

A72 Ceramic Cement & Feedthroughs

Sauereisen Ceramic Cement

A Superior Electrical Insulation for Heaters, Elements and Furnaces

- Provides maximum electrical resistance
- Heat conductive and thermal shock resistant
- Excellent bonding properties
- Chemical set
- Easy to mix and apply
- Ideal for potting applications
- Odorless



Sauereisen Electrotemp Ceramic is an excellent ceramic in applications where high electrical insulation is required and high thermal conductance is desired, as in heater elements. Coating a heater element with Sauereisen Ceramic allows you to electrically insulate the heater coils from shorting out while allowing excellent heat conductance. Other applications include mass spec probes, filaments, repair of ceramic pieces and some ceramic to metal joining.

Application / Curing

Sauereisen No. 8 is supplied in powder form and need only be mixed with water to apply. It may be applied by mechanical dispenser. In some applications it may be desirable to grind the powder with a mortar and pestle to minimize grain size for smoother, thinner layers.

Dry powder should be thoroughly remixed in the container to overcome any segregation. Weigh out 100 parts dry cement and 13 parts water. Add water to the powder all at once while mixing. Do not add water gradually. Continue stirring, until a creamy mortar-like consistency is obtained. Minimum amount of water should be used as excess water reduces mechanical strength, increases shrinkage and delays set time.

No. 8 hardens at room temperature or by baking. The initial set begins in approximately one to two hours and the cement continues to increase in hardness until thoroughly dried.

Drying time depends upon the amount of water used and the application thickness. Normally, overnight drying is sufficient. Low temperature oven drying - up to 180°F - can be used to accelerate the cure.

Caution

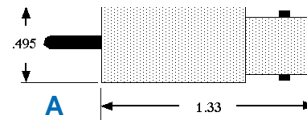
No. 8 may be a mild skin and eye irritant - care should be exercised in its use. Avoid contact with skin and eyes. Eye protection and rubber gloves are recommended when handling this product.

Sauereisen Ceramic is supplied in a convenient 4 oz. jar which will provide insulation for many mass spectrometer heater coils, filaments and probes.

Part No.	Description	Price ea.
SCC8	Sauereisen Ceramic 4 oz. jar	
SCC8-50	Sauereisen Ceramic 1 Gal. Container	

Ceramic Feedthroughs

BNC Connector Feedthrough



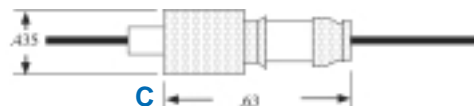
Part No.	Description	Price ea.
B52301	BNC Feedthrough	

Pin Connector Feedthrough, Large



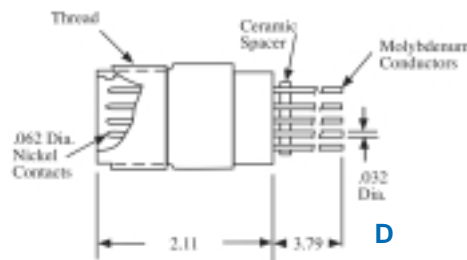
Part No.	Description	Price ea.
B5232	Pin Feedthrough, large	

TSQ® 70 Feedthrough



Part No.	Description	Price ea.
B01373	Feedthrough for TSQ70 Ion Gauge	

10 Pin Electrical Feedthrough



Part No.	Description	Price ea.
B08751	10 Pin Feedthrough	

Physical Properties of Sauereisen

Coefficient of thermal expansion	2.6 x 10 ⁻⁶ in/in/°F (4.68 x 10 ⁻⁶ cm/cm°C)
Color	Off white
Compressive strength	4500-5500 psi (316 kg/cm ²)
Density	160 pcf (2.56 gm/cm ³)
Dielectric constant	3.0-4.0
Dielectric strength -	
at 70°F (21°C)	76.0 to 101.5 Volts/mil (2900 to 3900 Volts/mm)
at 750°F (398°C)	25.0 to 38.0 Volts/mil (980 to 1490 Volts/mm)
at 1475°F (801°C)	12.5 to 25.0 Volts/mil (490 to 980 Volts/mm)
Maximum service temperature	2600°F (1426°C)
Modulus of rupture	450 psi (31 kg/cm ²)
Tensile strength	250 psi (17 kg/cm ²)
Thermal conductivity	10-12 Btu•in/ft ² •hr•°F (3.4-4.1 x 10 ⁻³ Cal•cm/cm ² •sec•°C)
Volume resistivity	
at 70°F (21°C)	1010-1011 ohm-cm
at 750°F (398°C)	109-1010 ohm-cm
at 1475°F (801°C)	108-109 ohm-cm