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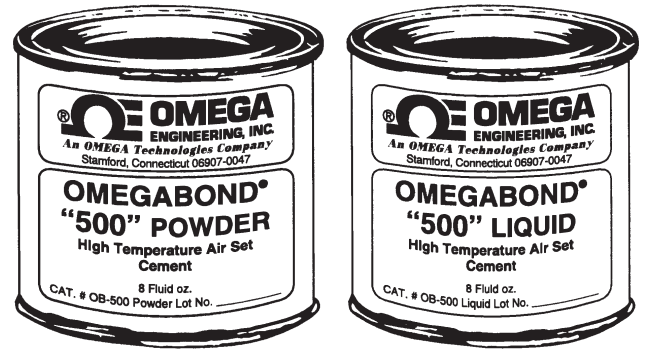
OMEGABOND[®] OB-500

HIGH TEMPERATURE AIR SET CEMENT

INSTRUCTION
SHEET

M1241-1007

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GENERAL DESCRIPTION

The OMEGA[®] OB-500 High Temperature Air Cement is a sodium silicate base, two-part ceramic cement which has many exceptional characteristics including:

- Resists temperatures to 1204°C (2200°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 coating properties
- Refractory cement - withstands short-term immersion in molten metal

OMEGA's OB-500 cement is a heat-cured refractory metal that is applied as a coating on expendable thermocouple tubes and as a lining for induction furnaces. It has excellent coating properties and can be applied by rolling, dipping or casting.

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[®] 500 Liquid Binder is an alkaline material and may irritate eyes and skin. Avoid contact with eyes and skin by wearing gloves and goggles or face shield.

OMEGABOND[®] 500 Powder Filler 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 the Liquid Binder and/or the Powder/Filler before eating and smoking. Keep containers closed.

SOLVENT

A 10% caustic or alkaline solution such as 10% NaOH (Sodium Hydroxide) will break down the OB-500 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.

SHELF LIFE

OMEGABOND[®] 500 Powder and Liquid have a shelf life of six (6) months when stored in unopened, tightly sealed containers in a dry location at 70°F.

DIRECTIONS FOR USE

OMEGA's OB-500 is a two-part cement and consists of a Powder/Filler and a Liquid/Binder. The mix ratio for cast

applications range from 1.87-2.0 parts powder to 1 part Liquid by weight. The consistency of mixed OB-500 may be adjusted by regulating the amount of liquid used; however, the use of excess liquid will reduce mechanical strength, increase the amount of shrinkage and delay the set time for the mixed cement. All surfaces to which OB-500 will be applied should be cleaned and free of dirt or grease. Sand blasting is recommended for steel surfaces. Do not apply OB-500 in thickness greater than 1/4".

Porous substrates should be dampened with OMEGABOND[®] 500 Liquid prior to application of the mixed cement.

CURING

OMEGA's OB-500 reaches an initial set by air drying for four (4) hours at ambient temperature. A final set is only reached after oven baking at 130°F for four (4) hours. If the cement is to be used at temperatures above 212°F, OB-500 must undergo an extended cure at 220°F or above for 12 hours. The pot life of mixed OB-500 is one hour after the Powder and Liquid are mixed together.

PHYSICAL PROPERTIES*

Maximum Service Temperature:	1204°C (2200°F)
Color:	Off white
Coefficient of Thermal Expansion:	10.93 x 10 ⁻⁶ in/in/°F
Compressive Strength:**	1500 PSI
Tensile Strength:	1500 PSI
Density:	
Wet:	112 lbs/cu. ft.
Dry:	82 lbs/cu. ft.
Flexural Strength:**	2000 PSI
Modulus of Elasticity:	3.6 x 10 ⁵ PSI
Pot Life:	1 hour

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

** Strength at 1 day after curing at 220°F

NOTE

The Material Safety Data Sheet (MSDS) for the OMEGA[®] OB-500 cement is shipped with the product. Additional copies can be obtained by contacting OMEGA Engineering and asking for MSDS-0145.



OMEGAnet® Online Service
omega.com

Internet e-mail
info@omega.com

Servicing North America:

U.S.A.:
ISO 9001 Certified
One Omega Drive, Box 4047
Stamford, CT 06907-0047
Tel: (203) 359-1660
FAX: (203) 359-7700
e-mail: info@omega.com

Canada:
976 Bergar
Laval (Quebec) H7L 5A1, Canada
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®
Engineering Service: 1-800-872-9436/1-800-USA-WHEN®

Mexico:
En Español: (001) 203-359-7803
FAX: (001) 203-359-7807
e-mail: espanol@omega.com
info@omega.com.mx

Servicing Europe:

Czech Republic: Frystatska 184, 733 01 Karviná, Czech Republic
Tel: +420 (0)59 6311899
FAX: +420 (0)59 6311114
Toll Free: 0800-1-66342
e-mail: info@omegashop.cz

Germany/Austria: Daimlerstrasse 26, D-75392 Deckenpfronn, Germany
Tel: +49 (0)7056 9398-0
FAX: +49 (0)7056 9398-29
Toll Free in Germany: 0800 639 7678
e-mail: info@omega.de

United Kingdom: One Omega Drive, River Bend Technology Centre
ISO 9002 Certified
Northbank, Irlam, Manchester
M44 5BD United Kingdom
Tel: +44 (0)161 777 6611
FAX: +44 (0)161 777 6622
Toll Free in United Kingdom: 0800-488-488
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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