Technical Data Sheet

XP61-SG

PRODUCT DISCRIPTION:

XP61-SG is a single component ceramic coating specifically engineered to provide external corrosion protection while providing high surface lubricity and sliding abrasion resistance on both carbon and stainless steel boiler and furnace tubing. XP61-SG has been formulated to retard tenacious slag build up on boiler water walls and to prevent fouling in high temperature generating sections of coal fired utility boilers.

The coating has excellent flow properties and can be applied to a dry film thickness of 6 to 16 mils. (150-400 microns).

XP61-SG is thermally neutral and bonds well to properly prepared carbon steel or stainless steel substrates. XP61-SG can also be applied to areas of refractory that may be subjected to slagging.

Upon curing XP61-SG becomes a durable ceramic coating that will provide protection of metal surfaces to 1,800° F (982° C) and will withstand thermal cyclic conditions to 2,000° F (1093° C).

PHYSICAL PROPERTIES:

Color	Green
Finish	Smooth
Maximum service temperature	1,800° F (982° C)
Bond Strength	2,180 psi
Tensile Strength	2,260 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 1,800° F (982° 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
- Refineries
- Chemical Facilities
- Cement Plants
- Pulp and Paper
- Steel Processing

USES:

- Boiler water wall tubes
- Superheater and reheater tubes
- Burners
- Boiler roof tubes
- Nose arch tubes

SPECIFICATION DATA:

Components	Single
Dry time between coats @ 50% R.H., 70° f	1 hour
Volume solids	96%
Theoretical coverage @ 1 mil. D.F.T.	600 sq.ft./gal.
Thinning liquid	None required
Metal temperature during application	50° F – 150° F (10 C - 66°C)
Weight per gallon	17.5 lb.
Storage temperature	33° - 100° F (0.6°C - 38° C)
Shelf life	1 year
Cure conversion temperature begins at:	500° F (260° C)
Viscosity	cSt 15.84

SURFACE PREPARATION:

Surfaces to be coated must be dry and free of all chlorides, weld splatter, oil, dirt, grease, liquor, ash and all other contaminants. Round off all rough welds and sharp edges. Abrasive blast to achieve a SSPC-SP5/NACE 1 (white blast) specification.

Assure that all compressed air and blast materials are free from contaminants such as water, dirt or oil. Garnet or other hard sharp materials are recommended for abrasive blasting. A 2 to 3 mil 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.

XP61-SG 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 XP61-SG. 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. XP61-SG normally dries by ambient air drying. If the temperature is below 70° F (93° C) and/or the humidity is high, slower drying will occur. Low temperature oven or heat drying may be used to accelerate the drying time. Do not exceed 200° F (93°C) during accelerated drying.

XP61-SG should be applied in minimum of two coats of 2 to 3 mils per coat. Each coat must dry for at least one hour before the second coat is applied.

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 ceramic coatings should be applied by personnel experienced in surface preparation and application of industrial coatings. Conventional or airless spray equipment is recommended. Contact Fireside Coatings for specific equipment requirements and recommendations.

MIXING:

Use mechanical agitation for mixing and **during application**. Mix materials until smooth and uniform in consistency. Adjust mixing speed to allow for material suspension during spraying without cavitation.

CLEAN-UP:

All equipment should be thoroughly 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 above 60° F.
Cure for 90 minutes at 180° F. to 200° F. (88° C to 93° C)
Cure for 1 hour at 300° F. to 350° F. (149° C to 177° C)
Cure for 1 hour at 420° F. to 460° F. (216° C to 238° C)

CAUTION:

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