

Glassbond Sauereisen Electrical Cement No. DW-30

Characteristics

- Insulates electricity
- Fireproof refractory
- Withstands temperatures to 900°F (482°C)
- Heat conductive and thermal shock resistant
- Resists water and most solvents
- Safe to use/non-toxic
- Strong, porcelain-like body
- Odourless
- Cures by chemical set even in confined areas
- Nonshrinking

Recommended For

Appliances
Elements
Embedding
Heaters
Insulators
Cutlery

Description

Electrical Cement No. DW-30 is an inorganic, chemically-setting, magnesium oxide base material which develops a slight expansion while hardening into a porcelain-like body. Since Electrical Cement No. DW-30 is dimensionally stable from -100°F to +900°F (-73°C to 482°C) and will not corrode resistance wires at elevated temperatures, it is recommended for embedding heating elements and potting resistors.

The stable nature of Electrical Cement No. DW-30 allows for application within explosion proof fittings. Other recommended uses are cementing knife blades into plastic, ceramic, wood or metal handles, weighting candlesticks or similar cavities, and sealing set screws. The product is supplied in powder form and is easily mixed with water to apply.

Physical Properties

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| Coefficient of thermal expansion | $4.7 \times 10^{-6}/F^{\circ}$ ($8.46 \times 10^{-6}/C^{\circ}$) |
| Colour | Tan |
| Compressive strength @ 7 days | 4,500 psi (316 kg/cm ²) |
| Density | 120 pcf (2 gm/cm ³) |
| Maximum service temperature | 900°F (482°C) |
| Mixing ratio (Powder:water, by weight) | 5:1 |
| Tensile strength | 300 psi (21 kg/cm ²) |
| Thermal conductivity | 5.8 |
| Volume Resistivity | 10^8 - 10^{10} |

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. Data should not be used for specification purposes.

Application/Instructions

MIXING - Electrical Cement No. DW-30 Powder should be thoroughly remixed before using. The recommended mix ratio is 5 parts No. DW-30 Powder and 1 part potable water. Place warm water into a clean mixing container and gradually add the No. DW-30 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. DW-30 may be mixed to a thinner consistency by regulating the amount of water used; however, the use of excess water will reduce mechanical strength, increase shrinkage and delay set time.

APPLICATION - Porous substrates may require dampening with Thinning Liquid No. 14 before applying the mixed cement. The cement may be applied by pouring, casting or mechanical dispenser. Failure of cement to adhere indicates setting has begun - discard cement. Do not attempt to retemper by adding more water.

Setting/Curing

No. DW-30 hardens with an internal chemical-setting action in 18 to 24 hours at ambient temperature. Working time of No. DW-30 when powder is mixed with water is approximately 30 minutes at 21°C (70°F). If it is desired to accelerate the cure, oven drying at 82°C (180°F) can be used. Avoid steaming while drying. If the cement will be exposed to elevated temperatures, contact Glassbond 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.

Cleaning

All equipment should be cleaned with soap and water before No. DW-30 cures. If removal is required after cure, consult Glassbond for recommendations.

Packaging

This material is supplied in various types and sizes of containers. Please contact Glassbond Sales for further details.

Shelf Life

Electrical Cement No. DW-30 Powder has a shelf life of one year when stored in unopened, tightly sealed containers in a dry location at 21°C (70°F). If there is doubt as to the quality of the material, consult Glassbond.

Caution

Consult the 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. Users shall determine the suitability of the product for intended application before using.

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