

# Ceramic Cloth G81

G81, .125" ceramic cloth is alumino-silicate based refractory fiber, white and odorless with Inconel wire reinforcement carrier. G81 resists temperature as high as 2300°F/1260°C. This material is lightweight and has very low thermal conductivity. It provides excellent insulation at high temperature. It also resists corrosive chemicals, commonly used acid and alkali. Exceptions are hydrofluoric and phosphoric acids and concentrated alkalis. If fabric is wet by water or steam, all thermal and physical properties are completely restored upon drying. No water of hydration is present. G81 will generate small amounts of smoke and trace element out-gassing during the initial exposure to temperatures above 450°F/232°C.

## Chemical and Physical Data:

Chemical Composition (refractory fiber only)

Total Al<sub>2</sub>O<sub>3</sub> and SiO<sub>2</sub>>97%(Al<sub>2</sub>O<sub>3</sub>: 47%), Fe<sub>2</sub>O<sub>3</sub>: <1.1%

Refractory Fiber Content: >85%

Weight Loss (1800°F): 8-10%

Fiber Physical Properties:

Fiber Diameter: 2 – 4 microns, Fiber Length: 100 – 250 mm

Fiber Shrinkage (1800°F/980°C, 3h): <3.5%

Working Temperature: 1800°F/980°C for continuous use, 2300°F Maximum

Insulation Properties:

Working Temperature

Thermal Conductivity of Fiber

	(BTU/sq.ft. °F/in.)	(W/m °K)
570°F/300°C	0.84	0.12
1,100°F/600°C	0.91	0.13
1,800°F/980°C	1.19	0.17

## Product and Safety Information

Ceramic cloth is refractory fiber. It is classified in Group 2b (possible human carcinogen) by International Agency for Research on Cancer (IARC). POSSIBLE CANCER HAZARD BY INHALATION. It can also cause irritation to skin and eyes.

Protective clothing, gloves, and dust mask is recommended for handling. In high airborne fiber environment, use local exhaust ventilation, dust collection, and other equipment designed to minimize airborne fiber emissions, and avoid airborne fiber exposure. Handle with extra caution after fiber becomes cristobalite at 1800°F or higher temperature.

## **Gaskets, Inc**

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Ceramic Fabric Sheet  
Last Up Date 03/08

### **Chemical Properties**

Ceramic cloth exhibits excellent chemical stability resisting attack from most corrosive agents. Exceptions are hydrofluoric and phosphoric acids and concentrated alkalis. It also resists oxidation and reduction. If wet by water, steam or oil, thermal properties and physical properties are completely restored upon drying. No water of hydration is present.

### **Typical Applications**

- Gasket and wrapping material
- Induction heating furnace coil insulation
- Cable and wire insulation
- Infrared radiating diffusers
- Boiler tadpole gaskets
- Fuel line insulation
- Furnace heat zone separators
- High-pressure steam portable flange covers
- Strip curtains
- Furnace curtains
- Pipe hanger insulation

GF08, ceramic tape is available in ½", 1", 2", 3", & 6" widths and is 1/8" thick. Supplied in 100 ft. rolls.

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