

Glassbond Sauereisen Tempseal Cement Paste N°3 MOD (18)

Characteristics

- High temperature sealing material
- Moisture resistant ceramic cement
- Thermally conductive
- Electrically insulating
- Single component paste
- Odourless
- Withstands temperatures to 2200°F (1204°C)

Recommended for

Lamp Assemblies
Thermocouples
Heating Elements
Resistors

Description

Tempseal cement N°3 MOD (18) is an inorganic adhesive paste offering high temperature resistance combined with a sealing capability superior to other refractories. Tempseal cement N°3 MOD (18) overcomes the inherent permeability of ceramic materials by permitting only a remarkably low level of absorption.

Common uses of N°3 MOD (18) include the assembly of heating elements, resistors and other electrical components where extreme operating temperatures coexist with a humid environment. The Tempseal cement effectively conducts heat and insulates electricity while providing a mechanical moisture barrier.

Physical properties

Viscosity @ 20C (Brookfield S91/50Rev/ after 60 secs)	17000-19500 cps
Coefficient of thermal expansion	$3.4 \times 10^{-6} / ^\circ\text{F}$ ($6.12 \times 10^{-6} / ^\circ\text{C}$)
Colour	Off white/Grey
Compressive strength	6000 psi (421.8 kg/cm ²)
Density	145 pcf (2.32 gm/cm ³)
Dielectric constant @ 70°F (21°C)	9
Dielectric strength @ 70°F (21°C)	50-100 Volts/mil (2000-3900 Volts/mm)
Flexural strength	3000 psi (210.9 kg/cm ²)
Maximum service temperature	2200°F (1204°C)
Modulus of elasticity	3.5×10^5 psi (2.5×10^4 kg/cm ²)
Tensile strength	600 psi (42 kg/cm ²)
Thermal conductivity @ 500-1500°F (260-816°C)	23-13 BTU·in/ft ² ·hr·°F ($7.8-4.4 \times 10^3$ Cal·cm/cm ² ·sec·°C)
Volume resistivity @ 70°F (21°C)	10^6-10^8 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. Data should not be used for specification purposes.

Application/Instructions

MIXING - N°3 MOD (18) is supplied as a paste containing a mixture of fine particles and proprietary binders that are blended in the manufacturing process. Measures should be taken to minimize the amount of settling that may occur during shipping and storage. Thoroughly remix the paste to a smooth uniform consistency prior to use to ensure proper dispersion of crucial ingredients.

APPLICATION - Tempseal cement works best when used in thin applications. Avoid applying N°3 MOD (18) at a thickness greater than 6 mm. Several coats may be applied when a heavier thickness is required. In multiple coat

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applications, each coat must be thoroughly dry prior to applying additional coats. Porous substrates may require dampening or sealing prior to applying the cement. Re-tempering of with other silicate liquids is not recommended.

Setting/Curing

Tempseal N°3 MOD (18) is a thermal setting cement that cures by exposure to heat. Drying time depends upon the thickness of the application. Low temperature oven drying at 82°C (180°F) is recommended to avoid steaming while drying. Temperatures above 100°C (212°F) could lead to steam generation in thick cross sections of cement, resulting in the production of voids, which will consequently reduce strength.

Cleaning

All equipment should be cleaned with soap and water before N°3 MOD (18) cures. If removal is required after cure, consult Glassbond.

Packaging

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

Shelf Life

N°3 MOD (18) paste has a shelf life of three months when stored in unopened, tightly sealed containers in a dry location at 21°C (70°F). Care should be taken to periodically rotate material to prevent settling. Avoid freezing. If there is any 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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