

Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier

3MTM ScotchcastTM Electrical Resin 250 Part A

Product Identification Numbers

LH-A100-0551-5, 80-7002-5004-8 7010293976

1.2. Recommended use and restrictions on use

Recommended use

Electrical, Part A of two part curing system for electrical insulation.

1.3. Supplier's details

MANUFACTURER: 3M

DIVISION: Electrical Markets Division

ADDRESS: 3M Center, St. Paul, MN 55144-1000, USA

Telephone: 1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification

Serious Eye Damage/Irritation: Category 2B. Skin Sensitizer: Category 1.

2.2. Label elements

Signal word

Warning

Symbols

Exclamation mark |

Pictograms



Hazard Statements

Causes eye irritation.

May cause an allergic skin reaction.

Precautionary Statements

Prevention:

Avoid breathing dust/fume/gas/mist/vapors/spray.

Wear protective gloves.

Wash thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace.

Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

If eye irritation persists: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

Disposal:

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

SECTION 3: Composition/information on ingredients

| Ingredient | C.A.S. No. | % by Wt |
|------------------------------|------------|-------------------------|
| 4,4'-ISOPROPYLIDENEDIPHENOL- | 25068-38-6 | 80 - 100 Trade Secret * |
| EPICHLOROHYDRIN POLYMER | | |
| CARBON BLACK | 1333-86-4 | 0 - 10 Trade Secret * |
| IRON OXIDE | 1332-37-2 | 0 - 10 Trade Secret * |

^{*}The specific chemical identity and/or exact percentage (concentration) of this composition 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:

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. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

Substance

Condition Carbon monoxide

Carbon dioxide

During Combustion During Combustion

5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

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. 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/occupational use only. Not for consumer sale or use. Avoid breathing dust/fume/gas/mist/vapors/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

No special storage requirements.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

| Ingredient | C.A.S. No. | Agency | Limit type | Additional Comments |
|--------------|------------|--------|---------------------------|----------------------------|
| CARBON BLACK | 1333-86-4 | ACGIH | TWA(inhalable fraction):3 | A3: Confirmed animal |
| | | | mg/m3 | carcin. |
| CARBON BLACK | 1333-86-4 | OSHA | TWA:3.5 mg/m3 | |

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

CMRG: Chemical Manufacturer's Recommended Guidelines

OSHA: United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average STEL: Short Term Exposure Limit

CEIL: Ceiling

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/vapors/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:

Full Face Shield

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.

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

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

Respiratory protection

Select and use respiratory protection to prevent an inhalation exposure based on the results of an exposure assessment. Consult with your respirator manufacturer for selection of appropriate types of respirators.

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 vapors and particulates

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

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state Liquid
Color Dark Red

Specific Physical Form: Viscous **Odor** Epoxy

Odor thresholdNo Data AvailablepHNo Data AvailableMelting pointNo Data Available

Boiling Point 500 °F

Flash Point >=275 °F [Test Method:Closed Cup]

Evaporation rateNo Data AvailableFlammability (solid, gas)Not ApplicableFlammable Limits(LEL)No Data AvailableFlammable Limits(UEL)No Data AvailableVapor PressureNegligible

Vapor Pressure Negligible
Vapor Density No Data Available

Density 1.18 g/ml

Specific Gravity 1.18 [Ref Std:WATER=1]

Solubility in Water

Solubility- non-water

Partition coefficient: n-octanol/ water

Autoignition temperature

No Data Available
No Data Available
No Data Available

Decomposition temperatureNo Data Available
Viscosity
>=10,000 centipoise

Percent volatile Nil

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

<u>Substance</u> <u>Condition</u>

Aldehydes Oxidation, heat or reaction

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:

Vapors released during curing may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin Contact:

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

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Ingestion:

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

Carcinogenicity:

| Ingredient | CAS No. | Class Description | Regulation |
|--------------|-----------|-------------------------------|---|
| CARBON BLACK | 1333-86-4 | Grp. 2B: Possible human carc. | International Agency for Research on Cancer |

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 | Species | No data available; calculated ATE >5,000 mg/kg |
| 4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN POLYMER | Dermal | Rat | LD50 > 1,600 mg/kg |
| 4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN POLYMER | Ingestion | Rat | LD50 > 1,000 mg/kg |
| IRON OXIDE | Dermal | Not available | LD50 3,100 mg/kg |
| IRON OXIDE | Ingestion | Not available | LD50 3,700 mg/kg |
| CARBON BLACK | Dermal | Rabbit | LD50 > 3,000 mg/kg |
| CARBON BLACK | Ingestion | Rat | LD50 > 8,000 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|---|---------|---------------------------|
| | | |
| 4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN POLYMER | Rabbit | Mild irritant |
| CARBON BLACK | Rabbit | No significant irritation |

| IRON OXIDE | Rabbit | No significant irritation |
|------------|--------|---------------------------|

Serious Eye Damage/Irritation

| Name | | Value |
|---|--------|---------------------------|
| 4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN POLYMER | Rabbit | Moderate irritant |
| CARBON BLACK | Rabbit | No significant irritation |
| IRON OXIDE | Rabbit | No significant irritation |

Skin Sensitization

| Name | Species | Value |
|---|---------|----------------|
| 4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN POLYMER | Human | Sensitizing |
| | and | |
| | animal | |
| IRON OXIDE | Human | Not classified |

Respiratory Sensitization

| Name | Species | Value |
|---|---------|----------------|
| 4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN POLYMER | Human | Not classified |

Germ Cell Mutagenicity

| Germ Gen Mutagementy | | |
|---|----------|--|
| Name | Route | Value |
| | | |
| 4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN POLYMER | In vivo | Not mutagenic |
| 4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN POLYMER | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| CARBON BLACK | In Vitro | Not mutagenic |
| CARBON BLACK | In vivo | Some positive data exist, but the data are not sufficient for classification |
| IRON OXIDE | In Vitro | Not mutagenic |

Carcinogenicity

| Name | Route | Species | Value |
|---|------------|---------|--|
| 4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN POLYMER | Dermal | Mouse | Some positive data exist, but the data are not sufficient for classification |
| CARBON BLACK | Dermal | Mouse | Not carcinogenic |
| CARBON BLACK | Ingestion | Mouse | Not carcinogenic |
| CARBON BLACK | Inhalation | Rat | Carcinogenic |
| IRON OXIDE | Inhalation | Human | 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 |
| 4,4'-ISOPROPYLIDENEDIPHENOL- | Ingestion | Not classified for female reproduction | Rat | NOAEL 750 | 2 generation |
| EPICHLOROHYDRIN POLYMER | | | | mg/kg/day | |
| 4,4'-ISOPROPYLIDENEDIPHENOL- | Ingestion | Not classified for male reproduction | Rat | NOAEL 750 | 2 generation |
| EPICHLOROHYDRIN POLYMER | | _ | | mg/kg/day | |
| 4,4'-ISOPROPYLIDENEDIPHENOL- | Dermal | Not classified for development | Rabbit | NOAEL 300 | during |
| EPICHLOROHYDRIN POLYMER | | | | mg/kg/day | organogenesi |
| | | | | | S |
| 4,4'-ISOPROPYLIDENEDIPHENOL- | Ingestion | Not classified for development | Rat | NOAEL 750 | 2 generation |
| EPICHLOROHYDRIN POLYMER | _ | | | mg/kg/day | _ |

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.

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Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|--|------------|--|----------------|---------|-----------------------------|-----------------------|
| 4,4'- ISOPROPYLIDENEDIPH ENOL- EPICHLOROHYDRIN POLYMER | Dermal | liver | Not classified | Rat | NOAEL 1,000 mg/kg/day | 2 years |
| 4,4'- ISOPROPYLIDENEDIPH ENOL- EPICHLOROHYDRIN POLYMER | Dermal | nervous system | Not classified | Rat | NOAEL 1,000 mg/kg/day | 13 weeks |
| 4,4'- ISOPROPYLIDENEDIPH ENOL- EPICHLOROHYDRIN POLYMER | Ingestion | auditory system heart endocrine system hematopoietic system liver eyes kidney and/or bladder | Not classified | Rat | NOAEL 1,000 mg/kg/day | 28 days |
| CARBON BLACK | Inhalation | pneumoconiosis | Not classified | Human | NOAEL Not available | occupational exposure |
| IRON OXIDE | Inhalation | pulmonary fibrosis pneumoconiosis | Not classified | Human | NOAEL Not available | occupational exposure |

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

Ecotoxicological information

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

Chemical fate information

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

SECTION 13: Disposal considerations

13.1. Disposal methods

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

Incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. 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.

EPA Hazardous Waste Number (RCRA): Not regulated

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. US Federal Regulations

Contact 3M for more information.

EPCRA 311/312 Hazard Classifications:

Physical Hazards

Not applicable

Health Hazards

Serious eye damage or eye irritation

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

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 product are in compliance with the new substance notification requirements of CEPA.

The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of the Korean Toxic Chemical 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 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 chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

Health: 2 Flammability: 1 Instability: 1 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.

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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