

# STAR Technology

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## ER7468

### One Part Secondary Insulating Epoxy

#### DESCRIPTION

ER7468 is a one part, heat cure electrical insulating epoxy designed as an insulating varnish for transformers and stators. This material is also excellent for many sand casting applications. ER7468 is extremely flexible upon cure and has excellent core noise and wire vibration reduction characteristics. This can be used in a dip and bake system or as a vacuum impregnating resin. ER7468 has a long shelf life and has excellent tank retention; refrigerated storage will increase shelf life.

Shelf life can be extended to 12 Month shelf life when stored at 77°F(25°C). With normal use, regular monitoring and adequate additions of fresh material shelf life is indefinite. Recommended storage in VPI equipment is 68°F(20°C). Data contained herein are believed to be reliable. Fit-for-use testing should be conducted by each user.

#### BENEFITS

100% solids

Low Viscosity

DOT Non-hazardous

#### TYPICAL PROPERTIES

|  | <u>TEST METHOD</u> | <u>VALUE</u> |
|--|--------------------|--------------|
| Cure Time [135° C] (hours):                      |                    | 4            |
| Gel Time [150° C] (minutes):                     |                    | 35           |
| Film Build (mils):                               |                    | 0.25         |
| Shore D Hardness:                                | ASTM D2240         | 40 - 50      |
| Flash Point (°F):                                |                    | > 200        |
| Thermal Class (°C)(UL File Number E310566):      | ASTM D2304         | 180          |
| Thermal Conductivity (W/mK):                     |                    | 0.15         |
| Glass Transition Temperature (°C):               |                    | 46           |
| Solids (%):                                      |                    | 100          |
| Coefficient of Thermal Expansion (unit/unit/°C): |                    | 9.89E-06     |
| Water Absorption [120 hours @ 25° C] (%):        | ASTM D570          | 0.503        |
| Specific Gravity (g/cc):                         | ASTM D1475         | 1.01         |
| Viscosity (cps):                                 | ASTM D2393         | 700          |
| Viscosity [93° C] (cps):                         | ASTM D2393         | 25           |
| Tensile Strength (psi):                          | ASTM D638          | 1500         |
| Elongation (%):                                  | ASTM D638          | 45%          |
| Helical Coil Bond Strength @ 25°C (Newtons):     | ASTM D2519         | 46           |
| Helical Coil Bond Strength @ 150°C (Newtons):    | ASTM D2519         | 5            |
| Volume Resistivity (Ω cm):                       | ASTM D257          | 1.67X1015    |
| Surface Resistivity (Ω):                         | ASTM D257          | 1.22X1016    |
| Dielectric Strength (volts.mil):                 |                    |              |
| 5 mil:   |                    | 650          |
| 0.25 mil:  |                    | 2400         |
| Color:   |                    | Amber        |
| Shelf Life (months):                             |                    | 6-12         |

To the best of our knowledge, the information contained herein is accurate. However, STAR TECHNOLOGY, Inc., does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of the suitability of any material is the sole responsibility of the user. The information contained herein is considered typical properties and is not intended to be used as specifications for our products. This information is offered solely to assist purchaser in selecting the appropriate products for purchaser's own testing. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein and in the material safety data sheet, we cannot guarantee that these are the only hazards that exist. Repeated and prolonged exposure to epoxy resins can cause sensitization or other allergic responses.

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#### APPLICATION PROCEDURES

Vacuum method - Place transformer into an empty vacuum chamber and vacuum for 10 minutes to ensure transformer is completely dry. Fill vacuum chamber with pre-vacuumed ER7468, 2 inches over the laminations and vacuum for 10 minutes. Break the vacuum and allow the transformer to drain for 10 minutes. Cure the transformer for at least 4 hours at 135° C.

Dip Method - Place transformer into a 135° C oven for 2 – 3 hours to ensure the transformer is completely dry. Allow the transformer to cool to 50° C (do not place transformer that is heated warmer than 50° C into resin – heating the resin will result in a shortened shelf life). Place the cooled transformer into the ER7468, 2 inches over the laminations for 10 minutes or until all bubbling stops. Allow the transformer to drain for 10 minutes. Cure the transformer for at least 4 hours at 135° C.

#### PRECAUTIONS

For industrial use only. Keep away from children. Refer to the Material Safety Data Sheets (MSDS forms) pertaining to this product before using. Avoid contact with skin or eyes. In the event of an eye splash or contact, immediately flush with cold water for 15 minutes and contact a physician. If skin contact occurs, wash with mild soap and water. The wearing of safety glasses with side shields and impervious gloves is recommended.

#### RESIN AND HARDENER WARNING STATEMENT

May cause allergic skin reaction. Avoid all contact with skin, eyes, and clothing. Wash thoroughly after handling.

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