



Material Technologies
Solving Tough Problems

StackGard™-255SQW

Corrosion Protection for Chimneys in Flue Gas Systems

- Resistant to SO₃, SO₂, HCl, NO_x gases
- Excellent performance up to 255°C (491°F)
- Resistant to dust abrasion
- Simple application by air spray
- Easy inspection and maintenance

Product Description

StackGard-255SQW is a two component, high temperature corrosion protection system, for the chimneys of industrial plants.

The flue gases found in cement plants, metal smelters, waste incineration, power generation and oil refineries, contain SO₃, SO₂, HCl, NO_x and dust, they are extremely corrosive and abrasive. StackGard-255SQW has demonstrated outstanding performance on steel chimneys exposed to this severely aggressive environment.

Applications

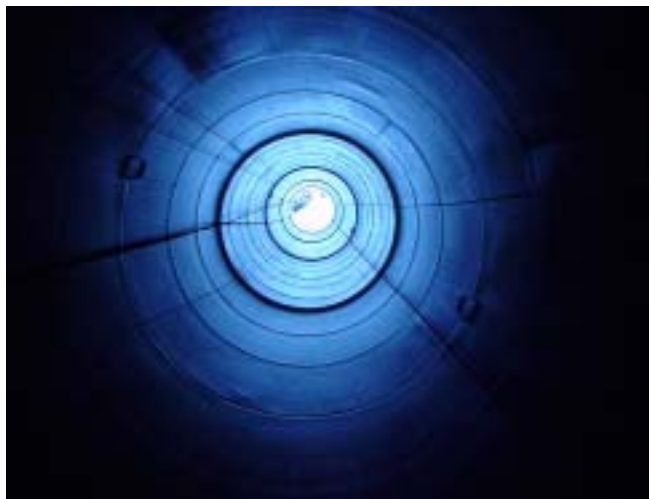
The main areas of application are on the inside surfaces of steel chimneys connected to:

- Bag houses, electrostatic precipitators and ducts in cement plants and waste incinerators.
- Gas scrubbers, ducts and fans in power generation plants and oil refineries.
- Ducts, filters and scrubbers in copper, zinc or lead smelters.

Performance

StackGard-255SQW has a proven performance in the steel areas exposed to the hot flue gases of industrial facilities. It protects the steel from corrosion, abrasion and impact at temperatures ranging from ambient up to 255°C.

StackGard-255SQW 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.



Large Stack Coated With StackGard-255SQW

Installation

StackGard-255SQW is supplied as two components system that is mixed in a fixed volume ratio prior to application. Mixed material is applied by air spray, on a sandblasted, dry steel surface. The material cures at room temperature after 12 hours into a dry and tough 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 at 80 to 180°C for few hours. Typically this is done using the hot flue gases during the start up of the process.

Additional Information

The shelf life of both components of StackGard-255SQW will be at least one year. The material shall be stored in a cool and dry area.

The material contains solvents, handle with care, keep sealed, 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	Test method	Typical Value
Pencil Hardness	ASTM D-3363	>B
Taber Abrasion, mg. (CS-17, 1Kg., 1000 cycles)	ASTM D-4060	<60
Adhesion to steel, psi.	ASTM D-4541	>1000
Coating Impact, in-lbf	ASTM D-2794	> 28
Heat ageing, hours @ 255°C (491°F)	3L&T M-12	>1000
Chemical properties (weight gain, 1 week immersion)		
HCl 37%	ASTM D-471	< 1.5 %
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	Air spray, roll or trowell
Vertical dry film thickness, single pass	15 to 25 mils
Coverage at 20 mils thickness	50 sq.ft./gallon
Surface preparation (Near white metal)	Sand blast, NACE 2, SSPC SP-10
Surface profile	> 3 mils (75 microns)
Coating inspection time	After 12 to 24 hours
Recoating interval	Up to 12 hours after inspection
Solvent for dissolving, viscosity adjustment	MEK, Toluene or xylene
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	4.5 to 1 (Part B previously dissolved)
Pot life after mixing	1.5 hr. at 25°C (77°F)
Cure time to tack free	<24 hours.
Final cure time	1 hr. at 180°C (356°F) to 24 hrs. at 80°C (176°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 StackGard-255SQW

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
StackGard-255SQW Kit	Pail 4 gallons	Can 1 gallon	5 gallons	80 lb.	10 gallons

3L&T

897 Independence Ave. #1B
Mountain View, CA. 94043
Phone: (650) 625-0177
Fax: (650) 625-0105
email: Linas@3L-T.com
www.3L-T.com

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