SCProbond™ HT-2 Cement

High Temperature Potting Cement

Synthetic ceramic for:
Assembling Insulating
Sealing Molding
Potting Refractories

SCProbond™HT-2 Potting Cement is a white, porcelain-like cement that is widely used throughout industry in a variety of applications including assembling, sealing, insulating and cementing of ceramics, porcelain, metal, and glass.

CHARACTERISTICS

- Adheres to practically all surfaces that are clean and free of oil and grease.
- Resists oil, electricity and most solvents.
- Heat conductive and thermal shock resistant.
- Resists all acids (except hydrofluoric).
- Fireproof and gasproof.
- Resists temperatures to 1750°F(954°C)

Application

Surfaces to receive the cement should be clean and free of grease and dirt. Highly porous substrates can be dampened slightly with a Thinning Liquid. Priming in this manner will assist the natural anticavitational property of the cement and may not be necessary in all applications.

HT-2 Cement may be placed by brushing, pouring or other automatic dispensing methods.

Since the cement sets by a chemical process that occurs when the HT-2 Liquid reacts with the HT-2 Powder, there are no maximum thickness restrictions for application.

PHYSICAL PROPERTIES

Absorption	13.8%
Bond strength	200 psi (14 kg.cm^2)
Coefficient of thermal expansion	6.2 x 10^{-6} in/in/^{0} F (1.12 x 10^{-5} cm/cm/^{0}C)
Color	Off white
Compressive strength	2200 psi (154 kg/cm^2)
Density	121 pcf (1.94 gm/cm^3)
Dielectric constant	5.0 - 7.0
Dielectric strength	
at 70^{0}F (21^{0}C)	12.5 to 38.0 Volts/mil (490 to 1490 Volts/mm)
at 750^{0}F (399^{0}C)	12.5 to 38.0 Volts/mil (490 to 1490 Volts/mm)
at 1475^{0}F (801^{0}C)	<2.0 Volts/mil (78 Volts/mm)
Flexural strength	455 psi (31 kg/cm^2)
Linear shrinkage	0.004 in/in (0.004 cm/cm)
Maximum service temperature	1750^{0}F (954^{0}C)
Shear strength	430 psi (30 kg/cm^2)
Tensile strength	400 psi (28 kg/cm^2)
Volume resistivity	
at 70^{0}F (21^{0}C)	10^9 - 10^{11} ohm-cm
at 750^{0}F (399^{0}C)	10^7 - 10^8 ohm-cm
at 1475^{0}F (801^{0}C)	10^2 - 10^3 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

SCProbond™ HT-2 is a two-part, chemical-setting cement consisting of a Powder and Liquid which are mixed together as used. HT-2 Powder should be thoroughly remixed before using. Weigh out from 2 to 3 parts of HT-2 Powder and 1 part of HT-2 Liquid (2 to 3 : 1), by weight. 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.

SCProbond™ HT-2 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 the cement to adhere indicates that setting has begun - discard cement. Do not attempt to retemper by adding more liquid.

Silicon Carbide Products, Inc.
361 Daniel Zenker Drive
Horseheads, New York 14845 USA
Telephone: +1-607-562-8599
Fax: +1-607-562-7585
Email: scp@scprobond.com

Proudly made in the USA

SCProbond™ HT-2

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SETTING/CURING

SCProbond™ HT-2 hardens with an internal chemical-setting action in 18-24 hours at ambient temperatures. Working time of SCProbond™ HT-2, when Powder and Liquid are blended together is approximately 30 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, contact Silicon Carbide Products, Inc. for appropriate drying schedule recommendations.

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

PACKAGING

Powder: 1-qt. and 1-gal cans;
50-lb. moisture-resistant bags,
and 50-lb. plastic pails.
Liquid 1-qt. cans, 1-gal. cans, 50-lb. pails & 600-lb. drums.

CLEAN-UP

All equipment should be cleaned with soap and water before SCProbond™ HT-2 cures. If removal is required after cure, consult Silicon Carbide Products, Inc.

SHELF LIFE

SCProbond™ HT-2 Powder and Liquid have a shelf life of one (1) year when stored in un opened, tightly sealed containers in a dry location at 70°F. If there is a doubt as to the quality of the materials, consult a Silicon Carbide Products, Inc. representative.

CAUTION

Consult Material Safety Data Sheets and container label Caution Statements for hazards in handling these materials.

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.

q **Information concerning government safety regulations available upon request.**

SCP Silicon Carbide Products

Silicon Carbide Products, Inc.
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Horseheads, New York 14845 USA
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