

3M Scotchcast™

Electrical Insulating Resin 2131

Product Description

3M™ Scotchcast™ Resin 2131 is a two component, flame retardant, flexible polyurethane resin for room temperature curing. The resin has been designed for electrical insulation and mechanical protection of flexible electrical cable joints. Its' unique formulation makes it particularly suited to withstand the rugged conditions under which mine and portable cable must operate.

The 2131 resin is classified as LI-LMP-MMP (low voltage insulation and mechanical protection) according to Cenelec HD 631.1 S2 Standard.

Once cured, the resin provides impact resistance and durability against moisture and atmospheric corrosion.

Application

Flame retardant mechanical protection and electrical insulation of flexible low voltage electrical joints installed for flame retardant indoor and outdoor, underground and submerged applications. Can be used to replace or repair cable jackets for both single and multi core power cables. Suitable for sealing the crutch and/or sheath when terminating multi core cables. When used in accordance with the appropriate kit configuration, Scotchcast™ Resin 2131 meets Part 7, Title 30 CFR and carries MSHA approvals.

Features

- Good adhesion to metals and different plastics
- Bonds to itself and most modern cable jackets
- Flame retardant
- Tough, yet flexible
- Excellent hydrolytic stability
- Low exothermic reaction temperature

Process Figures

Mixing Ratio (pbw)	A : B	100 : 50
Pot Life	At 5°C	24 min
	At 23°C	13 min
	At 40°C	5 min
De-mould Time	At 0°C	6 – 8 hours
	At 10°C	3.5 – 4 hours
	At 21°C	1.5 – 2 hours
Approx Cure Time	At 0°C	36+ hours
	At 10°C	24 – 30 hours
	At 21°C	16 – 24 hours

Typical Properties

Note: This data is not to be used for specifications.

Values listed are typical and should not be considered minimum or maximum.

Property	Value	Specification
Part A		
Viscosity 23°C	5400 mPas	EN ISO 2555
Part B		
Viscosity 23°C	1350 mPas	EN ISO 2555
Part A&B (mixed)		
Density	1.15 g/cm ³	ISO 3675
Viscosity 23°C	3300 mPas	EN ISO 2555
Part A&B (cured*)		
Colour	Black	
Mechanical properties		
Hardness Shore A	80	EN ISO 868
Tensile Strength	5.5 MPa	EN ISO 527
Elongation at Break	150 %	EN ISO 527
Glass Transition Temperature	-80 °C	EN 53445
Electrical properties		
Volume resistivity at 23 °C	1,89E+13 Ωcm	IEC 60250
at 80 °C	1,20E+10 Ωcm	
Dielectric Strength at 23 °C	20 kV/mm	EN 60243-1
Dissipation factor at 23 °C	<0.038	IEC 60250
at 80 °C	<0.530	
Dielectric constant at 23 °C	5.5	IEC 60250
at 80 °C	9.5	

Usage Information

The resin will be supplied, in two-chamber plastic pouches with peelable barrier in the correct stoichiometric proportion. This type of packaging will assure the correct mixing ratio for applying the resin. Product should be kept in the sealed outer package until ready to use. In cold weather, the product should be kept in a warm area (recommended above 16°C) to aid mixing.

Storage

3M™ Scotchcast™ Resin 2131 has a shelf life of at least 36 months when stored between 10°C and 40°C with humidity level <75 % in the originally sealed bag.

The expiration date of each product appears on the product label.

Storage beyond the date specified on the label does not necessarily mean that the product is no longer usable. In this case however, it is the responsibility of the user to determine applicability of the resin.

Safety and Handling

3M provides its customers with a product specific Material Safety Data Sheet (MSDS) to cover potential health effects, safe handling, storage, use and disposal information. 3M strongly encourages its customers to review the MSDS on its products prior to their use.

Product Stewardship

3M 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 of our philosophy and policies by which we assess the health and environmental information on our products and then take the appropriate steps to protect employee, the public health and the environment.

Customer Notice

3M encourages its customers and potential users of 3M products to review their applications for such products from the standpoint of human health and environmental quality. To help ensure that 3M products are not used in ways for which they were not intended or tested. 3M personnel are available to assist customers in dealing with ecological and product safety considerations. Your 3M sales representative can arrange for the proper contacts.

Regulatory Status

The 2131 Resin is in compliance with EU regulation 1907/2007/EC (REACH)

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Electrical Markets Division

3M United Kingdom PLC

Sales Office

PO Box 393

Bedford MK41 0YE

Telephone: 0870 609 4639

Fax: 01234 229 433

3M Ireland Ltd

Sales Office

The Iveagh Building, The Park,

Carrickmines, Dublin 18, Ireland

Telephone: (01) 800 812 732

Fax: 353 1 280 3509

3M United Kingdom PLC

Head Office

3M Centre, Cain Road

Bracknell, Berkshire RG12 8HT

Telephone: 01344 858 000

Fax: 01344 858 758