

SAUEREISEN

ELECTRIC REFRACTORY CEMENT NO. 350

Strong-bonding cement for:

Bonding
Coating
Insulating
Sealing

Sauereisen Electric Refractory Cement No. 350 is a chemically-setting inorganic cement specified for high temperature bonding applications. The product is supplied as a two-component sodium silicate cement consisting of a Powder and Liquid which are mixed together as used.

The excellent coating properties of Sauereisen No. 350 make it ideal for assembly and encapsulation of ceramic parts, electric elements and induction heating coils. It can also be used as a wash coating for sand-resin bodies and as a refractory coating. Electric Refractory Cement No. 350 may be applied by dipping, spraying, pouring or automatic dispensing.

CHARACTERISTICS

- Withstands temperatures to 1700°F (927°C).
- Heat conductive and thermal shock resistant.
- Insulates electricity.
- Resists oil, solvents and most acids (except hydrofluoric).
- Small particle size allows for good flow characteristics.
- Adheres to metal, ceramics, glass and other surfaces.
- Safe to use, odorless and non-toxic.

PHYSICAL PROPERTIES

Color	Gray
Compressive strength	2000 psi (141 kg/cm ²)
Density	117 pcf (1.87 gm/cm ³)
Dielectric constant	8.08
Dielectric strength @ 70°F (21°C)	35-42 Volts/mil (1335-1602 Volts/mm)
Flexural strength	700 psi (49.2 kg/cm ²)
Maximum service temperature	1700°F (927°C)
Modulus of elasticity	7.49 x 10 ⁵ psi (5.26 x 10 ⁵ kg/cm ²)
Tensile strength	500 psi (35.2 kg/cm ²)
Thermal conductivity	3.7 BTU·in/ft ² ·hr·°F (1.23 x 10 ⁻³ Cal·cm/cm ² ·sec·°C)
Working time	60 minutes

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.

APPLICATION

Sauereisen No. 350 Powder should be thoroughly remixed before using. Weigh out 65% - 70% of No. 350 Powder and 30% - 35% of No. 350 Liquid. Place Liquid in a clean mixing container and gradually add Powder while mixing. Continue mixing until a smooth uniform consistency is obtained. Mixing may be done with a slow-speed mixer or by hand with a spatula.

No. 350 may be mixed to a thinner consistency by regulating the amount of Liquid used; however, the use of excess Liquid will reduce mechanical strength, increase shrinkage and delay set time. Failure of cement to adhere indicates setting has begun. Adjust batch sizes accordingly to minimize wastage. Do not attempt to retemper the cement paste by adding more Liquid. Porous substrates may require dampening with No. 350 Liquid before applying the mixed cement.

SETTING/CURING

Electric Refractory Cement No. 350 hardens with an internal chemical-setting action in 18-24 hours at ambient temperatures. Working time of No. 350 when Powder is mixed with Liquid is approximately 60 minutes at 70°F. If it is desired to accelerate the cure, oven drying at 180°F can be used. Avoid steaming while drying. If the cement will be exposed to elevated temperatures approaching or briefly exceeding its service limits, contact Sauereisen for appropriate drying schedule recommendations.

If high humidity resistance is required and it is impractical to fire the cement, a moisture-resistant lacquer or silicone coating may be applied to the exposed surfaces.

PACKAGING

Powder:

1-gallon cans
50-pound bags

Liquid:

1-gallon cans
50-pound pails
600-pound drums

CLEAN-UP

All equipment should be cleaned with soap and water before No. 350 cures. If removal is required after cure, consult Sauereisen for recommendations.

SHELF LIFE

Sauereisen No. 350 Powder and No. 350 Liquid have a shelf life of one year when stored in unopened, tightly sealed containers in a dry location at 70°F. If there is a 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