

SCOTCHCAST[®] No. 810 RESIN

Description

Scotchcast No. 810 Resin is an unfilled solvent free two component Epoxy Resin for room temperature curing. Scotchcast No.810 Resin is one of a system of products available from 3M Electrical Specialties Division.

Features

— low viscosity

Process Figures

Mixing Proportion:	A : B	2 : 1
Application Time: 100g	at 23°C	60 min. at 60°C 20 min.
Cure Time:	at 23°C	16 hours at 60°C 3 hours

Property	Value	Specification
Part A		
Determination of Density (Hyd.Method)	1.19 g/cm ³	DIN 51757 / ISO 3675
Viscosity 23°C	2.1 Pas	DIN 16945 / ISO 3104
Part B		
Determination of Density (Hyd.Method)	1.08 g/cm ³	DIN 51757 / ISO 3675
Viscosity 23°C	0.08 Pas	DIN 16945 / ISO 3104

Property	Value	Specification
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Part A + B No. 810

Density	1.14 g/cm ³	DIN 53479 / ISO 0061
Viscosity 23°C	0.8 Pas	DIN 16945 / ISO 3104
Gel-Time	58 min	DIN 16945 procedure B
Impact Strength	9 KJ/m ²	DIN 53453 / ISO/R-179
Shore-D-Hardness	75 - 85	DIN 53505 / ISO/R-868
Tensile Strength	42.5 N/mm ²	DIN 53455 / ISO/R527
Elongation at Break	4 %	DIN 53455 / ISO/R527
Glass Transition Temperature	36°C	DIN 53445 / ISO/DR 533
Electrolytic Corrosion	A 1.2	VDE 0303 / IEC 426
Dielectric Strength	31 kV/mm	VDE 0303 / IEC 243
Volume Resistivity at 23 °C	2.1 E14 Ohm cm	VDE 0303 / IEC 93
Dissipation Factor at 23 °C 50 Hz	0.04	VDE 0303 / IEC 250
at 50 °C 50 Hz	0.08	
at 80 °C 50 Hz	0.30	
Dielectric Constant at 23 °C 50 Hz	3.0	VDE 0303 / IEC 250
at 50 °C 50 Hz	4.4	
at 80 °C 50 Hz	8.5	
Track Resistance (low voltage)	CTI 600	DIN /IEC 112

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Important Notice to Purchaser

All statements, technical information and recommendations contained herein are based on tests we believe to be reliable, but the accuracy or completeness thereof is not guaranteed, and the following is made in lieu of all warranties, express or implied:

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of the product for the intended use, and user assumes all risk and liability whatsoever in connection therewith. No statement or recommendation not contained herein shall have any force or effect unless in an agreement signed by officers of seller and manufacturer.

3M

Scotchcast™

810 Electrical Resin

Two-part, Room Cure,
Rigid, Epoxy Liquid
Resin

“Scotchcast” resin 810 is a low viscosity system suitable for coil impregnation as well as general potting applications. It is transparent and rigid when cured, working at a maximum continuous temperature of 120°C.

- Transparent
- Low Viscosity

Typical Properties		Test Methods	
Viscosity (centipose at 23°C) ¹	800	1.	DIN 16945
Specific Gravity ¹	1.1	2.	VDE 0303/IEC 243
Gel Time (minutes at 23°C) ¹	90	3.	VDE 0303/IEC 250
Electric Strength (kV/mm) ²	31	4.	VDE 0303/IEC 93
Dielectric Constant (50Hz at 23°C) ³	3.0	5.	DIN 53455/ISO-R527
Dissipation Factor (50Hz at 23°C) ³	0.04	6.	DIN 53505/ISO-R868
Volume Resistivity (ohm-cm at 23°C) ⁴	10 ¹⁴		
Tensile Strength (MPa) ⁵	40		
Elongation (% at break) ⁵	4		
Hardness (shore D) ⁶	80		

All figures quoted are typical values and are not intended for specification purposes.

Scotchcast 810 Electrical Resin

Handling Properties

Mix Ratio (A:B)	Weight 2:1 Volume 1:0.553
Pot Life (small quantities at room temperature)	50 minutes
Cure Guide	24 hours at room temperature (23°C) 3 hours at 70°C

Mixing

Weigh the correct proportions to within 2% accuracy and mix thoroughly together until a homogenous mixture is obtained.

Deaeration

Air introduced during mixing can be removed by evacuating for 5 to 15 minutes at 5 to 10mm of mercury (Hg) absolute pressure.

Container side walls should be several times the height of liquid resin to contain the foaming that takes place under vacuum. Allow the froth to rise and collapse after which vacuum should be continued for another few minutes.

Important Notice

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3M

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Storage

Both parts should be stored in a cool, dry place. When not in use, containers should be kept tightly closed.

Safety Advice

Scotchcast Electrical Resin 810 contains cycloaliphatic amines, nonyl phenol and n-aminoethylpiperazine.

Precautions: The product is irritating to the eyes and skin, and may cause sensitisation by skin contact. Avoid contact with skin and eyes and wear suitable gloves and eye/face protection. Launder contaminated clothing before re-use. Avoid prolonged breathing of vapours - use only in well ventilated areas.

First Aid: Eye contact - rinse immediately with plenty of water and seek medical advice.

Skin contact - wash immediately with plenty of soap and water.

For further health and safety information, please contact the Toxicology Department at the Bracknell Head Office.

Authorised Distributor of 3M™ Scotchcast™ Electrical Resin Systems

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