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OMEGABOND[®] OB-700

HIGH TEMPERATURE CHEMICAL SET CEMENT

INSTRUCTION
SHEET

M1242-1210

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GENERAL DESCRIPTION

The OMEGABOND[®] OB-700 High Temperature Chemical Set Cement is a sodium silicate base, one-part ceramic cement which has many exceptional characteristics including:

- Resists temperatures to 827°C (1600°F)
- Resists oil, solvents and most acids (except hydrofluoric)
- Heat conductive and thermal shock resistant
- Excellent electrical insulator
- Adheres to metals, ceramics, glass, porcelain and most other surfaces
- Excellent mechanical bonding characteristics
- Ceramic-like body

OB-700 cement is used in assembling/sealing applications that are typical for electrical equipment. It is also ideal for coating applications on molds and forms that produce special patterns and shapes. The cement exhibits excellent bonding characteristics and is used on metals or other materials which have a high coefficient of thermal expansion.

HANDLING INFORMATION

CAUTION

- Avoid prolonged breathing of vapors - work in well-ventilated area
- Protect skin against contamination
- Protect eyes against contamination
- Do not take internally

OMEGABOND 700 Powder is a harmful dust. Avoid breathing dust by using respirators. Avoid contact with eyes or skin by wearing gloves and goggles or a face shield. Wash thoroughly with soap and water after handling. Keep containers closed.

SHELF LIFE

OMEGABOND 700 Powder has a shelf life of (6) months when stored in unopened, tightly sealed containers in a dry location at 70°F.

SOLVENT

A 10% caustic or alkaline solution such as 10% NaOH (Sodium Hydroxide) will break down the OB-700 cement after it has cured. However, care should be exercised as far as the compatibility of the caustic solution with any other components involved in the application, such as the material or surface that the cured cement has been applied to.

DIRECTIONS FOR USE

OMEGABOND 700 cement is a one part cement and is supplied as a powder. Mix the cement by placing 20-25% water by weight into a clean mixing container. Then gradually add 75-80% by weight of OB-700 Powder to the water. Use a slow-speed mechanical mixer or a hand spatula to mix the

cement. Avoid using excess water as that will reduce mechanical strength, increase the amount of shrinkage and delay the set time for the mixed cement. OB700 may be applied by brushing, troweling, pouring, molding or dipping. If the cement fails to adhere, this indicates that setting action has begun. In this case discard the cement - do not attempt to retemper by adding more water. Porous substrates should be dampened with OMEGABOND[®] Cement Thinning Liquid (Part No. OB-TL), prior to application of the mixed cement.

CURING

OB-700 Cement cures with an internal chemical setting action in 18-24 hours at ambient temperature. Since it is a chemical-set cement, it can be used in thick applications (i.e., it can be applied in thicknesses greater than 1/4"). Cure time can be accelerated by low temperature oven drying at 180°F. If the cement is to be exposed to elevated temperatures, cure at 18-24 hours at ambient temperature, then oven dry for 4 hours at 180°F and for an additional 4 hours at 220°F. This helps to prevent flaking and chipping.

PHYSICAL PROPERTIES*

Maximum Service Temperature:	827°C (1600°F)
Color:	White
Coefficient of Thermal Expansion:	12.4 x 10 ⁻⁶ in/in°F
Compressive Strength:**	1460 PSI
Flexural Strength:**	250 PSI
Modulus of Rupture:**	431 PSI
Modulus of Elasticity:	1.2 x 10 ⁵ PSI

* Determined under laboratory conditions using applicable ASTM procedures. Actual field data may vary. Do not use Physical Properties for specifications.

**At 7 days

NOTE

The Material Safety Data Sheet (MSDS) for the OMEGA[®] OB-700 cement is shipped with the product. Additional copies can be obtained by contacting OMEGA Engineering and asking for MSDS-0138.

NOTES



OMEGAnet® Online Service
omega.com

Internet e-mail
info@omega.com

Servicing North America:

U.S.A.:
ISO 9001 Certified
Omega Engineering, Inc., One Omega Drive, P.O. Box 4047
Stamford, CT 06907-0047
Toll-Free: 1-800-826-6342 Tel: (203) 359-1660
FAX: (203) 359-7700 e-mail: info@omega.com

Canada:
976 Bergar
Laval (Quebec), H7L 5A1 Canada
Toll-Free: 1-800-826-6342 TEL: (514) 856-6928
FAX: (514) 856-6886 e-mail: info@omega.ca

For immediate technical or application assistance:

U.S.A. and Canada: Sales Service: 1-800-826-6342/1-800-TC-OMEGA®
Customer Service: 1-800-622-2378/1-800-622-BEST®
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**Mexico/
Latin America** En Español: 001 (203) 359-7803 FAX: 000 (203) 359-7807
info@omega.com.mx e-mail: espanol@omega.com

Servicing Europe:

Benelux: Managed by the United Kingdom Office
Toll-Free: 0800 099 3344 TEL: +31 20 347 21 21
FAX: +31 20 643 46 43 e-mail: sales@omegaeng.nl

Czech Republic: Frystatska 184
733 01 Karviná, Czech Republic
Toll-Free: 0800-1-66342 TEL: +420-59-6311899
FAX: +420-59-6311114 e-mail: info@omegashop.cz

France: Managed by the United Kingdom Office
Toll-Free: 0800 466 342 TEL: +33 (0) 161 37 29 00
FAX: +33 (0) 130 57 54 27 e-mail: sales@omega.fr

Germany/Austria: Daimlerstrasse 26, D-75392 Deckenpfronn, Germany
Toll-Free: 0800 6397678 TEL: +49 (0) 7056 9398-0
FAX: +49 (0) 7056 9398-29 e-mail: info@omega.de

United Kingdom: OMEGA Engineering Ltd.
ISO 9001 Certified
One Omega Drive, River Bend Technology Centre, Northbank
Irlam, Manchester M44 5BD United Kingdom
Toll-Free: 0800-488-488 TEL: +44 (0) 161 777-6611
FAX: +44 (0) 161 777-6622 e-mail: sales@omega.co.uk

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WARNING: These products are not designed for use in, and should not be used for, human applications.



WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

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RETURN REQUESTS / INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

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