Technical Data Sheet

XP61-S

PRODUCT DISCRIPTION:

XP 61-S is a single component thin film 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 tubing. XP61-S has been formulated to retard tenacious slag build up on boiler water walls and to reduce fouling in the generating sections of coal fired utility boilers. XP61-S is also recommended as a top coat over F-61 or thermal sprayed coatings in areas of aggressive erosion such as soot blower lanes or burners.
The coating has excellent flow properties and can be applied to a dry film thickness of 8 to 16 mils. (200-400 microns)

XP61-S is thermally conductive and bonds well to properly prepared carbon steel or stainless steel substrates.

Upon curing XP61-S becomes a durable ceramic coating that will provide protection of metal surfaces to 1,600° F (871° C) and will withstand thermal cyclic conditions to 1,800° F (982° C)

PHYSICAL PROPERTIES

Color	Green
Finish	Smooth
Maximum service temperature	1800° F (983° C)
Bond Strength	2,240 psi
Tensile Strength	2,360 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 (983° 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
- Steel Processing

USES

- Boiler water wall tubes
- Superheater and reheater tubes
- Burners
- Radiant furnace tubing
- Boiler roofs
- Nose arch tubes

SPECIFICATION DATA

Components	Single
Dry time between coats @ 50% R.H., 70° f	1 hour
Volume solids	88%
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	13.61 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)

Viscosity	26.9 (cSt)

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 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-S 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 XP 61-S. 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. XP 61-S normally dries by ambient air drying. If the temperature is below 70° F (21° C) and 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-S should be applied in minimum of three (3) coats of 2 to 3 mils per coat. Each coat must dry to the touch 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) If thicker coating is required 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. Hold gun 10” to 12” from the surface at right angles. Lap each pass 50%.

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 without cavitation. It is recommended to screen the material before application

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 24 hours.
Cure for 90 minutes at 180 deg. F. to 200 deg. F.
Cure for 1 hour at 300 deg. F. to 350 deg. F.
Cure for 1 hour at 425 deg. F. to 460 deg. F.

CAUTION

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