



Safety Data Sheet

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|------------------------|-----------|-------------------------|----------|
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Product identifier

3M™ Scotchcast™ Inline Splice Kit 72-N3 (Scotchcast™ 2104)

ID Number(s):

80-6100-7210-2

Recommended use

Electrical, ELECTRICAL SPLICING AND INSULATION

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) |

Emergency telephone number

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

This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet (SDS), Article Information Sheet (AIS), or Article Information Letter (AIL) 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:

25-0742-4, 25-1043-6

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| Issue Date: | 05/22/18 | Supersedes Date: | 01/04/18 |

SECTION 1: Identification

1.1. Product identifier

3M™ Scotchcast™ Electrical Insulating Resin 2104, Part A

Product Identification Numbers

80-6116-1275-7

1.2. Recommended use and restrictions on use

Recommended use

Electrical, Part A of two part electrical resin

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

Acute Toxicity (inhalation): Category 4.
Serious Eye Damage/Irritation: Category 2A.
Skin Corrosion/Irritation: Category 2.
Respiratory Sensitizer: Category 1.
Skin Sensitizer: Category 1.
Specific Target Organ Toxicity (single exposure): Category 3.
Specific Target Organ Toxicity (repeated exposure): Category 1.

2.2. Label elements

Signal word

Danger

Symbols

Exclamation mark | Health Hazard |

Pictograms



Hazard Statements

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

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

Precautionary Statements

Prevention:

Do not breathe dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.
In case of inadequate ventilation wear respiratory protection.
Wear eye/face protection.
Wear protective gloves.
Do not eat, drink or smoke when using this product.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.

Response:

IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
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.
Take off contaminated clothing and wash it before reuse.
Call a POISON CENTER or doctor/physician if you feel unwell.

Storage:

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

Disposal:

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

40% of the mixture consists of ingredients of unknown acute oral toxicity.

57% of the mixture consists of ingredients of unknown acute inhalation toxicity.

SECTION 3: Composition/information on ingredients

| Ingredient | C.A.S. No. | % by Wt |
|--|------------|---------|
| PHTHALIC ACID, DI-C11-14-BRANCHED ALKYL ESTERS, C13-RICH | 68515-47-9 | 35 - 50 |
| POLYMETHYLENE POLYPHENYLENE ISOCYANATE | 9016-87-9 | 15 - 35 |
| 1,3-BUTADIENE, HOMOPOLYMER, HYDROXY-TERMINATED | 69102-90-5 | 15 - 25 |
| P,P'-METHYLENEBIS(PHENYL ISOCYANATE) | 101-68-8 | 5 - 20 |
| 1,1'-METHYLENEBIS(ISOCYANATOBENZENE) | 26447-40-5 | 0 - 10 |
| PHENYL ISOCYANATE | 103-71-9 | 0 - 0.5 |

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

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**

Isocyanates
Carbon monoxide
Carbon dioxide
Hydrogen Cyanide
Oxides of Nitrogen

Condition

During Combustion
During Combustion
During Combustion
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.

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. Do not use in a confined area with minimal air exchange. Do not breathe 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

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 amines.

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 |
|--------------------------------------|------------|--------|---------------------------------------|------------------------------|
| P,P'-METHYLENEBIS(PHENYL ISOCYANATE) | 101-68-8 | ACGIH | TWA:0.005 ppm | |
| P,P'-METHYLENEBIS(PHENYL ISOCYANATE) | 101-68-8 | OSHA | CEIL:0.2 mg/m ³ (0.02 ppm) | |
| PHENYL ISOCYANATE | 103-71-9 | ACGIH | TWA:0.005 ppm;STEL:0.015 ppm | SKIN; Resp+Dermal sensitizer |

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:

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. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.

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

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 supplied-air respirator

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

| | |
|----------------------------------|--|
| General Physical Form: | Liquid |
| Specific Physical Form: | Resin |
| Odor, Color, Grade: | Dark green liquid with isocyanate odor |
| Odor threshold | <i>No Data Available</i> |
| pH | <i>No Data Available</i> |
| Melting point | <i>No Data Available</i> |
| Boiling Point | >= 230 °F |
| Flash Point | 230 °F [<i>Test Method:Closed Cup</i>] |
| Evaporation rate | <i>No Data Available</i> |
| Flammability (solid, gas) | Not Applicable |
| Flammable Limits(LEL) | <i>No Data Available</i> |

| | |
|--|-------------------------------------|
| Flammable Limits(UEL) | <i>No Data Available</i> |
| Vapor Pressure | <i>No Data Available</i> |
| Vapor Density | <i>No Data Available</i> |
| Density | 1.04 g/ml |
| Specific Gravity | 1.04 [Ref Std: WATER=1] |
| Solubility in Water | Slight (less than 10%) |
| 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> |
| Viscosity | 1,400 centipoise - 2,000 centipoise |
| Average particle size | <i>No Data Available</i> |
| Bulk density | <i>No Data Available</i> |
| Hazardous Air Pollutants | <i>No Data Available</i> |
| Molecular weight | <i>No Data Available</i> |
| Volatile Organic Compounds | <i>No Data Available</i> |
| Percent volatile | Negligible |
| Softening point | <i>No Data Available</i> |
| VOC Less H2O & Exempt Solvents | <i>No Data Available</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 will not occur.

10.4. Conditions to avoid

Not determined

10.5. Incompatible materials

Amines
Alcohols
Water

Not Applicable

10.6. Hazardous decomposition products

Substance

Condition

None known.

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:

Harmful if inhaled.

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 colored skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure.

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 ATE10 - 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 |
| 1,3-BUTADIENE, HOMOPOLYMER, HYDROXY-TERMINATED | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| 1,3-BUTADIENE, HOMOPOLYMER, HYDROXY-TERMINATED | Ingestion | | LD50 estimated to be 2,000 - 5,000 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 |
| 1,1'-METHYLENEBIS(ISOCYANATOBENZENE) | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| 1,1'-METHYLENEBIS(ISOCYANATOBENZENE) | Inhalation-Dust/Mist (4 hours) | Rat | LC50 0.368 mg/l |
| 1,1'-METHYLENEBIS(ISOCYANATOBENZENE) | 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 |
| 1,1'-METHYLENEBIS(ISOCYANATOBENZENE) | 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 |
| 1,1'-METHYLENEBIS(ISOCYANATOBENZENE) | official classification | Severe irritant |

Skin Sensitization

| Name | Species | Value |
|--|-------------------------|-------------|
| POLYMETHYLENE POLYPHENYLENE ISOCYANATE | official classification | Sensitizing |
| P,P'-METHYLENEBIS(PHENYL ISOCYANATE) | official classification | Sensitizing |
| 1,1'-METHYLENEBIS(ISOCYANATOBENZENE) | official classification | Sensitizing |

Respiratory Sensitization

| Name | Species | Value |
|--|---------|-------------|
| POLYMETHYLENE POLYPHENYLENE ISOCYANATE | Human | Sensitizing |
| P,P'-METHYLENEBIS(PHENYL ISOCYANATE) | Human | Sensitizing |
| 1,1'-METHYLENEBIS(ISOCYANATOBENZENE) | 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 |
| 1,1'-METHYLENEBIS(ISOCYANATOBENZENE) | 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 |
| 1,1'-METHYLENEBIS(ISOCYANATOBENZENE) | 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 mg/l | during organogenesis |
| 1,1'-METHYLENEBIS(ISOCYANATOBENZENE) | 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 | |
| 1,1'-METHYLENEBIS(ISOCYANATOBENZENE) | 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 |
| 1,1'-METHYLENEBIS(ISOCYANATOBENZENE) | 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**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.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. 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

Acute toxicity

Serious eye damage or eye irritation

Skin Corrosion or Irritation

Specific target organ toxicity (single or repeated exposure)

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

| <u>Ingredient</u> | <u>C.A.S. No</u> | <u>% by Wt</u> |
|--|------------------|----------------|
| POLYMETHYLENE POLYPHENYLENE ISOCYANATE | 9016-87-9 | 15 - 35 |
| P,P'-METHYLENEBIS(PHENYL ISOCYANATE) | 101-68-8 | 5 - 20 |

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

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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|------------------------|-----------|-------------------------|----------|
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SECTION 1: Identification

1.1. Product identifier

3M™ Scotchcast™ Electrical Insulating Resin 2104, Part B

Product Identification Numbers

| ID Number | UPC | ID Number | UPC |
|----------------|-----|-----------|-----|
| 80-6116-1276-5 | | | |

1.2. Recommended use and restrictions on use

Recommended use

Electrical, Part B of two part electrical resin

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 1.

2.2. Label elements

Signal word

Danger

Symbols

Corrosion |

Pictograms

**Hazard Statements**

Causes serious eye damage.

Precautionary Statements**Prevention:**

Wear eye/face protection.

Response:

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

Immediately call a POISON CENTER or doctor/physician.

15% of the mixture consists of ingredients of unknown acute oral toxicity.

SECTION 3: Composition/information on ingredients

| Ingredient | C.A.S. No. | % by Wt |
|--|------------|-----------------------|
| POLYPROPYLENE GLYCOL GLYCEROL TRIETHER | 25791-96-2 | 55 - 75 |
| N,N-DI(2-HYDROXYPROPYL)ANILINE | 3077-13-2 | 5 - 20 Trade Secret * |
| PHTHALIC ACID, DI-C11-14-BRANCHED ALKYL ESTERS, C13-RICH | 68515-47-9 | 5 - 20 Trade Secret * |
| DIPROPYLENE GLYCOL | 25265-71-8 | 1 - 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:

Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye Contact:

Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately 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

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

Aldehydes
Carbon monoxide
Carbon dioxide
Oxides of Nitrogen

Condition

During Combustion
During Combustion
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.

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/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. Avoid release to the environment.

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

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/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. 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 vapors 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**

| | |
|----------------------------------|-------------------------------------|
| General Physical Form: | Liquid |
| Odor, Color, Grade: | Light amber liquid with glycol odor |
| Odor threshold | <i>No Data Available</i> |
| pH | <i>No Data Available</i> |
| Melting point | <i>No Data Available</i> |
| Boiling Point | >= 230 °F |
| Flash Point | >= 230 °F [Test Method:Closed Cup] |
| Evaporation rate | <i>No Data Available</i> |
| Flammability (solid, gas) | Not Applicable |
| Flammable Limits(LEL) | <i>No Data Available</i> |
| Flammable Limits(UEL) | <i>No Data Available</i> |
| Vapor Pressure | Negligible |
| Vapor Density | <i>No Data Available</i> |
| Density | 1 g/ml |
| Specific Gravity | 1 [Ref Std:WATER=1] |
| Solubility in Water | Slight (less than 10%) |

| | |
|--|---------------------------------|
| 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> |
| Viscosity | 450 centipoise - 750 centipoise |
| Average particle size | <i>No Data Available</i> |
| Bulk density | <i>No Data Available</i> |
| Hazardous Air Pollutants | <i>No Data Available</i> |
| Molecular weight | <i>No Data Available</i> |
| Volatile Organic Compounds | <i>No Data Available</i> |
| Percent volatile | <i>No Data Available</i> |
| Softening point | <i>No Data Available</i> |
| VOC Less H2O & Exempt Solvents | <i>No Data Available</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.

No Data Available

10.6. Hazardous decomposition products

| <u>Substance</u> | <u>Condition</u> |
|------------------|------------------|
| None known. | |

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:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin Contact:

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

Eye Contact:

Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Ingestion:

May be harmful if swallowed.

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

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 ATE2,000 - 5,000 mg/kg |
| POLYPROPYLENE GLYCOL GLYCEROL TRIETHER | Dermal | Rat | LD50 > 2,000 mg/kg |
| POLYPROPYLENE GLYCOL GLYCEROL TRIETHER | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 50 mg/l |
| POLYPROPYLENE GLYCOL GLYCEROL TRIETHER | Ingestion | Rat | LD50 4,600 mg/kg |
| N,N-DI(2-HYDROXYPROPYL)ANILINE | Dermal | Rabbit | LD50 > 2,000 mg/kg |
| N,N-DI(2-HYDROXYPROPYL)ANILINE | Ingestion | Rat | LD50 3,800 mg/kg |
| DIPROPYLENE GLYCOL | Dermal | Rabbit | LD50 > 5,010 mg/kg |
| DIPROPYLENE GLYCOL | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 2.34 mg/l |
| DIPROPYLENE GLYCOL | Ingestion | Rat | LD50 > 5,010 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|--|-----------------------|---------------------------|
| POLYPROPYLENE GLYCOL GLYCEROL TRIETHER | Rabbit | No significant irritation |
| N,N-DI(2-HYDROXYPROPYL)ANILINE | Professional judgment | Minimal irritation |
| DIPROPYLENE GLYCOL | Rabbit | No significant irritation |

Serious Eye Damage/Irritation

| Name | Species | Value |
|--|-----------------------|---------------------------|
| POLYPROPYLENE GLYCOL GLYCEROL TRIETHER | Rabbit | Mild irritant |
| N,N-DI(2-HYDROXYPROPYL)ANILINE | Professional judgment | Corrosive |
| DIPROPYLENE GLYCOL | Rabbit | No significant irritation |

Skin Sensitization

| Name | Species | Value |
|--------------------|---------|----------------|
| DIPROPYLENE GLYCOL | Guinea | Not classified |

pig

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 |
|--------------------|----------|---------------|
| DIPROPYLENE GLYCOL | In Vitro | Not mutagenic |
| DIPROPYLENE GLYCOL | In vivo | Not mutagenic |

Carcinogenicity

| Name | Route | Species | Value |
|--------------------|-----------|-------------------------|------------------|
| DIPROPYLENE GLYCOL | Ingestion | Multiple animal species | Not carcinogenic |

Reproductive Toxicity

Reproductive and/or Developmental Effects

| Name | Route | Value | Species | Test Result | Exposure Duration |
|--------------------|-----------|--------------------------------|---------|-----------------------|----------------------|
| DIPROPYLENE GLYCOL | Ingestion | Not classified for development | Rat | NOAEL 5,000 mg/kg/day | during organogenesis |

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 |
|--------------------|-----------|--|--|---------|-----------------------|-------------------|
| DIPROPYLENE GLYCOL | Ingestion | respiratory system | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 470 mg/kg/day | 105 weeks |
| DIPROPYLENE GLYCOL | Ingestion | heart | Not classified | Rat | NOAEL 470 mg/kg/day | 105 weeks |
| DIPROPYLENE GLYCOL | Ingestion | endocrine system liver | Not classified | Rat | NOAEL 3,040 mg/kg/day | 105 weeks |
| DIPROPYLENE GLYCOL | Ingestion | kidney and/or bladder | Not classified | Rat | NOAEL 115 mg/kg/day | 105 weeks |
| DIPROPYLENE GLYCOL | Ingestion | skin bone, teeth, nails, and/or hair hematopoietic system immune system nervous system vascular system | Not classified | Rat | NOAEL 3,040 mg/kg/day | 105 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

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. 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 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: 3 **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.

HMIS Hazard Classification

Health: 3 **Flammability:** 1 **Physical Hazard:** 0 **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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