

SAUERREISEN

TEMPSEAL CEMENT NO. 3

Inorganic silicate paste cement for high temperature bonding and sealing.

Specialty adhesive recommended for:

Lamp Assemblies
Thermocouples
Heating Elements
Resistors

Sauereisen TempSeal Cement No. 3 is an inorganic adhesive paste offering high temperature resistance combined with with a sealing capability superior to other refractories. TempSeal Cement No. 3 overcomes the inherent permeability of ceramic materials by permitting only a remarkably low level of absorption.

Common uses of No. 3 include the assembly of heating elements, resistors and other electrical components where extreme operating temperatures coexist with a humid environment. The TempSeal Cement effectively conducts heat and insulates electricity while providing a mechanical moisture barrier.

CHARACTERISTICS

- High temperature sealing material.
- Moisture resistant ceramic cement.
- Thermally conductive.
- Electrically insulating.
- Single component paste.
- Odorless.

APPLICATION

Sauereisen No. 3 is supplied as a Paste containing a mixture of fine particles and proprietary binders that are blended in the manufacturing process. Measures should be taken to minimize the amount of settling that may occur during shipping and storage. Thoroughly remix the Paste to a smooth uniform consistency prior to use to ensure proper dispersion of crucial ingredients.

PHYSICAL PROPERTIES

Coefficient of thermal expansion	3.4 x 10 ⁻⁶ in/in/°F (6.12 x 10 ⁻⁶ cm/cm/°C)
Color	White
Compressive strength	6000 psi (421.8 kg/cm ²)
Density	145 pcf (2.32 gm/cm ³)
Dielectric constant @ 70°F (21°C)	9
Dielectric strength @ 70°F (21°C)	50 - 100 Volts/mil (2000 - 3900 Volts/mm)
Flexural strength	3000 psi (210.9 kg/cm ²)
Maximum service temperature	2200°F (1204°C)
Modulus of elasticity	3.5 x 10 ⁵ psi (2.5 x 10 ⁴ kg/cm ²)
Tensile strength	600 psi (42 kg/cm ²)
Thermal conductivity @ 500° -1500°-F (260°-816°C)	23 - 13 BTU·in/ft ² ·hr·°F (7.8 - 4.4 x 10 ⁻³ Cal·cm/cm ² ·sec·°C)
Volume resistivity @ 70°F (21°C)	10 ⁶ - 10 ⁸ ohm-cm

Physical properties were determined on specimens prepared under laboratory conditions using applicable ASTM procedures. Actual field conditions may vary and yield different results; therefore, data are subject to reasonable deviation.

TempSeal Cement works best when used in thin applications. Avoid applying No. 3 at a thickness greater than 1/4 inch. Several coats may be applied when a heavier thickness is required. In multiple coat applications, each coat must be thoroughly dry prior to applying additional coats. Porous substrates may require dampening or sealing prior to applying the cement. Retempering of No. 3 with other silicate liquids is not recommended.

SETTING/CURING

TempSeal No. 3 is a thermal setting cement that cures by exposure to heat. Drying time depends on the thickness of the application. Low temperature oven drying at 180°F is recommended. Avoid steaming while drying.

PACKAGING

Approximately 17.6 pounds of Sauereisen TempSeal Cement No. 3 is included with in a 1-gallon can.

CLEAN-UP

All equipment should be cleaned with soap and water before Cement No. 3 cures. If removal is required after cure, consult Sauereisen.

SHELF LIFE

Sauereisen TempSeal No. 3 Paste has a shelf life of six (6) months when stored in unopened, tightly sealed containers in a dry location at 70°F. Care should be taken to periodically rotate material to prevent settling. Avoid freezing.

If there is doubt about the status of the material, consult Sauereisen quality control personnel.

CAUTION

Consult Material Safety Data Sheets and container label Caution Statements for any hazards in handling this material.

WARRANTY

We warrant that our goods will conform to the description contained in the order, and that we have good title to all goods sold. WE GIVE NO WARRANTY, WHETHER OF MERCHANTABILITY, FITNESS FOR PURPOSE OR OTHERWISE, EXPRESS OR IMPLIED, OTHER THAN AS EXPRESSLY SET FORTH HEREIN. We are glad to offer suggestions or to refer you to customers using Sauereisen cements and compounds for a similar application. Users shall determine the suitability of the product for intended application before using, and users assume all risk and liability whatsoever in connection therewith regardless of any suggestions as to application or construction. In no event shall we be liable hereunder or otherwise for incidental or consequential damages. Our liability and your exclusive remedy hereunder or otherwise, in law or in equity, shall be expressly limited to our replacement of nonconforming goods at our factory or, at our sole option, to repayment of the purchase price of nonconforming goods.

- Information concerning government safety regulations available upon request.**
- Sauereisen also produces compounds for corrosion resistance, electrostatic discharge and grouting.**

SAUEREISEN ...since 1899

160 Gamma Drive
Pittsburgh, PA 15238-2989 USA
Phone 412/963-0303 Fax 412/963-7620
www.sauereisen.com