

**Safety Data Sheet**

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| Issue Date: | 2025/09/18 | Supersedes Date: | 2020/10/27 |

SECTION 1: Identification**1.1. Product identifier**

3M™ Scotchcast™ Electrical Resin 226 (A & B)

Product Identification Numbers

80-1300-0277-9 80-1300-0324-9

1.2. Recommended use and restrictions on use**Recommended use**

Electrical, Electrical insulation

1.3. Supplier's details

Company: 3M Canada Company
Division: Electrical Markets Division
Address: 1840 Oxford Street East, Post Office Box 5757, London, Ontario N6A 4T1

Telephone: (800) 364-3577
E Mail:

1.4. Emergency telephone number

Medical Emergency Telephone: 1-800-3M HELPS / 1800 364 3577

This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet (SDS) or Article Information Sheet (AIS) for each of these components is included. Please do not separate the component documents from this cover page. The document numbers for components of this product are:

21-8309-3, 21-0680-5

Transport in accordance with applicable regulations.

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use and application of a product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

3M Canada SDSs are available at www.3M.ca



Safety Data Sheet

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| Document group: | 21-8309-3 | Version number: | 5.00 |
| Issue Date: | 2025/09/09 | Supersedes Date: | 2020/10/16 |

This Safety Data Sheet has been prepared in accordance with the Canadian Hazardous Products Regulations.

SECTION 1: Identification

1.1. Product identifier

3M™ Scotchcast™ Electrical Resin 226 Part A

1.2. Recommended use and restrictions on use

Intended Use

Electrical

Specific Use

Part A of two part curing system for electrical insulation.

Restrictions on use

Not applicable

1.3. Supplier's details

| | |
|-------------------|--|
| Company: | 3M Canada Company |
| Division: | Electrical Markets Division |
| Address: | 1840 Oxford Street East, Post Office Box 5757, London, Ontario N6A 4T1 |
| Telephone: | (800) 364-3577 |
| Website: | www.3M.ca |

1.4. Emergency telephone number

Medical Emergency Telephone: 1-800-3M HELPS / 1800 364 3577

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Skin Corrosion/Irritation: Category 2.

Serious Eye Damage/Irritation: Category 2A.

Respiratory Sensitizer: Category 1.

Skin Sensitizer: Category 1A.

Specific Target Organ Toxicity (repeated exposure): Category 1.

Specific Target Organ Toxicity (single exposure): Category 3.

2.2. Label elements

Signal word

Danger

Symbols

Exclamation mark | Health Hazard |

Pictograms



Hazard Statements

Causes skin irritation. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. May cause respiratory irritation.

Causes damage to organs through prolonged or repeated exposure: respiratory system.

Precautionary statements

Prevention:

Do not breathe fumes. Wash exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.

Response:

IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER or doctor if you feel unwell. Get medical attention if you feel unwell. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical advice. If experiencing respiratory symptoms: Call a POISON CENTER or doctor. Take off contaminated clothing and wash it before reuse.

Storage:

Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal:

Dispose of contents and container in accordance with applicable local, regional, national, and international regulations.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

This material is a mixture.

| Ingredient | C.A.S. No. | % by Wt | Common Name |
|--|------------|------------------------|---|
| Polymethylene polyphenylene isocyanate | 9016-87-9 | 50 - 60 Trade Secret * | Isocyanic acid, polymethylenepolyphenylene ester |
| P,P'-methylenebis(phenyl isocyanate) | 101-68-8 | 35 - 45 Trade Secret * | Benzene, 1,1'-methylenebis[4-isocyanato- |
| Diphenylmethane-2,4'-diisocyanate | 5873-54-1 | 3 - 7 Trade Secret * | Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]- |
| Diphenylmethane-2,2'-diisocyanate | 2536-05-2 | 0.1 - 1 Trade Secret * | Benzene, 1,1'-methylenebis[2-isocyanato- |

*The concentration (exact or range) of this component has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye Contact:

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If Swallowed:

Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Irritating to the respiratory tract (coughing, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain). Allergic respiratory reaction (difficulty breathing, wheezing, cough, and tightness of chest). Allergic skin reaction (redness, swelling, blistering, and itching). Target organ effects following prolonged or repeated exposure. See Section 11 for additional details.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

In case of fire: Use a carbon dioxide or dry chemical extinguisher to extinguish.

5.2. Unsuitable extinguishing media

DO NOT USE WATER

5.3. Special hazards arising from the substance or mixture

Closed containers exposed to heat from fire may build pressure and explode.

5.4. Special protection actions for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS. Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, in accordance with good industrial hygiene practice.

6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

Contain spill. Pour isocyanate decontaminant solution (90% water, 8% concentrated ammonia, 2% detergent) on spill and allow to react for 10 minutes. Or pour water on spill and allow to react for more than 30 minutes. Cover with absorbent material. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a container approved for transportation by appropriate authorities, but do not seal the container for 48 hours to avoid pressure build-up. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

For industrial or professional use only. Not for consumer sale or use. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from heat. Store away from strong bases. Store away from amines. Store locked up.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

No occupational exposure limit values exist for any of the components listed in Section 3 of this SDS.

8.2. Exposure controls

8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect Vented Goggles

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.

For prolonged or repeated contact, gloves made from the following material(s) are recommended (breakthrough times are >4 hours): Butyl Rubber, Neoprene, Nitrile Rubber

Any glove recommended for prolonged/repeated contact is also suitable for short-term/splash contact.

If this product is used in a manner that presents a higher potential for exposure (e.g., spraying, high splash potential, etc.), then use of a protective apron may be necessary. See recommended glove material(s) for determining appropriate apron material(s). If a glove material is not available as an apron, polymer laminate is a suitable option.

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|---|
| Physical state | Liquid |
| Specific Physical Form: | liquid |
| Colour | Black, Dark Brown |
| Odour | Slight Musty |
| Odour threshold | <i>No Data Available</i> |
| pH | <i>Not Applicable</i> |
| Melting point/Freezing point | <i>Not Applicable</i> |
| Boiling point | 208 °C |
| Flash Point | 199 °C [Test Method:Pensky-Martens Closed Cup] |
| Evaporation rate | <i>No Data Available</i> |
| Flammability | Not Applicable |
| Flammable Limits(LEL) | <i>No Data Available</i> |
| Flammable Limits(UEL) | <i>No Data Available</i> |
| Vapour Pressure | < 0 Pa [@ 25 °C] |
| Relative Vapour Density | <i>No Data Available</i> |
| Density | 1.19 g/ml - 1.29 g/ml |
| Relative density | 1.19 - 1.29 [@ 25 °C] [Ref Std:WATER=1] |
| Water solubility | Nil [Details:Insoluble in water, reacts with water to liberate CO2 gas] |
| Solubility- non-water | <i>No Data Available</i> |
| Partition coefficient: n-octanol/ water | <i>Not Applicable</i> |
| Autoignition temperature | <i>No Data Available</i> |
| Decomposition temperature | <i>No Data Available</i> |
| Kinematic Viscosity | 161 mm ² /sec |
| Volatile Organic Compounds | 0 % |
| Percent volatile | <i>Not Applicable</i> |
| VOC Less H2O & Exempt Solvents | 0 % |

| | |
|---------------------------------|-----------------------|
| Particle Characteristics | <i>Not Applicable</i> |
|---------------------------------|-----------------------|

SECTION 10: Stability and reactivity

10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization may occur.

10.4. Conditions to avoid

Heat

10.5. Incompatible materials

Amines

Strong bases

Alcohols

Water

10.6. Hazardous decomposition products

Substance

Condition

Isocyanates

At Elevated Temperatures

Carbon monoxide

At Elevated Temperatures

Carbon dioxide

At Elevated Temperatures

Hydrogen Cyanide

At Elevated Temperatures

Irritant Vapours or Gases

At Elevated Temperatures

Oxides of Nitrogen

At Elevated Temperatures

Organic Acids

At Elevated Temperatures

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Allergic Respiratory Reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest. May cause additional health effects (see below).

Skin Contact:

Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:

Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the

cornea, and impaired vision.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:

Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish coloured skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure.

Additional Information:

Persons previously sensitized to isocyanates may develop a cross-sensitization reaction to other isocyanates.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

| Name | Route | Species | Value |
|--|--------------------------------|---------|--|
| Overall product | Inhalation-Vapor(4 hr) | | No data available; calculated ATE >10 - =20 mg/l |
| Overall product | Ingestion | | No data available; calculated ATE >5,000 mg/kg |
| Polymethylene polyphenylene isocyanate | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| Polymethylene polyphenylene isocyanate | Inhalation-Dust/Mist (4 hours) | Rat | LC50 0.368 mg/l |
| Polymethylene polyphenylene isocyanate | Ingestion | Rat | LD50 31,600 mg/kg |
| P,P'-methylenebis(phenyl isocyanate) | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| P,P'-methylenebis(phenyl isocyanate) | Inhalation-Dust/Mist (4 hours) | Rat | LC50 0.368 mg/l |
| P,P'-methylenebis(phenyl isocyanate) | Ingestion | Rat | LD50 31,600 mg/kg |
| Diphenylmethane-2,4'-diisocyanate | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| Diphenylmethane-2,4'-diisocyanate | Inhalation-Dust/Mist (4 hours) | Rat | LC50 0.368 mg/l |
| Diphenylmethane-2,4'-diisocyanate | Ingestion | Rat | LD50 31,600 mg/kg |
| Diphenylmethane-2,2'-diisocyanate | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| Diphenylmethane-2,2'-diisocyanate | Inhalation-Dust/Mist (4 hours) | Rat | LC50 0.368 mg/l |
| Diphenylmethane-2,2'-diisocyanate | Ingestion | Rat | LD50 31,600 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|--|-------------------------|----------|
| Polymethylene polyphenylene isocyanate | official classification | Irritant |
| P,P'-methylenebis(phenyl isocyanate) | official classification | Irritant |
| Diphenylmethane-2,4'-diisocyanate | official classification | Irritant |
| Diphenylmethane-2,2'-diisocyanate | official classification | Irritant |

Serious Eye Damage/Irritation

| Name | Species | Value |
|--|-------------------------|-----------------|
| Polymethylene polyphenylene isocyanate | official classification | Severe irritant |
| P,P'-methylenebis(phenyl isocyanate) | official classification | Severe irritant |
| Diphenylmethane-2,4'-diisocyanate | official classification | Severe irritant |
| Diphenylmethane-2,2'-diisocyanate | official classification | Severe irritant |

Skin Sensitization

| Name | Species | Value |
|--|---------|-------------|
| Polymethylene polyphenylene isocyanate | Mouse | Sensitizing |
| P,P'-methylenebis(phenyl isocyanate) | Mouse | Sensitizing |
| Diphenylmethane-2,4'-diisocyanate | Mouse | Sensitizing |
| Diphenylmethane-2,2'-diisocyanate | Mouse | Sensitizing |

Respiratory Sensitization

| Name | Species | Value |
|--|---------|-------------|
| Polymethylene polyphenylene isocyanate | Human | Sensitizing |
| P,P'-methylenebis(phenyl isocyanate) | Human | Sensitizing |
| Diphenylmethane-2,4'-diisocyanate | Human | Sensitizing |
| Diphenylmethane-2,2'-diisocyanate | Human | Sensitizing |

Germ Cell Mutagenicity

| Name | Route | Value |
|--|----------|--|
| Polymethylene polyphenylene isocyanate | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| P,P'-methylenebis(phenyl isocyanate) | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Diphenylmethane-2,4'-diisocyanate | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Diphenylmethane-2,2'-diisocyanate | In Vitro | Some positive data exist, but the data are not sufficient for classification |

Carcinogenicity

| Name | Route | Species | Value |
|--|------------|---------|--|
| Polymethylene polyphenylene isocyanate | Inhalation | Rat | Some positive data exist, but the data are not sufficient for classification |
| P,P'-methylenebis(phenyl isocyanate) | Inhalation | Rat | Some positive data exist, but the data are not sufficient for classification |
| Diphenylmethane-2,4'-diisocyanate | Inhalation | Rat | Some positive data exist, but the data are not sufficient for classification |
| Diphenylmethane-2,2'-diisocyanate | Inhalation | Rat | Some positive data exist, but the data are not sufficient for classification |

Reproductive Toxicity**Reproductive and/or Developmental Effects**

| Name | Route | Value | Species | Test result | Exposure Duration |
|--|------------|--------------------------------|---------|------------------|----------------------|
| Polymethylene polyphenylene isocyanate | Inhalation | Not classified for development | Rat | NOAEL 0.004 mg/l | during organogenesis |
| P,P'-methylenebis(phenyl isocyanate) | Inhalation | Not classified for development | Rat | NOAEL 0.004 | during |

| | | | | | |
|-----------------------------------|------------|--------------------------------|-----|------------------|----------------------|
| | | | | mg/l | organogenesis |
| Diphenylmethane-2,4'-diisocyanate | Inhalation | Not classified for development | Rat | NOAEL 0.004 mg/l | during organogenesis |
| Diphenylmethane-2,2'-diisocyanate | Inhalation | Not classified for development | Rat | NOAEL 0.004 mg/l | during organogenesis |

Target Organ(s)

Specific Target Organ Toxicity - single exposure

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|--|------------|------------------------|----------------------------------|-------------------------|---------------------|-------------------|
| Polymethylene polyphenylene isocyanate | Inhalation | respiratory irritation | May cause respiratory irritation | official classification | NOAEL Not available | |
| P,P'-methylenebis(phenyl isocyanate) | Inhalation | respiratory irritation | May cause respiratory irritation | official classification | NOAEL Not available | |
| Diphenylmethane-2,4'-diisocyanate | Inhalation | respiratory irritation | May cause respiratory irritation | official classification | NOAEL Not available | |
| Diphenylmethane-2,2'-diisocyanate | Inhalation | respiratory irritation | May cause respiratory irritation | official classification | NOAEL Not available | |

Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|--|------------|--------------------|--|---------|------------------|-------------------|
| Polymethylene polyphenylene isocyanate | Inhalation | respiratory system | Causes damage to organs through prolonged or repeated exposure | Rat | LOAEL 0.004 mg/l | 13 weeks |
| P,P'-methylenebis(phenyl isocyanate) | Inhalation | respiratory system | Causes damage to organs through prolonged or repeated exposure | Rat | LOAEL 0.004 mg/l | 13 weeks |
| Diphenylmethane-2,4'-diisocyanate | Inhalation | respiratory system | Causes damage to organs through prolonged or repeated exposure | Rat | LOAEL 0.004 mg/l | 13 weeks |
| Diphenylmethane-2,2'-diisocyanate | Inhalation | respiratory system | Causes damage to organs through prolonged or repeated exposure | Rat | LOAEL 0.004 mg/l | 13 weeks |

Aspiration Hazard

For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

No data available.

SECTION 13: Disposal considerations

13.1. Disposal methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. As a disposal alternative, utilize an acceptable permitted waste disposal facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the

available treatment and disposal facilities.

SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Global inventory status

Contact 3M for more information. The components of this material are in compliance with the provisions of the Korea Chemical Control Act. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Japan Industrial Safety and Health Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

SECTION 16: Other information

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Health: 2 **Flammability:** 1 **Instability:** 1 **Special Hazards:** Reacts with Water

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification

Health: *2 **Flammability:** 1 **Physical Hazard:** 1 **Personal Protection:** X - See PPE section.

Hazardous Material Identification System (HMIS® IV) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® IV ratings are to be used with a fully implemented HMIS® IV program. HMIS® is a registered mark of the American Coatings Association (ACA).

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ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY OR CONDITION ARISING OUT OF A COURSE OF PERFORMANCE, COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. User is responsible for determining whether the product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

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This Safety Data Sheet has been prepared in accordance with the Canadian Hazardous Products Regulations.

SECTION 1: Identification

1.1. Product identifier

3M™ Scotchcast™ Electrical Resin 226 Part B

1.2. Recommended use and restrictions on use

Intended Use

Electrical

Specific Use

Part B of two part curing system for electrical insulation.

Restrictions on use

Not applicable

1.3. Supplier's details

| | |
|-------------------|--|
| Company: | 3M Canada Company |
| Division: | Electrical Markets Division |
| Address: | 1840 Oxford Street East, Post Office Box 5757, London, Ontario N6A 4T1 |
| Telephone: | (800) 364-3577 |
| Website: | www.3M.ca |

1.4. Emergency telephone number

Medical Emergency Telephone: 1-800-3M HELPS / 1800 364 3577

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Reproductive Toxicity: Category 1B.

Specific Target Organ Toxicity (repeated exposure): Category 1.

2.2. Label elements

Signal word

Danger

Symbols

Health Hazard |

Pictograms**Hazard Statements**

May damage fertility or the unborn child.

Causes damage to organs through prolonged or repeated exposure: cardiovascular system | endocrine system | immune system | kidney/urinary tract.

Precautionary statements**Prevention:**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe vapours. Wash exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves.

Response:

IF exposed or concerned: Get medical attention. Get medical attention if you feel unwell.

Storage:

Store locked up.

Disposal:

Dispose of contents and container in accordance with applicable local, regional, national, and international regulations.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

This material is a mixture.

| Ingredient | C.A.S. No. | % by Wt | Common Name |
|---|------------|----------------------|---|
| Castor oil | 8001-79-4 | 90 - 100 | Castor oil |
| N,N'-bis(2,6-diisopropylphenyl)carbodiimide | 2162-74-5 | 1 - 5 Trade Secret * | Benzenamine, N,N'-methanetetraylbis[2,6-bis(1-methylethyl)- |

*The concentration (exact or range) of this component has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures**Inhalation:**

Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:

Wash with soap and water. If you feel unwell, get medical attention.

Eye Contact:

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:

Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

No critical symptoms or effects. See Section 11.1, information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures**5.1. Suitable extinguishing media**

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Unsuitable extinguishing media

None Determined

5.3. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products**Substance**

Formaldehyde
Carbon monoxide
Carbon dioxide
Ammonia
Oxides of Nitrogen

Condition

During Combustion
During Combustion
During Combustion
During Combustion
During Combustion

5.4. Special protection actions for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS. Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, in accordance with good industrial hygiene practice.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions

on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

For industrial or professional use only. Not for consumer sale or use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Use personal protective equipment (gloves, respirators, etc.) as required.

7.2. Conditions for safe storage including any incompatibilities

No special storage requirements. Store locked up.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

No occupational exposure limit values exist for any of the components listed in Section 3 of this SDS.

8.2. Exposure controls

8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

None required.

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.

Gloves made from the following material(s) are recommended: Polymer laminate

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|----------------|--------|
| Physical state | Liquid |
|----------------|--------|

| | |
|--|--------------------------------------|
| Specific Physical Form: | Viscous |
| Colour | Dark Purple |
| Odour | Slight Glycol |
| Odour threshold | <i>No Data Available</i> |
| pH | <i>Not Applicable</i> |
| Melting point/Freezing point | <i>No Data Available</i> |
| Boiling point | > 204.4 °C |
| Flash Point | > 204.4 °C [Test Method: Closed Cup] |
| Evaporation rate | <i>Not Applicable</i> |
| Flammability | Not Applicable |
| Flammable Limits(LEL) | <i>Not Applicable</i> |
| Flammable Limits(UEL) | <i>Not Applicable</i> |
| Vapour Pressure | <i>No Data Available</i> |
| Relative Vapour Density | <i>No Data Available</i> |
| Density | 0.9 g/ml - 1 g/ml |
| Relative density | 0.9 - 1 [Ref Std: WATER=1] |
| Water solubility | Nil |
| Solubility- non-water | <i>No Data Available</i> |
| Partition coefficient: n-octanol/ water | <i>No Data Available</i> |
| Autoignition temperature | <i>No Data Available</i> |
| Decomposition temperature | <i>No Data Available</i> |
| Kinematic Viscosity | 737 mm ² /sec |
| Volatile Organic Compounds | 0 |
| Percent volatile | <i>No Data Available</i> |
| VOC Less H₂O & Exempt Solvents | 0 |
| Average particle size | <i>Not Applicable</i> |
| Bulk density | <i>Not Applicable</i> |

| | |
|---------------------------------|-----------------------|
| Particle Characteristics | <i>Not Applicable</i> |
|---------------------------------|-----------------------|

SECTION 10: Stability and reactivity

10.1. Reactivity

This material is considered to be non reactive under normal use conditions.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Substance

None known.

Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

No known health effects.

Skin Contact:

Contact with the skin during product use is not expected to result in significant irritation.

Eye Contact:

Contact with the eyes during product use is not expected to result in significant irritation.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea. May cause additional health effects (see below).

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:

Cardiac Effects: Signs/symptoms may include irregular heartbeat (arrhythmia), changes in heart rate, damage to heart muscle, heart attack, and may be fatal. Immunological Effects: Signs/symptoms may include alterations in the number of circulating immune cells, allergic skin and /or respiratory reaction, and changes in immune function. Endocrine Effects: Signs/symptoms may include disruption of gonadal, thyroid, adrenal, or pancreatic function; changes in hormone production; alterations in circulating hormone levels; and/or changes in tissue response to hormones. Kidney/Bladder Effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

Reproductive/Developmental Toxicity:

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

| Name | Route | Species | Value |
|---|-----------|---------|--|
| Overall product | Ingestion | | No data available; calculated ATE >5,000 mg/kg |
| Castor oil | Dermal | | LD50 estimated to be > 5,000 |
| Castor oil | Ingestion | | LD50 estimated to be > 5,000 |
| N,N'-bis(2,6-diisopropylphenyl)carbodiimide | Dermal | Rat | LD50 > 2,000 mg/kg |
| N,N'-bis(2,6-diisopropylphenyl)carbodiimide | Ingestion | Rat | LD50 >300, <2000 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|---|---------|--------------------|
| Castor oil | Human | Minimal irritation |
| N,N'-bis(2,6-diisopropylphenyl)carbodiimide | Rat | Minimal irritation |

Serious Eye Damage/Irritation

| Name | Species | Value |
|---|---------|---------------|
| Castor oil | Rabbit | Mild irritant |
| N,N'-bis(2,6-diisopropylphenyl)carbodiimide | Rabbit | Mild irritant |

Skin Sensitization

| Name | Species | Value |
|---|------------|----------------|
| Castor oil | Human | Not classified |
| N,N'-bis(2,6-diisopropylphenyl)carbodiimide | Guinea pig | Not classified |

Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

| Name | Route | Value |
|---|----------|---------------|
| Castor oil | In Vitro | Not mutagenic |
| Castor oil | In vivo | Not mutagenic |
| N,N'-bis(2,6-diisopropylphenyl)carbodiimide | In Vitro | Not mutagenic |

Carcinogenicity

For the component/components, either no data are currently available or the data are not sufficient for classification.

Reproductive Toxicity**Reproductive and/or Developmental Effects**

| Name | Route | Value | Species | Test result | Exposure Duration |
|---|-----------|--------------------------------------|---------|-------------------|--------------------------|
| N,N'-bis(2,6-diisopropylphenyl)carbodiimide | Ingestion | Not classified for development | Rat | NOAEL 3 mg/kg/day | premating into lactation |
| N,N'-bis(2,6-diisopropylphenyl)carbodiimide | Ingestion | Not classified for male reproduction | Rat | NOAEL 3 mg/kg/day | 28 days |
| N,N'-bis(2,6-diisopropylphenyl)carbodiimide | Ingestion | Toxic to female reproduction | Rat | NOAEL 1 mg/kg/day | premating into lactation |

Target Organ(s)**Specific Target Organ Toxicity - single exposure**

For the component/components, either no data are currently available or the data are not sufficient for classification.

Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|---|-----------|--|--|---------|------------------------|-------------------|
| Castor oil | Ingestion | heart hematopoietic system liver | Not classified | Rat | NOAEL 4,800 mg/kg/day | 13 weeks |
| Castor oil | Ingestion | kidney and/or bladder | Not classified | Mouse | NOAEL 13,000 mg/kg/day | 13 weeks |
| N,N'-bis(2,6-diisopropylphenyl)carbodiimide | Ingestion | heart endocrine system immune system kidney and/or bladder | Causes damage to organs through prolonged or repeated exposure | Rat | NOAEL 4 mg/kg/day | 28 days |

| | | | | | | |
|---|-----------|---|----------------|-----|--------------------|---------|
| N,N'-bis(2,6-diisopropylphenyl)carbodiimide | Ingestion | bone, teeth, nails, and/or hair hematopoietic system liver nervous system | Not classified | Rat | NOAEL 16 mg/kg/day | 28 days |
|---|-----------|---|----------------|-----|--------------------|---------|

Aspiration Hazard

For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

No data available.

SECTION 13: Disposal considerations**13.1. Disposal methods**

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. As a disposal alternative, utilize an acceptable permitted waste disposal facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****Global inventory status**

Contact 3M for more information. The components of this material are in compliance with the provisions of the Korea Chemical Control Act. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

SECTION 16: Other information

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Health: 0 Flammability: 1 Instability: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

| | | | |
|------------------------|------------|-------------------------|------------|
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3M Canada SDSs are available at www.3M.ca