Technical Data Sheet

Fireside CS300

PRODUCT DISCRIPTION:

Fireside CS300 is a single component ceramic coating engineered to provide external corrosion protection while providing high surface lubricity on both carbon and stainless steel boiler tubing.

Fireside CS300 has been specifically formulated to provide superior corrosion protection while retarding tenacious slag and scale build up. The coating is recommended for lower furnace water walls, CFB back pass areas, refuse boiler corrosion and fouling and other high temperature environments subjected to corrosion and/or slagging.

The coating has excellent flow properties and can be applied to a dry film thickness of up to 20 mils. (500 microns) Fireside CS300 bonds well to properly prepared carbon steel or stainless steel substrates.

Upon curing Fireside CS300 becomes a durable ceramic coating that will provide protection of metal surfaces to 1,200° F (649° C) and will withstand thermal cyclic conditions to 1,500° F (815° C)

PHYSICAL PROPERTIES

Color	Green
Finish	Smooth
Maximum service temperature	1200° F (649° C)
Bond Strength	2,160 psi
Tensile Strength	2,243 psi

Note: Physical properties were determined on specimens prepared under laboratory conditions using applicable ASTM procedures. Actual field conditions may vary and yield different results; therefore data is subject to reasonable deviation.

CHARACTERISTICS

- Resistant to 1,200° F (649° C)
- Resistant to severe cyclic conditions
- Corrosion resistant
- Prevents slagging and fouling
- Resist gases, oils, solvents and most acids
- Non-toxic and non reactive
- Good mechanical bonding
- High surface lubricity

INDUSTRIES

- Power Plants
- Chemical Facilities
- Cement Plants
- Pulp and Paper
- Waste to energy plants

USES

- Boiler water wall tubes
- Generating and back pass tubes
- Precipitators
- Duct work and stacks
- Boiler roofs
- Headers

SPECIFICATION DATA

Components	Single
Dry time between coats @ 50% R.H., 70° f	1 hour
Volume solids	86%
Theoretical coverage @ 1 mil. D.F.T.	500 sq.ft./gal.
Thinning liquid	None required
Metal temperature during application	50° F – 150° F (10 C - 66°C)
Weight per gallon	14.03 lb.
Storage temperature	33° - 100° F (0.5° - 38° C)
Shelf life (before mixing)	1 year
Cure conversion temperature begins at:	+ 300° F (204° C)

SURFACE PREPARATION

Surfaces to be coated must be dry and free of all chlorides, weld splatter, oil, dirt, grease, liquor and all other contaminants. Round off all rough welds and sharp edges. Abrasive blast to achieve a SSPC-SP5 (white blast) specification. Assure that all compressed air and blast materials are free from contaminants such as water or oil. Garnet or other hard sharp materials are recommended for abrasive blasting. A 3 mil (75 micron) surface profile is recommended.

APPLICATION INSTRUCTIONS

Surface temperature must be a minimum of 5° F (3° C) above the dew point. Do not apply to steel temperatures below 50° F (10° C).

*Do not exceed dry film thickness recommendations of .020 (500 microns).

Fireside CS300 is normally sprayed but if applied by brush, mechanically mix container every 5 minutes during application to assure proper particle suspension.

WARNING! Do not thin Fireside CS300. Call Fireside Coatings for technical assistance.

Application to hot surfaces (+200° F, 93° C) tends to promote dry spray and may cause blistering to occur. Fireside CS300 normally dries by ambient air drying. Low temperature oven or heat drying may be used to accelerate the drying time. Do not exceed 200° F (93°C) during accelerated drying.

Fireside CS300 should be applied in minimum of 4 coats of 3 to 4 mils (75 – 100 microns) per coat. Each coat must dry to the touch before the second coat is applied. Recommend at least one hour between coats if ambient drying.
If heat cure is used (to accelerate drying) assure that the temperature does not exceed 200° F (93° C). Allow each coat to completely dry before subsequent coats are applied.

EQUIPMENT

Fireside Coatings should be applied by personnel experienced in the application of industrial coatings. Conventional or airless spray equipment is recommended.
Adjust pressure as needed. Adjust the fan width as required and hold gun 10” to 12” from the surface. When spraying overlap each pass 50% to assure complete coverage.

MIXING

NOTE: Mechanical agitation/ mixing **must** be used during application. Mix materials until smooth and uniform in consistency. When spraying adjust mixing speed to allow for material suspension without cavitation.

CLEAN-UP

All equipment should be cleaned with water before the coating dries.

CURING REQUIREMENTS

After application allow the coating to air dry above 50 deg. f. or 10 deg. C for minimum 16 hours.
Cure for 90 minutes at 180 deg. F. to 200 deg. F. (83-93 C)
Cure for 1 hour at 300 deg. F. to 350 deg. F. (149-177 C))
Cure for 1 hour at 425 deg. F. to 460 deg. F. (218-239 C)

CAUTION

Consult Safety Data Sheets and container label caution statements for any hazards in handling this material.