Kingfisher
Protecting Industry Worldwide

CERAMIC TECHNICAL DATASHEET

PRODUCT SPECIFICATION
DATA SHEET NO. CER00109

K-GUARD CRC

Boiler Tube Corrosion Resistant Protection System

Typical list of applications

- **Boiler waterwalls**
- **Econimiser tubes**
- **Air heater tubes**
- **Superheater tubes**
- **Steam drum**
- **Fireside components**

Use warm soap and water to clean tools immediately after use. Once the coating is dry, the material must be abraded off.
Store between 10°C(50°F) and 27°C(80°F). DO NOT FREEZE. Use product within 6 months of receiving.

Manufacture
K-GUARD CRC is an inorganic water based ceramic coating technology incorporating an advanced proprietary blend of ceramic and metallic additives. The coating is designed to achieve maximum wear resistance characteristics for metallic surfaces subjected to severe high temperature erosion. This single component technology is 50% solids by weight containing zero VOCs.

Application
The K-GUARD CRC is used to counter the detrimental effects of constant, erosion, corrosion and slag build-up on boiler tubes situated within the different areas of a boiler system such as boiler water walls, superheater tubes and reheat tubes. Forms of supply K-GUARD CRC is provided in a range of kit sizes, accompanied with the exact amount of setting agent required for the application. As the coating is a water based system, we recommend the setting agent is used as part of the process, as this provides a high degree of resistance against increased levels of humidity levels. We recommend consultation takes place with one of our qualified engineers in order to assess its suitability for particular applications. Should you have a requirement for the product to be installed, then we would welcome the opportunity in discussing your application needs using our fully trained staff and workforce, alternatively we will be happy to consult with or supervise your own workforce

Installation
The water based coating is a relatively simple application, however before applying, the surface must be shot blasted clean with abrasive media (30/60 or coarser) garnet, aluminium oxide or appropriate media to achieve the cleanliness and angularity required to achieve steel surfaces of a White Metal Blast (BS EN ISO SA 3). Once the coating and the setting agent is mixed using an industrial type mixer, constantly mix for at least 2-3 minutes, ensuring an even blend is achieved and all heavy materials resting at the bottom of the container is evenly dispersed, scrape any residue build from the sides of the container, been throughly dispersed, it then needs to be screened with 60 to 80 mesh filter. The product may be applied through an airless or conventional spray gun and can only be applied to a substrate where temperature is more than 5°F above the dew point, during surface preparation and coating application.

The coating can then be immediatley applied in thin multiple passes with a maximum thickness of 30 microns (1.2 mils) dry per pass. Each pass must be dry to touch prior to applying additional coats. The theoretical coverage rate is 13sqm for the 6.5 L kit at 250 microns. The typical actual coverage rate is 1.4 - 1.5sqm/L. minimum 63 microns (2.5 mils) to 75 microns (3 mils) profile for high temperature service. The coating will need to undergo a curing process once it has been left to air dry. Please refer to the K-GUARD curing schedule.

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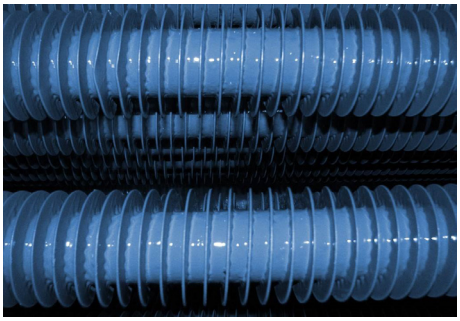

Mechanical Properties		
Performance Property	**Test Method**	**Result**
Hardness	ASTM D2240	90 Shore D
X-Cut Adhesion	ASTM D6677	Rating 10
Pull off Adhesion	ASTM D45441	Greater than 15,200 kPa (2,200 psi)
Abrasion	ASTM D4060	Less than 25mg loss
Viscosity, cP		3,000 to 4,000 cP
Temperature Resistance		upto 1200 °C
Solids Content	ASTM D1259	50%
Volatile Organic Compounds	ASTM D2369	0 grams/liter

Physical Properties	
Color	Blue
No. Components	Single
Air Dry (23 °C. / 50% RH)	15 to 20 minutes
Heat Cure	Consult with manufacturer
Min Recoat	Dry to touch (print free)
Max Recoat	24 hours
Max thickness per coat	60 microns (wet), 30 micorns (dry)
Suggested thickness	150 to 300 microns (dry)

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