

## About Steatite



Steatite Ceramics are excellent electrical insulators. VHANDY's Steatite products are low cost materials having good mechanical strength, great electrical insulating properties, good wear and corrosion resistance and can function at safe operating temperatures up to 1000 C. Typical applications include, but are not limited to, electric heating elements, igniters, lamp bases/sockets, resistors, stand offs, band heaters, knife sharpeners, thermocouple cores, thermostat pins, load banks, ovens, furnaces, connectors, spacers, electrostatic air cleaners,

relays, switches, fuses, substrates, sensors and stiffening rods.

Steatite ceramic is used extensively for insulation in the electrical and electronic industries. It is a lower cost material than Alumina, but has excellent electrical resistance properties (which are retained at high temperatures) along with moderate mechanical strength.

This ceramics offers low contraction on firing allows us to produce components to precise tolerances. Both small and highly detailed shapes can be achieved using cost efficient production techniques, making steatite ceramic a good choice for the volume manufacture of insulating components.

## Overview of Physical Properties

- Relatively high mechanical strength
- High volume resistivity at elevated temperatures
- Excellent dielectric strength
- Low dissipation factor

Item	Unit	Steatite
Main Chemical composition		steatite
Density	g/cm <sup>3</sup>	≥2.5
Porosity	%	0
Hardness	HRA	≥75
Flexural Strength	Kgf/cm <sup>2</sup>	900
Compressive Strength	Kgf/cm <sup>2</sup>	4000
Fracture Toughness	MPa/m	≥120
Max Operating Temp	°C	≥1000
Thermal Conductivity	W/m°K	2.5
Volume Resistivity	20°C	10 <sup>12</sup>
	100°C	10 <sup>10</sup> -10 <sup>12</sup>
	300°C	5*10 <sup>8</sup>
Dielectric Strength	Volts/mil	230

## Overview of Applications

- Supports for heating elements
- Electrical insulators
- Stand-off insulators
- Lighting insulators (supports, bases, etc.)
- Spacers
- Insulating washers or bushings