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**SC-1600**

## Reduces/Stops Graphite Oxidation/Burning to 1600 C

SC-1600 is a water-based paintable Beta (cubic-crystal-structure) Silicon Carbide (SiC) coating that is usable to 1600 C in air/oxidizing atmospheres to protect all graphite and carbons from oxidation while providing an abrasion resistant layer. Thus, SC-1600 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) for 0.5-1 hour.

### Typical Graphite Protection from Oxidation for 1 Hour at Soak Temperature

Material	Soak Temp. (C)	% Unreacted
Coated w/SC-1600	1400	95
	1600	94
Uncoated	1400	0
	1600	0

Heating rates were 5 C/min; samples were fractured pieces 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	2912 F/1600 C
Use Atmosphere	Air [others also OK]
Fired Composition	>75% SiC with proprietary Binder
Liquid Carrier	Water
Brookfield Viscosity (cps)	1528 @3/30
Specific Gravity	1.90
Color	Greenish-Gray
Shelf Life (months)	>12
Coverage (ft <sup>2</sup> /gal)	100-400
Coating pH	2-3
H F R Ratings	1-1-0
Substrate Use	Graphite

### Sizes and colors

SC-1600 is greenish-gray colored paint.

Standard Size: 8 oz. and 1 pint Nalgene.



### Safety Information

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

### CAUTION: DO NOT CONTACT WET COATINGS WITH MOLTEN METAL.

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