



## Technical Data Sheet

### DOWSIL™ RSN-0994 Resin

Heat resistant, water repellent silicone electrical varnish

#### Features & Benefits

- Silicone resin in xylene.
- Heat and water resistant.
- AIEE Class 220 C insulating material.
- DOWSIL™ RSN-0994 Resin is the most heat stable varnish available. Glass cloth coated with this varnish retains its flexibility and electric strength after 1 year at 250°C.

#### Applications

- Designed for coating glass cloth.
- Also used for coating sleeving and for bonding mica-glass combinations.

#### Typical Properties

Specification Writers: These values are not intended for use in preparing specifications.

Property	Unit	Result
Solids content, min.	%	49
Physical nature		Liquid
Color		Light straw
Viscosity at 25°C	mm <sup>2</sup> .s <sup>-1</sup>	80 to 150
Relative density at 25°C		1.00 to 1.02
Flash point - closed cup	°C	27
Solvent		Xylene
Heat endurance at 250°C - flex life <sup>1</sup>	hours	1000
Heat endurance at 250°C - craze life	hours	10,000
Heat endurance at 300°C - flex life	hours	400
Heat endurance at 300°C - craze life	hours	750
Thermal life at 300°C <sup>2</sup>	hours	800
Thermal life at 275°C <sup>2</sup>	hours	3000
Thermal life at 250°C <sup>2</sup>	hours	9000

1. Test method ASTM D115 except: tested on aluminium panels because copper oxidizes too rapidly; test temperature increased to 250°C.
2. Hours necessary to reduce the electric strength of glass cloth impregnated with DOW CORNING 994 to 1.8kV/mm as measured by the curved electrode method.

## Typical Properties (Cont.)

Property	Unit	Result
<b>Electrical properties, as cured</b>		
Electric strength as received <sup>3</sup>	kV/mm	91.5
Electric strength after 24 hours immersion <sup>3</sup>	kV/mm	18.0
Permittivity at 25°C 100 Hz		2.8
Permittivity at 25°C 100 kHz		2.8
Dissipation factor at 25°C 100 Hz		0.0015
Dissipation factor at 25°C 100 kHz		0.0014

3. 6.35 mm electrodes, rapid rise method, in air; 0.05 mm film on aluminium panels.

### How to Use

DOWSIL™ RSN-0994 Resin is ordinarily dip-coated on glass cloth and cured in a high temperature coating tower. In a typical tower operation the cloth passes through a solvent removal zone at 120°C to 175°C for 5 to 10 minutes. The cloth then goes through a curing zone with temperatures of 200°C to 300°C for 15 to 30 minutes.

For coating glass sleeving and bonding mica-glass combinations, a cure of one hour at 250°C produces a flexible film that is exceptionally heat stable and water repellent.

### Handling Precautions

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW WEBSITE AT DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

### Usable Life and Storage

When stored at or below 25°C in the original unopened containers, this product has a usable life of 30 months from the date of production.

### Limitations

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

### Health and Environmental Information

To support customers in their product safety needs, Dow has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.

For further information, please see our website, [dow.com](http://dow.com) or consult your local Dow representative.

### Disposal Considerations

Dispose in accordance with all local, state (provincial) and federal regulations. Empty containers may contain hazardous residues. This material and its container must be disposed in a safe and legal manner.

It is the user's responsibility to verify that treatment and disposal procedures comply with local, state (provincial) and federal regulations. Contact your Dow Technical Representative for more information.

## **Product Stewardship**

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

## **Customer Notice**

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

## **How Can We Help You Today?**

Tell us about your performance, design, and manufacturing challenges. Let us put our silicon-based materials expertise, application knowledge, and processing experience to work for you.

**For more information** about our materials and capabilities, visit **dow.com**.

To discuss how we could work together to meet your specific needs, go to **dow.com** for a contact close to your location. Dow has customer service teams, science and technology centers, application support teams, sales offices, and manufacturing sites around the globe.

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