

# STAR Technology

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## FRE8580

### Epoxy Casting Compound

#### DESCRIPTION

FRE8580 is a room temperature cure, flame rated, epoxy potting and encapsulation compound formulated with a low exotherm and moderate gel and cure schedules. The Shore D hardness of FRE8580 lends its use to include prototype mold making, potting and encapsulation for shock sensitive components, PC board protection and moisture proofing electronic assemblies. FRE8580FC is a faster setting version with a gel time of 30 minutes.

Data contained herein are believed to be reliable. Fit-for-use testing should be conducted by each user.

<b>TYPICAL PROPERTIES</b>	<b>TEST METHOD</b>	<b>VALUE</b>
Gel Time [200 Gram Mass at 75°F] (minutes):	ASTM D2471	120
Cure Time (hours):		24
Shore D Hardness:	ASTM D2240	75
Volume Resistivity ( $\Omega$ cm):		$2.6 \times 10^{-15}$
Dielectric Strength (V/mil):		350
Thermal Conductivity (W/mK)		0.39
Tg (°C):	ASTM D3418	45
Peak Exotherm in 150 Gram Mass (° C):		45
Dissipation Factor [At 25 °C]:		
At 100 Hz:		0.04107
At 1000 Hz:		0.03370
At 100 kHz:		0.03513
Dielectric Constant [At 25 °C]:		
At 100 Hz:		2.01112
At 1000 Hz:		1.91064
At 100 kHz:		1.78418
Flammability Class:		UL-94 V <sub>0</sub>
Part A:		
Specific Gravity (g/cc):	ASTM D1475	1.51
Viscosity (cps):	ASTM D2393	30000
Color:		Black
Part B:		
Specific Gravity (g/cc):	ASTM D1475	1.54
Viscosity (cps):	ASTM D2393	68000
Color:		Amber
Mix Ratio:		
By Weight:		100: 108
By Volume:		100: 100
UL 1446 Temperature Rating		Class F (155)

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.

#### **WARNING STATEMENT**

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

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