PROCERA™ McG Series is a premium grade coating ceramic material that provides protection against tube corrosion and slagging in the power generation markets. Boiler tubes coated with McG Series of coatings will maintain optimum heat transfer. McG Series is non-catalytic, resulting in a significant decrease in residue and slag buildup on tube surfaces. PROCERA McG Series of coatings are non-hazardous, non-toxic, are water-soluble, and discharge no fumes when applied.

**PROCERA McG Series materials will:**
- reduce the oxidation of metals at high temperatures
- improve the temperature uniformity of boiler water wall tubes
- reduce the abrasive wear of fly ash on boiler tubes
- reduce the build-up of combustion by-products in pulverized coal burning boilers
- improve the heat absorption rate into boiler water wall tubes
- demonstrate excellent corrosion and acid resistance at high temperatures

**Application:**
- PROCERA McG Series can be used anywhere inside the boiler. There are no limits regarding substrate requirements. The coatings can be installed over alloy and carbon steels, old or new tubes. The coatings are applied onsite during a maintenance outage by certified applicators. New tube panels can be coated then cured off-site, minimizing the outage time needed for protective coating applications.

**Surface preparation and heat cure:**
- The surface preparation required for applying the coating is a white metal finish with a 2 - 3 mil profile. After heat cure, the thickness will vary depending on the purpose of the application.

**Limitations:**
- PROCERA McG Series mix cards (formulas) for specific environments and applications. There are a variety of blend options, targeted and based on the type of metal substrates, issues and areas of the boiler.

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**Water Based Non-Metallic, Non-Catalytic Coating for Metals that is Non-Toxic and Non-Flammable.**
- The coating is sprayed at room temperature and will air dry in approximately 30 - 45 minutes.
- After properly cured (500 degrees F.) the coating is nearly pore free and is both chemically and mechanically bonded to the coated metal substrate.
- The coating forms an abrasion resistant surface that is non-reactive, non-wetting and thermal shock resistant.
- The coating stops oxidation, carbonization, and combustion product buildup.
- This prevents deterioration of the metal caused by chemical attack, molten metal contact and heat related corrosion.
- This allows the metal to retain its metallurgical properties and mechanical strength and results in increased service life and unit efficiency.

**RECOMMENDED USES:**
- Applications where increased resistance to abrasion, corrosion and molten metal contact is required such as:
  
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<td>Water Walls</td>
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</tbody>
</table>

**KEY PROPERTIES:**

| Atmospheres: | Coal, Oil, gas, wood, garbage, and electric fired furnaces, kilns or vessels. |
| Bonding:     | The ceramic coating forms both a chemical and mechanical bond to the coated substrate after proper cure temperature is realized (500 degree F.). |
| Chemical Resistance: | The ceramic coating has excellent resistance to acids, alkali, fluxes, oxides and combustion products. |
| Color: Dark Green | Coverage: 100 to 125 sq. ft. / gallon |
| Curing: | Curing is accomplished when coating surface reaches a temperature of 500 degrees F. This can be accomplished prior to installation or during heat up of the coated component. |

**Dry Thickness:** 3 to 6 mil

**Temperature Resistance:** The maximum operating temperature of the ceramic coating is as follows:
- Aluminum 600°F
- Hastaloy 1900°F
- Stainless Steel 1800°F
- Carbon Steel 1200°F
- Inconel 1900°F

**Thermal Cycling:** After proper curing, the coated component can be cycled from its maximum use temperature to room temperature without failure.