

# STAR Technology

FORMULATING • INNOVATIVE • SOLUTIONS

## ER3220

### Two Part Encapsulation Epoxy

#### DESCRIPTION

ER3220 is a two part, heat cured epoxy specially formulated for the encapsulation of high voltage coil systems. The combination of low viscosity and rapid cure at elevated temperatures makes ER3220 an excellent candidate for these demanding applications.

ER3220 should be degassed prior to use and used under vacuum conditions during the actual potting and encapsulation applications. Parts to be potted should be pre-heated when possible. For optimum results, the ER3220 should be dispensed at 95° to 105°C and at a vacuum of 1.0 torr or less. Parts should be gelled at 95°C for 1 hour and post cured for 3 hours at 150°C for optimum development of physical properties. This product may contain fillers that may settle over time. Product may need to be stirred before using. Customer must determine suitability of product before using.

#### TYPICAL PROPERTIES

	<u>TEST METHOD</u>	<u>VALUE</u>
Gel Time [45 Gram Mass at 100°C] (hours):		1- 2
Cure Schedule (hours, °C):		1 at 95 + 3 at 150 16 at 95
Shore D Hardness:	ASTM D2240	80
Tensile Strength (psi):	ASTM D638	6000
Coefficient of Linear Thermal Expansion (unit/unit/°C):		4.9x10 <sup>-5</sup>
Dielectric Strength (Volts/Mil)		374
Tg (°C):	ASTM D3418	140
Reaction Onset Temperature (°C):		145
Temperature at Maximum Exotherm (°C):		173
Part A:		
Specific Gravity (g/cc):	ASTM D1475	1.56
Viscosity (cps):	ASTM D2393	35000
Color:		Transparent/ Clear
Weight/ Gallon (lb):		12.10
Part B:		
Specific Gravity (g/cc):	ASTM D1475	1.19
Viscosity (cps):	ASTM D2393	100
Color:		Straw to Amber
Weight/ Gallon (lb):		9.92
Mixed Product:		
Specific Gravity (g/cc):	ASTM D1475	1.47
Viscosity (cps):	ASTM D2393	3000
Color:		Transparent Amber
Weight/ Gallon (lb):		11.70
Mix Ratio:		
By Weight:		100 : 38
By Volume:		100 : 50

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

Carefully weigh out appropriate amounts of resin and hardener into a clean mixing container and thoroughly mix until all streaks and striations are gone. Scrape the sides and bottom frequently to ensure complete mixing.

For 1# and 2# kits, add all of Part B to Part A and mix thoroughly.

*CAUTION:* Unmixed compound from the sides or bottom of the container can cause soft spots or uncured areas in the completed piece. To prevent this, transfer the entire mixed contents to a second clean container and remix for a short time before using.

#### 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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