

# 3M™ Scotchcast™ Electrical Resin 262

## One-Part, Class B, General Purpose Epoxy Powder Resin

### Product Description

3M™ Scotchcast™ Electrical Resin 262 is a widely used, well-known general purpose epoxy powder resin. A one-part, red pigmented, rapid heat-curing product, it is designed to provide a continuous, tough moisture and chemical resistant dielectric coating to a variety of substrates.

- Fast curing
- Excellent electrical properties
- Excellent thermal shock and impact resistance
- Excellent heat, chemical and moisture resistance
- Good cut-through resistance
- Excellent flow

Scotchcast Electrical resin 262 is manufactured by a fusion blend process, insuring that each individual particle of powder contains all the components necessary to effect a complete cure and attain stated performance properties.

Scotchcast electrical resin 262 is applied to an object that has been heated to a temperature above the melting point of the resin. On contact with the preheated application surface, the resin melts, flows to a controlled extent, then cures, bonding to the substrate and coalescing into a smooth, continuous, essentially uniform, thick coating. It effectively coats flat surfaces and corners, as well as, high points. Uses for Scotchcast 262 include moisture proofing and insulating armatures, stators, buss bars and toroid cores.

### Scotchcast™ Electrical Resin 262 – Typical Properties

Property	Value
Color	Red
Specific Gravity <sup>1</sup> (cured)	1.34
Dielectric Strength <sup>3</sup> 12 to 15 mil coating	1000 v/mil
Thermal Shock <sup>2</sup> 10 cycles-75°C to 155°C 12 -15 mil coating 1/8" sandblasted steel	Passes
Impact Resistance <sup>2</sup> 12-15 mil coating 1/8" sandblasted steel panel Gardner 5/8" Radius Impact Tester	100 inch-lbs
Cut-Through Resistance <sup>2</sup> – 1lb wt: 1/8 AWG wire	130°C (266° F)
Edge Coverage <sup>2</sup> 12-15 mil coating on flat	38-48%
Gel time <sup>2</sup> @ 193°C hot plate	12-16 seconds

\*Not recommended for specification purposes. Product specifications will be provided upon request.

Test Methods

<sup>1</sup> ASTM D-792

<sup>2</sup> 3M Test Method

<sup>3</sup> ASTM D-149



## Usage Information

### Method of Application

The rapid cure of 3M™ Scotchcast™ Electrical Resin 262 permits the use of highspeed production methods. The powder can be readily applied by spraying techniques as well as through the use of fluid bed dipping of preheated parts. Automated and manual types of application equipment are both available. Equipment manufacturers' names can be suggested upon request.

### Curing

The cure of Scotchcast 262 to a thermoset condition involves a time-temperature relationship. The retained heat in application units having high heat capacity is sufficient in many cases to effect a cure of the resin without the need for post-curing facilities. For example, if an application surface can retain a temperature of 204° C (400° F) for 60 seconds after coating, it will be fully cured. Small articles, or those with a large surface-to-mass ratio, lose heat rapidly and may require a higher preheat temperature and/or additional oven-curing.

The figures below represent nominal guidelines for obtaining the resin's adhesion, impact and chemical resistance characteristics.

Cure Temperature	Time
149° C (300° F)	40 minutes
177° C (350° F)	20 minutes
204° C (400° F)	60 seconds
232° C (450° F)	30 seconds

The user must determine the time required for the coated substrate to reach listed temperatures.

## Handling and Safety Precautions

Read all Health Hazard, Precautionary and First Aid, Material Safety Data Sheet, and/or product label prior to handling or use.

## Important Notice

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## Preheat Temperature Range

Prior to applying Scotchcast electrical resin 262, the part must be preheated to a temperature ranging from 150° C (302° F) to 260° C (500° F). The optimum preheat temperature depends upon the size, heat capacity and configuration of the object to be coated, as well as the method of application. The ideal coating temperature will vary for each application and is best determined by experimentation.

## Storage

Laboratory evaluation indicates that the usable shelf life of the product is twenty four (24) months from the date of manufacture when stored at temperatures not exceeding 27° C (80° F), providing the material is stored in its original container. Care should be taken when removing the resin from the original container to prevent inclusion of foreign material. After the resin removal, the bag should be retied immediately. This will help to avoid agglomeration caused by excess moisture. For best results, store in a cool, dry place.

## Ordering Information/Customer Service

For ordering technical or product information, or a copy of the Material Safety Data Sheet, call:

Phone: 800/722-6721 or 512/984-9393

Fax: 877/601-1305 or 512/984-6296

## Warranty; Limited Remedy; Limited Liability.

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