

# SAUEREISEN

## INSA-LUTE HI TEMP CEMENT NO. 7

High-grade silica refractory for:

**Appliances**      **Heaters**  
**Assembling**    **Soldering irons**  
**Coating**        **Switches**

Sauereisen Insa-Lute Hi Temp Cement No. 7 is a sodium silicate adhesive cement used by leading electrical manufacturers. The cement exhibits outstanding resistance to heat and electricity. Typical applications include instrumentation assembly, coating and embedding of resistance wires, and high-temperature insulation.

Insa-Lute Hi Temp Cement bonds well to metal, ceramic and glass. Upon curing, the cement resembles a durable ceramic and will resist high temperatures.

Working properties of the cement exhibit a virtually unlimited pot life prior to exposure to air. This feature makes No. 7 ideal for automated applications using dispensing equipment. Due to its inorganic composition, Insa-Lute Hi temp Cement is very stable and will not out-gas.

### CHARACTERISTICS

- Heat conductive and thermal shock resistant.
- Safely insulates electricity.
- Withstands temperatures to 2500°F (1371°C).
- Resists oil, solvents and most acids.
- Non-toxic and odorless.
- Adheres to metal, ceramics, glass and other surfaces.
- Good mechanical bond.
- Supplied in paste form.

### PHYSICAL PROPERTIES

Coefficient of thermal expansion (ASTM C372)	6.0 x 10 <sup>-6</sup> /F° (10.8 x 10 <sup>-6</sup> /C°)
Color	White
Compressive strength (ASTM C579) @ 7 days	3,500 psi (246.1 kg/cm <sup>2</sup> )
Dielectric constant (ASTM D150)	3.5 - 6.0
Dielectric strength (ASTM D149)	
@ 70°F (21°C)	12.5 to 51.0 Volts/mil (490 to 2,000 Volts/mm)
@ 750°F (399°C)	≤ 15.0 Volts/mil (588 Volts/mm)
@ 1,475°F (802°C)	≤ 1.3 Volts/mil (51 Volts/mm)
Maximum service temperature	2500°F (1371°C)
Shear strength	600 psi (42.2 kg/cm <sup>2</sup> )
Tensile strength (ASTM C307)	400 psi (28.1 kg/cm <sup>2</sup> )
Volume resistivity (ASTM D1829)	
@ 70°F (21°C)	10 <sup>8</sup> -10 <sup>9</sup> 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.

### INSTRUCTIONS

#### Mixing

No. 7 should be thoroughly remixed to a smooth, uniform consistency prior to use. If necessary, Thinning Liquid No. 14 can be used where the cement is required in a more fluid consistency. Minimal amounts of extra liquid should be used, as excess liquid will reduce mechanical strength, increase shrinkage and delay set time.

#### Application

Surfaces to receive the cement should be clean and free of grease and dirt. Porous substrates should be dampened slightly with Sauereisen Thinning Liquid No. 14 prior to application.

Insa-Lute Hi Temp Cement No. 7 is an air-set and should be used in thin applications. Avoid applying in a thicknesses greater than 1/4 inch. If necessary, multiple coats may be applied to build thickness. Placement of the cement may be done by brushing, dipping or spraying.

### SETTING/CURING

No. 7 cures by air drying at room temperature. Drying time depends on the consistency and thickness of the application. Normally 18-24 hours drying at ambient temperature is sufficient.

When the cement has limited exposure to air, or if it is desired to accelerate the cure, low temperature oven drying at 180°F (82°C) can be used. Avoid steaming while drying. If the cement will be exposed to elevated temperatures that may approach or briefly exceed the recommended service limits, contact Sauereisen for appropriate drying schedule recommendations.

A heat cure is also suggested where humidity resistance is required. In addition, a moisture-resistant lacquer or silicone coating may be applied to the exposed surfaces.

## PACKAGING

No. 7: 1-quart and 1-gallon cans;  
5-gallon pails.

## CLEAN-UP

All equipment should be cleaned with soap and water before No. 7 cures. If removal is required after cure, a low concentration of sodium hydroxide may dissolve the cement. Consult Sauereisen for other recommendations.

## SHELF LIFE

Sauereisen No. 7 Paste has a shelf life of six (6) months when stored in unopened, tightly sealed containers in a dry location at 70°F. If there is doubt as to the quality of the material, consult Sauereisen.

## 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 manufactures products for corrosion resistance, electrostatic discharge protection and machinery grouting.**

**SAUEREISEN** ...since 1899  
160 Gamma Drive  
Pittsburgh, PA 15238-2989 USA  
Phone 412/963-0303 Fax 412/963-7620  
[www.sauereisen.com](http://www.sauereisen.com)