrasion and low sticking
- Simple application by airless spray or roll
- Rapid cure at the specified temperature

Product Description

FlueGard-225SQC is a two component polymeric alloy material. Main use is for corrosion protection in the flue gas section of industrial plants. The flue gases found in cement plants, metal smelters, waste incinerators, power generation and oil refineries, contain SO₃, SO₂, HCl, CO₂, NO_x and dust. They are extremely corrosive and abrasive. FlueGard-225SQC has further improved the outstanding performance of FlueGard-225SLB on carbon steel and stainless steel surfaces.

Applications

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

- Bag houses, electrostatic precipitators and ducts in cement plants and waste incinerators.
- Flue Gas Desulfurization scrubbers, ducts and chimneys in power generation plants and oil refineries.
- Ducts, filters and stacks in copper, zinc or lead smelters and battery recycle plants.

Performance

FlueGard-225SQC has the best known performance protecting the steel areas exposed to the hot flue gases of industrial facilities. It is resistant to corrosion, abrasion and impact at temperatures from ambient up to 225°C. Most important, it will not fail by delamination as other high temperature coatings. FlueGard-225SQC will also resist severe chemical and salt corrosion in industrial and marine environments due to its tough impervious thermoset nature and a strong chemical bond to the substrate.



Baghouse Filter Protected with FlueGard-225SQC

Installation

FlueGard-225SQC is supplied as a two component system, it is mixed in a 4:1 volume ratio prior to application. Mixed material is applied by airless spray on a sandblasted, dry steel surface.

The material cures at room temperature after 12 to 24 hours, into an elastomeric coating. At this stage it can be inspected for thickness and integrity and any defect can be recoated.

Once the coating inspection is satisfactory, the final cure is performed by rapid heating from room temperature to 140/180°C (284/356°F) and holding for few hours. Typically this is done using the hot flue gases during the start up of the process. Also can be done with an external heat source.

Additional Information

The shelf life of both components of FlueGard-225SQC will be at least one year. The material shall be stored in a cool and dry area.

Avoid excessive exposure to inhalation and body contact. Use in well ventilated areas, for indoor applications use forced ventilation.

See the corresponding MSDS sheets.

3L&T Inc.

Product Properties

Physical Properties	Test Method	Typical Value
Pencil hardness	ASTM D-3363	>HB
Taber abrasion, mg. (CS-17, 1Kg., 1000 cycles)	ASTM D-4060	<30
Adhesion to steel, psi.	ASTM D-4541	>3000
Impact resistance, in-lbf	ASTM D-2794	> 52
Heat ageing, hours @ 225°C (437°F)	ASTM D-2485	>1000
Chemical Resistance (Weight gain, 1 week immersion)		
HCl 37%	ASTM D-471	< 1.0 %
H ₃ PO ₄ 54%	ASTM D-471	< 0.5 %
H ₂ SO ₄ 36%	ASTM D-471	< 0.5 %
H ₂ O	ASTM D-471	< 0.5 %

Application

Application methods	Airless spray, roll or trowel
Vertical dry film thickness, single pass	15 to 25 mils
Coverage at 20 / 100 mils dry film thickness	60 / 12 sq.ft./gallon
Surface preparation	Sand blast, SSPC SP-10 (Near white metal)
Surface profile	> 3 mils (75 microns)
Coating inspection time	After 12 to 24 hours
Recoating interval	Up to 72 hours after inspection
Solvent for dissolving, viscosity adjustment	Toluene, Xylene, dry MEK
Solvent for cleaning tools after curing	MEK immersion

Handling Properties

Shelf life	1 year
Shipping and storing temperature	10°C to 40°C (50°F to 104°F)
Mix ratio by volume	4 to 1 (Part B previously dissolved)
Pot life after mixing	>2 hr. at 25°C (77°F)
Cure time to tack free	<24 hours.
Final cure time	1 hr. at 180°C (356°F) to 8 hrs. at 140°C (284°F)
Surface temperature for application	10°C to 60°C (50°F to 140°F)
Air relative humidity for application	<90%, 5°C above dew point

Ordering Information for FlueGard-225SQC

Product is supplied as two components in 5 gallon kits, clearly identified as Part A (5 gallon pail, color black) and Part B (1 gallon can, solid pellets color white)

Description	Part A	Part B	Total Volume	Weight	Minimum Order
FlueGard-225SQC Kit	4 gl. (15.1 lt.)	1 gl. (3.8 lt.)	5 gl.(18.9 lt.)	55 lb.(25Kg.)	10 gl.(37.8 lt.)

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