

# STAR Technology

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## ER7401

### High Build Thixotropic Resin

#### DESCRIPTION

ER7401 is a one part heat cure epoxy resin designed for high build VPI/dip applications. ER7401 has a high thixotropic index, good infiltration and retention, and excellent chemical resistance. The high thixotropic index gives ER7401 its high film-build with a single dip process. The excellent chemical resistance of ER7401 makes this product great for harsh environments. Shelf life can be extended to 12 months 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). ER7401 can be used in VPI processes or in standard dip tank equipment. See application process below for these application procedures.

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

#### BENEFITS

100% solids  
DOT Non-hazardous  
High Build  
Highly Thixotropic

#### TYPICAL PROPERTIES

	<u>TEST METHOD</u>	<u>VALUE</u>
Cure Time [150° C] (hours):		4-6
Gel Time [150° C] (minutes):		10-12
Film Build on Steel (mils):		3-4
Helical Coil Bond Strength		
25° C (N):	ASTM D2519	225.16
120° C (N):	ASTM D2519	30.51
Tensile Strength (psi):	ASTM D638	5,660
Dielectric Strength, short time (V/mil)	ASTM D149	2,000
Dissipation Factor, 25°C, 1 KHz (%)	ASTM D150	0.22
Glass Transition Temperature (°C):		100
Solids (%):		100
Specific Gravity (g/cc):	ASTM D1475	1.12
Viscosity		
20 rpm (cps):	ASTM D2393	3000
2.5 rpm (cps):	ASTM D2393	8500
Color:		Natural
Service Temperature (°C):		180
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: Preheat motor to 250° to 300°F for 3 hours. Place motor in empty vacuum chamber and apply dry vacuum of 1 to 5 millimeters of Hg for 1 hour. Insure that the part to be impregnated is 110° to 130°F, if part is below 110° F, repeat above steps to ensure part is at least 110°F. If part is above 130° F, allow time for cooling, do not introduce resin with a part warmer than 130° F.

Introduce the resin into the process tank and allow the resin to cover the part by 3 to 4 inches over the windings. Vacuum the part with 1 to 5 millimeters of Hg for 30 minutes. Pressurize the process tank to a pressure between 90 psi to 100 psi and keep motor under pressure for 1 hour.

Transfer the resin into the storage tank. After all the resin has been transferred, release the pressure on the process tank. Lift the motor and allow excess resin to drip from the part. Add motor to a preheated 310° F oven and bake motor for 4 to 6 hours based on motor size.

#### 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.