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SC-1400

Reduces/Stops Graphite Oxidation/Burning to Above 1400 C

SC-1400 is a water-based paintable Beta (cubic-crystal-structure) Silicon Carbide (SiC) coating that is usable to 1400 C and above (even to 1600 C for short-time exposure) in air/oxidizing atmospheres to protect all graphite and carbons from oxidation while providing an abrasion resistant layer. Thus, SC-1400 reduces carbon loss and costly graphite component replacement.

Key Attributes

- Extends Lifetime & Reduces Maintenance
- Provides a Hard, Abrasion-Resistant Layer
- High Emissivity due to SiC
- Usable on all Graphites / Carbons
- Withstands Cyclic Use
- Forms Sealed-Porosity-Coating That Stops Oxidation: Performs Best if Used > 700 C (>1292 F) due to Pore-Sealing
- Water-based, Ready-to-use, Like Housepaint

Ideal Use

- Oxidation Reduction/Prevention with Graphite and Carbons
- Abrasion-Resistant Surface Sealant Layer for Graphite

Use Notes

1. DO NOT DILUTE.
2. Resuspend the paint.
3. Lightly roughen (sandpaper or grit-blast) the surface to be coated.
4. Clean surface of all loose dust/powder.
5. Apply 2-4 coatings [3-10 mils, 0.003-0.01 inch or 0.08-0.25 mm] by brush or spray, drying thoroughly between applications and before heating to use-temperature.
6. Coating is fully hard and water-resistant after heating to >350 C (>662 F).

Typical Graphite Protection from Oxidation for 1 Hour at Soak Temperature

Material	Soak Temp. (C)	% Unreacted
Coated w/SC-1400	1400	90
	1600	80
Uncoated	1400	0
	1600	0

Heating & cooling times were 4.5 h (1400 C) or 5.5 h (1600 C); samples were 1" D, 1" H cylinders of CS-312 graphite; coatings were 0.2 mm thick (7-8 mils); three brush applications.

Specifications

Active Ingredient	Beta Silicon Carbide
Max Use Temperature	2552 F / 1400 C
Short-Term Use To	2912 F / 1600 C
Use Atmosphere	Air [others also OK]
Fired Composition	>75% SiC with proprietary Binder
Liquid Carrier	Water
Brookfield Viscosity (cps)	1700-2700 @3/30
Specific Gravity	1.85
Color	Greenish-Gray
Shelf Life (months)	>12
Coverage (ft ² /gal)	100-400
Coating pH	2-3
H F R Ratings	1-1-0
Substrate Use	Graphite

Sizes and colors

SC-1400 is greenish-gray colored paint.
 Standard Size: wide-mouth 1 gallon pail.

Safety Information

- Consult MSDS before use.
- Avoid breathing of spray/vapors.
- For Industrial use only.

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