

ADR/RID: UN3082, NOT RESTRICTED AS PER SPECIAL PROVISION 375, ENVIRONMENTALLY HAZARDOUS SUBSTANCE EXEMPTION, (EPOXY RESIN), III, --.

IMDG-CODE: UN3082, NOT RESTRICTED AS PER IMDG CODE 2.10.2.7, MARINE POLLUTANT EXCEPTION, (4,4'-ISOPROPYLDENEDIPHENOL-EPICHLOROXYDRIN POLYMER), III, IMDG-Code segregation code: NONE, EMS: --.

ICAO/IATA: UN3082, NOT RESTRICTED AS PER SPECIAL PROVISION A197, ENVIRONMENTALLY HAZARDOUS SUBSTANCE EXEMPTION, (4,4'-ISOPROPYLDENEDIPHENOL-EPICHLOROXYDRIN POLYMER), III.

UU-0016-5166-8, UU-0063-8489-3

Not hazardous for transportation

Refer to section 14 of the kit components for transport information.

KIT LABEL

2.1. Classification of the substance or mixture

CLP REGULATION (EC) No 1272/2008

CLASSIFICATION:

Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315

Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319

Respiratory Sensitization, Category 1 - Resp. Sens. 1; H334

Skin Sensitization, Category 1 - Skin Sens. 1; H317

Hazardous to the Aquatic Environment (Chronic), Category 2 - Aquatic Chronic 2; H411

For full text of H phrases, see Section 16.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

SIGNAL WORD

DANGER.

Symbols

GHS08 (Health Hazard) | GHS09 (Environment) |

Pictograms



Contains:

reaction product: bisphenol-A-(epichlorhydrin); Dihydro-3-(tetrapropenyl)furan-2,5-dione

HAZARD STATEMENTS:

H315

Causes skin irritation.

H319

Causes serious eye irritation.

H334

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317

May cause an allergic skin reaction.

H411 Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P261A Avoid breathing vapours.
P280E Wear protective gloves.

Response:

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.

Disposal:

P501 Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

Refer to Safety Data Sheet for component % unknown values (www.3M.com/msds).

Revision information:

Kit: Component document group number(s) information was modified.
Label: CLP Ingredients - kit components information was added.
Label: CLP Classification information was modified.
Label: CLP Precautionary - Response information was modified.



Safety Data Sheet

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| | | | |
|------------------------|------------|-------------------------|------------|
| Document group: | 25-8693-1 | Version number: | 7.00 |
| Revision date: | 11/02/2022 | Supersedes date: | 06/02/2018 |

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

3M™ Scotchcast™ Electrical Resin 280 Part A

Product Identification Numbers

UU-0016-5168-4

7100064308

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Electrical

1.3. Details of the supplier of the safety data sheet

Address: 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
Telephone: +44 (0)1344 858 000
E Mail: tox.uk@mmm.com
Website: www.3M.com/uk

1.4. Emergency telephone number

+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

CLP REGULATION (EC) No 1272/2008

The health and environmental classifications of this material have been derived using the calculation method, except in cases where test data are available or the physical form impacts classification. Classification(s) based on test data or physical form are noted below, if applicable.

CLASSIFICATION:

Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
 Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319
 Skin Sensitization, Category 1 - Skin Sens. 1; H317
 Hazardous to the Aquatic Environment (Chronic), Category 2 - Aquatic Chronic 2; H411

For full text of H phrases, see Section 16.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

SIGNAL WORD

WARNING.

Symbols

GHS07 (Exclamation mark) |GHS09 (Environment) |

Pictograms



Ingredients:

| Ingredient | CAS Nbr | EC No. | % by Wt |
|--|------------|-----------|----------------------|
| reaction product: bisphenol-A-(epichlorhydrin) | 25068-38-6 | 500-033-5 | <= 100(Typically100) |

HAZARD STATEMENTS:

| | |
|------|--|
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H317 | May cause an allergic skin reaction. |
| H411 | Toxic to aquatic life with long lasting effects. |

PRECAUTIONARY STATEMENTS

Prevention:

| | |
|-------|-----------------------------------|
| P273 | Avoid release to the environment. |
| P280E | Wear protective gloves. |

Response:

| | |
|--------------------|--|
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P333 + P313 | If skin irritation or rash occurs: Get medical advice/attention. |

Disposal:

| | |
|------|--|
| P501 | Dispose of contents/container in accordance with applicable local/regional/national/international regulations. |
|------|--|

2.3. Other hazards

None known.

This material does not contain any substances that are assessed to be a PBT or vPvB

SECTION 3: Composition/information on ingredients**3.1. Substances**

| Ingredient | Identifier(s) | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|--|--|---------------------------|--|
| reaction product: bisphenol-A-(epichlorhydrin) | (CAS-No.) 25068-38-6 (EC-No.) 500-033-5 | <= 100 (Typically 100) | Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411 |

Please see section 16 for the full text of any H statements referred to in this section

Specific Concentration Limits

| Ingredient | Identifier(s) | Specific Concentration Limits |
|--|--|---|
| reaction product: bisphenol-A-(epichlorhydrin) | (CAS-No.) 25068-38-6 (EC-No.) 500-033-5 | (C >= 5%) Skin Irrit. 2, H315 (C >= 5%) Eye Irrit. 2, H319 |

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

3.2. Mixtures

Not applicable

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

The most important symptoms and effects based on the CLP classification include:

Irritation to the skin (localized redness, swelling, itching, and dryness). Allergic skin reaction (redness, swelling, blistering, and itching). Serious irritation to the eyes (significant redness, swelling, pain, tearing, and impaired vision).

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

Not applicable.

SECTION 5: Fire-fighting measures

5.1. 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

| <u>Substance</u> | <u>Condition</u> |
|------------------|--------------------|
| Aldehydes. | During combustion. |
| Carbon monoxide | During combustion. |
| Carbon dioxide. | During combustion. |

5.3. Advice 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

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. 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 dykes 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 authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible.

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

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/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. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities

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 acids. Store away from strong bases. Store away from oxidising agents.

7.3. Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

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 Safety Data Sheet.

Biological limit values

No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

8.2. Exposure controls

8.2.1. Engineering controls

No engineering controls required.

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.

Applicable Norms/Standards

Use eye protection conforming to EN 166

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:

| Material | Thickness (mm) | Breakthrough Time |
|------------------|-------------------|-------------------|
| Polymer laminate | No data available | No data available |

Applicable Norms/Standards

Use gloves tested to EN 374

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

None required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|-------------------------|--------------------|
| Physical state | Liquid. |
| Specific Physical Form: | Resin |
| Colour | Colourless |
| Odor | Amine, Epoxy |
| Odour threshold | No data available. |

| | |
|---|---|
| Melting point/freezing point | <i>No data available.</i> |
| Boiling point/boiling range | ≥ 260 °C |
| Flammability (solid, gas) | Not applicable. |
| Flammable Limits(LEL) | <i>No data available.</i> |
| Flammable Limits(UEL) | <i>No data available.</i> |
| Flash point | 251 °C [<i>Test Method:</i> Pensky-Martens Closed Cup] |
| Autoignition temperature | <i>No data available.</i> |
| Decomposition temperature | <i>No data available.</i> |
| pH | <i>substance/mixture is non-soluble (in water)</i> |
| Kinematic Viscosity | <i>No data available.</i> |
| Water solubility | Negligible |
| Solubility- non-water | <i>No data available.</i> |
| Partition coefficient: n-octanol/water | <i>No data available.</i> |
| Vapour pressure | 3 Pa [<i>@ 77 °C</i>] |
| Density | 1.17 g/ml |
| Relative density | 1.17 [<i>Ref Std:</i> WATER=1] |
| Relative Vapor Density | <i>No data available.</i> |

9.2. Other information

9.2.2 Other safety characteristics

| | |
|--------------------------------------|---|
| Average particle size | <i>No data available.</i> |
| Bulk density | <i>No data available.</i> |
| EU Volatile Organic Compounds | 0 g/l [<i>Details:</i> Parts A and B as mixed] |
| Evaporation rate | <i>No data available.</i> |
| Molecular weight | <i>No data available.</i> |
| Percent volatile | <i>No data available.</i> |
| Softening point | <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 polymerisation will not occur.

10.4 Conditions to avoid

Heat.

10.5 Incompatible materials

Strong oxidising agents.

Strong acids.

Strong bases.

Water

No data available.

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 agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from internal hazard assessments.

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

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 health effects are expected.

Skin contact

Mild Skin Irritation: Signs/symptoms may include localised 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 diarrhoea.

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 |
| reaction product: bisphenol-A-(epichlorhydrin) | Dermal | Rat | LD50 > 1,600 mg/kg |
| reaction product: bisphenol-A-(epichlorhydrin) | Ingestion | Rat | LD50 > 1,000 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|--|---------|---------------|
| reaction product: bisphenol-A-(epichlorhydrin) | Rabbit | Mild irritant |

Serious Eye Damage/Irritation

| Name | Species | Value |
|--|---------|-------------------|
| reaction product: bisphenol-A-(epichlorhydrin) | Rabbit | Moderate irritant |

Skin Sensitisation

| Name | Species | Value |
|--|-----------|-------------|
| reaction product: bisphenol-A-(epichlorhydrin) | Human and | Sensitising |

| | | |
|--|--------|--|
| | animal | |
|--|--------|--|

Respiratory Sensitisation

| Name | Species | Value |
|--|---------|----------------|
| reaction product: bisphenol-A-(epichlorhydrin) | Human | Not classified |

Germ Cell Mutagenicity

| Name | Route | Value |
|--|----------|--|
| reaction product: bisphenol-A-(epichlorhydrin) | In vivo | Not mutagenic |
| reaction product: bisphenol-A-(epichlorhydrin) | In Vitro | Some positive data exist, but the data are not sufficient for classification |

Carcinogenicity

| Name | Route | Species | Value |
|--|--------|---------|--|
| reaction product: bisphenol-A-(epichlorhydrin) | Dermal | Mouse | 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 |
|--|-----------|--|---------|---------------------|----------------------|
| reaction product: bisphenol-A-(epichlorhydrin) | Ingestion | Not classified for female reproduction | Rat | NOAEL 750 mg/kg/day | 2 generation |
| reaction product: bisphenol-A-(epichlorhydrin) | Ingestion | Not classified for male reproduction | Rat | NOAEL 750 mg/kg/day | 2 generation |
| reaction product: bisphenol-A-(epichlorhydrin) | Dermal | Not classified for development | Rabbit | NOAEL 300 mg/kg/day | during organogenesis |
| reaction product: bisphenol-A-(epichlorhydrin) | Ingestion | Not classified for development | Rat | NOAEL 750 mg/kg/day | 2 generation |

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

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

Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|--|-----------|--|----------------|---------|-----------------------|-------------------|
| reaction product: bisphenol-A-(epichlorhydrin) | Dermal | liver | Not classified | Rat | NOAEL 1,000 mg/kg/day | 2 years |
| reaction product: bisphenol-A-(epichlorhydrin) | Dermal | nervous system | Not classified | Rat | NOAEL 1,000 mg/kg/day | 13 weeks |
| reaction product: bisphenol-A-(epichlorhydrin) | 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 |

Aspiration Hazard

For the component/components, either no data is currently available or the data is 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.

11.2. Information on other hazards

This material does not contain any substances that are assessed to be an endocrine disruptor for human health.

SECTION 12: Ecological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

12.1. Toxicity

No product test data available.

| Material | CAS # | Organism | Type | Exposure | Test endpoint | Test result |
|--|------------|------------------|--------------|----------|---------------|-------------|
| reaction product: bisphenol-A-(epichlorhydrin) | 25068-38-6 | Rainbow trout | Estimated | 96 hours | LC50 | 2 mg/l |
| reaction product: bisphenol-A-(epichlorhydrin) | 25068-38-6 | Water flea | Estimated | 48 hours | LC50 | 1.8 mg/l |
| reaction product: bisphenol-A-(epichlorhydrin) | 25068-38-6 | Activated sludge | Experimental | 3 hours | IC50 | >100 mg/l |
| reaction product: bisphenol-A-(epichlorhydrin) | 25068-38-6 | Green Algae | Experimental | 72 hours | EC50 | >11 mg/l |
| reaction product: bisphenol-A-(epichlorhydrin) | 25068-38-6 | Green Algae | Experimental | 72 hours | NOEC | 4.2 mg/l |
| reaction product: bisphenol-A-(epichlorhydrin) | 25068-38-6 | Water flea | Experimental | 21 days | NOEC | 0.3 mg/l |

12.2. Persistence and degradability

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|--|------------|-----------------------------|----------|----------------------|-------------------------------|-------------------------------------|
| reaction product: bisphenol-A-(epichlorhydrin) | 25068-38-6 | Experimental Hydrolysis | | Hydrolytic half-life | 117 hours (t _{1/2}) | Non-standard method |
| reaction product: bisphenol-A-(epichlorhydrin) | 25068-38-6 | Experimental Biodegradation | 28 days | BOD | 5 %BOD/COD | OECD 301F - Manometric respirometry |

12.3 : Bioaccumulative potential

| Material | Cas No. | Test type | Duration | Study Type | Test result | Protocol |
|--|------------|-------------------------------|----------|------------|-------------|---------------------|
| reaction product: bisphenol-A-(epichlorhydrin) | 25068-38-6 | Experimental Bioconcentration | | Log Kow | 3.242 | Non-standard method |

12.4. Mobility in soil

No test data available.

12.5. Results of the PBT and vPvB assessment

This material does not contain any substances that are assessed to be a PBT or vPvB

12.6. Endocrine disrupting properties

This material does not contain any substances that are assessed to be an endocrine disruptor for environmental effects

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, 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.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of 3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor.

EU waste code (product as sold)

- 08 04 09* Waste adhesives and sealants containing organic solvents or other dangerous substances
- 20 01 27* Paint, inks, adhesives and resins containing dangerous substances

SECTION 14: Transportation information

| | Ground Transport (ADR) | Air Transport (IATA) | Marine Transport (IMDG) |
|--|--|--|--|
| 14.1 UN number | UN3082 | UN3082 | UN3082 |
| 14.2 UN proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN POLYMER) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN POLYMER) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN POLYMER) |
| 14.3 Transport hazard class(es) | 9 | 9 | 9 |
| 14.4 Packing group | III | III | III |
| 14.5 Environmental hazards | Environmentally Hazardous | Not applicable | Marine Pollutant |
| 14.6 Special precautions for user | Please refer to the other sections of the SDS for further information. | Please refer to the other sections of the SDS for further information. | Please refer to the other sections of the SDS for further information. |

| | | | |
|--|--------------------|--------------------|--------------------|
| 14.7 Transport in bulk according to Annex II of Marpol 73/78 and IBC Code | No data available. | No data available. | No data available. |
| Control Temperature | No data available. | No data available. | No data available. |
| Emergency Temperature | No data available. | No data available. | No data available. |
| ADR Classification Code | M6 | Not applicable. | Not applicable. |
| IMDG Segregation Code | Not applicable. | Not applicable. | NONE |

Please contact the address or phone number listed on the first page of the SDS for additional information on the transport/shipment of the material by rail (RID) or inland waterways (ADN).

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 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.

DIRECTIVE 2012/18/EU

Seveso hazard categories, Annex 1, Part 1

None

Seveso named dangerous substances, Annex 1, Part 2

| Dangerous Substances | Identifier(s) | Qualifying quantity (tonnes) for the application of | |
|--|---------------|---|-------------------------|
| | | Lower-tier requirements | Upper-tier requirements |
| reaction product: bisphenol-A-(epichlorhydrin) | 25068-38-6 | 200 | 500 |

15.2. Chemical Safety Assessment

A chemical safety assessment has not been carried out for this substance/mixture in accordance with Regulation (EC) No 1907/2006, as amended.

SECTION 16: Other information

List of relevant H statements

| | |
|------|--|
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H411 | Toxic to aquatic life with long lasting effects. |

Revision information:

EU Section 09: pH information information was added.
CLP: Ingredient table information was modified.
Label: CLP Classification information was modified.
Label: CLP Precautionary - Prevention information was modified.
Section 03: Composition table % Column heading information was added.
Section 3: Composition/ Information of ingredients table information was modified.
Section 03: Mixture not applicable information was added.
Section 03: SCL table information was added.
Section 04: First Aid - Symptoms and Effects (CLP) information was added.
Section 04: Information on toxicological effects information was modified.
Section 5: Hazardous combustion products table information was modified.
Section 7: Precautions safe handling information information was modified.
Section 09: Color information was added.
Section 9: Evaporation Rate information information was deleted.
Section 9: Explosive properties information information was deleted.
Section 09: Kinematic Viscosity information information was added.
Section 9: Melting point information information was modified.
Section 09: Odor information was added.
Sections 3 and 9: Odour, colour, grade information information was deleted.
Section 9: Oxidising properties information information was deleted.
Section 9: pH information information was deleted.
Section 9: Property description for optional properties information was modified.
Section 9: Vapour density value information was added.
Section 9: Vapour density value information was deleted.
Section 9: Viscosity information information was deleted.
Section 11: Acute Toxicity table information was modified.
Section 11: Carcinogenicity Table information was modified.
Section 11: Classification disclaimer information was modified.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: No endocrine disruptor information available warning information was added.
Section 11: Reproductive and/or Developmental Effects text information was deleted.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Respiratory Sensitization Table information was modified.
Section 11: Serious Eye Damage/Irritation Table information was modified.
Section 11: Skin Corrosion/Irritation Table information was modified.
Section 11: Skin Sensitization Table information was modified.
Section 11: Target Organs - Repeated Table information was added.
Section 11: Target Organs - Repeated Table information was deleted.
Section 12: 12.6. Endocrine Disrupting Properties information was added.
Section 12: 12.7. Other adverse effects information was modified.
Section 12: Component ecotoxicity information information was modified.
Section 12: Contact manufacturer for more detail. information was deleted.
Section 12: No Data text for mobility in soil information was added.
Section 12: No endocrine disruptor information available warning information was added.
Section 12: No PBT/vPvB information available warning information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 12: Bioaccumulative potential information information was modified.

Section 13: 13.1. Waste disposal note information was modified.
Section 14 Classification Code – Main Heading information was added.
Section 14 Classification Code – Regulation Data information was added.
Section 14 Control Temperature – Main Heading information was added.
Section 14 Control Temperature – Regulation Data information was added.
Section 14 Disclaimer Information information was added.
Section 14 Emergency Temperature – Main Heading information was added.
Section 14 Emergency Temperature – Regulation Data information was added.
Section 14 Hazard Class + Sub Risk – Main Heading information was added.
Section 14 Hazard Class + Sub Risk – Regulation Data information was added.
Section 14 Hazardous/Not Hazardous for Transportation information was added.
Section 14 Other Dangerous Goods – Main Heading information was added.
Section 14 Other Dangerous Goods – Regulation Data information was added.
Section 14 Packing Group – Main Heading information was added.
Section 14 Packing Group – Regulation Data information was added.
Section 14 Proper Shipping Name information was added.
Section 14 Regulations – Main Headings information was added.
Section 14 Segregation – Regulation Data information was added.
Section 14 Segregation Code – Main Heading information was added.
Section 14 Special Precautions – Main Heading information was added.
Section 14 Special Precautions – Regulation Data information was added.
Section 14 Transport in bulk – Regulation Data information was added.
Section 14 Transport in bulk according to Annex II of Marpol and the IBC Code – Main Heading information was added.
Section 14 UN Number Column data information was added.
Section 14 UN Number information was added.
Section 15: Chemical Safety Assessment information was modified.
Section 15: Regulations - Inventories information was modified.
Section 15: Seveso Substance Text information was added.
Section 16: UK disclaimer information was deleted.
Section 2: No PBT/vPvB information available warning information was added.

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into the European Union, you are responsible for all regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration.

3M United Kingdom MSDSs are available at www.3M.com/uk



Safety Data Sheet

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| | | | |
|------------------------|------------|-------------------------|------------|
| Document group: | 21-0444-6 | Version number: | 12.00 |
| Revision date: | 11/02/2022 | Supersedes date: | 05/10/2018 |

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

3M™ Scotchcast™ Electrical Resin 280 Part B

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Electrical

1.3. Details of the supplier of the safety data sheet

Address: 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
Telephone: +44 (0)1344 858 000
E Mail: tox.uk@mmm.com
Website: www.3M.com/uk

1.4. Emergency telephone number

+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

CLP REGULATION (EC) No 1272/2008

The health and environmental classifications of this material have been derived using the calculation method, except in cases where test data are available or the physical form impacts classification. Classification(s) based on test data or physical form are noted below, if applicable.

CLASSIFICATION:

Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319
Respiratory Sensitization, Category 1 - Resp. Sens. 1; H334
Skin Sensitization, Category 1 - Skin Sens. 1; H317
Hazardous to the Aquatic Environment (Chronic), Category 4 - Aquatic Chronic 4; H413

For full text of H phrases, see Section 16.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

SIGNAL WORD

DANGER.

Symbols

GHS08 (Health Hazard) |

Pictograms



Ingredients:

| Ingredient | CAS Nbr | EC No. | % by Wt |
|--|------------|-----------|---------|
| Dihydro-3-(tetrapropenyl)furan-2,5-dione | 26544-38-7 | 247-781-6 | 40 - 55 |

HAZARD STATEMENTS:

| | |
|------|--|
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H317 | May cause an allergic skin reaction. |
| H413 | May cause long lasting harmful effects to aquatic life. |

PRECAUTIONARY STATEMENTS

Prevention:

| | |
|-------|--------------------------|
| P261A | Avoid breathing vapours. |
| P280E | Wear protective gloves. |

Response:

| | |
|--------------------|--|
| P304 + P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P342 + P311 | If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician. |

Disposal:

| | |
|------|--|
| P501 | Dispose of contents/container in accordance with applicable local/regional/national/international regulations. |
|------|--|

53% of the mixture consists of components of unknown acute oral toxicity.

Contains 53% of components with unknown hazards to the aquatic environment.

2.3. Other hazards

None known.

This material does not contain any substances that are assessed to be a PBT or vPvB

SECTION 3: Composition/information on ingredients**3.1. Substances**

Not applicable

3.2. Mixtures

| Ingredient | Identifier(s) | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|--|--|---------|--|
| Castor oil, oligomeric reaction products with maleic anhydride | (CAS-No.) 68308-83-8 (EC-No.) 500-202-3 | 45 - 60 | Substance not classified as hazardous |
| Dihydro-3-(tetrapropenyl)furan-2,5-dione | (CAS-No.) 26544-38-7 (EC-No.) 247-781-6 (REACH-No.) 01-2119979080-37 | 40 - 55 | Aquatic Chronic 4, H413 Acute Tox. 4, H332 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 |
| 2,4,6-tris(dimethylaminomethyl)phenol | (CAS-No.) 90-72-2 (EC-No.) 202-013-9 (REACH-No.) 01-2119560597-27 | 0 - 1 | Acute Tox. 4, H302 Skin Corr. 1C, H314 Eye Dam. 1, H318 |

Please see section 16 for the full text of any H statements referred to in this section

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

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

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. Extinguishing media**

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

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

Substance

Carbon monoxide
Carbon dioxide.
Oxides of nitrogen.

Condition

During combustion.
During combustion.
During combustion.

5.3. Advice 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

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. 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 dykes 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 authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible.

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not use in a confined area with minimal air exchange. Avoid breathing 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 cool. Protect from sunlight. Store away from heat. Store away from acids. Store away from oxidising agents. Store in a dry place.

7.3. Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

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 Safety Data Sheet.

Biological limit values

No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

Derived no effect level (DNEL)

| Ingredient | Degradation Product | Population | Human exposure pattern | DNEL |
|--|---------------------|------------|--|------------------------|
| 2,4,6-tris(dimethylaminomethyl) phenol | | Worker | Inhalation, Long-term exposure (8 hours), Systemic effects | 0.31 mg/m ³ |

Predicted no effect concentrations (PNEC)

| Ingredient | Degradation Product | Compartment | PNEC |
|--|---------------------|--------------------------------|-------------|
| 2,4,6-tris(dimethylaminomethyl) phenol | | Freshwater | 0.084 mg/l |
| 2,4,6-tris(dimethylaminomethyl) phenol | | Intermittent releases to water | 0.84 mg/l |
| 2,4,6-tris(dimethylaminomethyl) phenol | | Marine water | 0.0084 mg/l |
| 2,4,6-tris(dimethylaminomethyl) phenol | | Sewage Treatment Plant | 0.2 mg/l |

Recommended monitoring procedures: Information on recommended monitoring procedures can be obtained from UK HSC

8.2. Exposure controls

In addition, refer to the annex for more information.

8.2.1. Engineering controls

No engineering controls required.

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.

Applicable Norms/Standards

Use eye protection conforming to EN 166

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:

| Material | Thickness (mm) | Breakthrough Time |
|------------------|-------------------|-------------------|
| Polymer laminate | No data available | No data available |

Applicable Norms/Standards

Use gloves tested to EN 374

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 air-purifying respirator suitable for organic vapours and particulates

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

Applicable Norms/Standards

Use a respirator conforming to EN 140 or EN 136: filter types A & P

8.2.3. Environmental exposure controls

Refer to Annex

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|--|
| Physical state | Liquid. |
| Colour | Brown, Yellow |
| Odor | Maleic Anhydride |
| Odour threshold | <i>No data available.</i> |
| Melting point/freezing point | <i>No data available.</i> |
| Boiling point/boiling range | >=93.9 °C |
| Flammability (solid, gas) | Not applicable. |
| Flammable Limits(LEL) | <i>No data available.</i> |
| Flammable Limits(UEL) | <i>No data available.</i> |
| Flash point | >=93.9 °C [<i>Test Method:Closed Cup</i>] |
| Autoignition temperature | <i>No data available.</i> |
| Decomposition temperature | <i>No data available.</i> |
| pH | <i>substance/mixture is non-soluble (in water)</i> |
| Kinematic Viscosity | 2,772.27722772277 mm ² /sec |
| Water solubility | Nil |
| Solubility- non-water | <i>No data available.</i> |
| Partition coefficient: n-octanol/water | <i>No data available.</i> |
| Vapour pressure | <i>No data available.</i> |
| Density | <i>No data available.</i> |
| Relative density | 0.96 - 1.06 [<i>Test Method:Tested per ASTM protocol</i>] [<i>Ref Std:WATER=1</i>] |
| Relative Vapor Density | <i>No data available.</i> |

9.2. Other information

9.2.2 Other safety characteristics

| | |
|-------------------------------|---|
| Average particle size | No data available. |
| Bulk density | No data available. |
| EU Volatile Organic Compounds | 0 g/l [Details: Parts A and B as mixed] |
| Evaporation rate | No data available. |
| Molecular weight | No data available. |
| Percent volatile | No data available. |
| Softening point | No data available. |

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 polymerisation will not occur.

10.4 Conditions to avoid

Heat.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

| <u>Substance</u> | <u>Condition</u> |
|----------------------------|---|
| Amine compounds. | Heat. |
| Irritant vapours or gases. | Oxidation, heat or reaction - during cure |

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from internal hazard assessments.

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**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.

Skin contact

Skin Irritation: Signs/symptoms may include localised 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

May be harmful if swallowed.

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

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 | Dermal | | No data available; calculated ATE >5,000 mg/kg |
| Overall product | Ingestion | | No data available; calculated ATE >2,000 - ≤5,000 mg/kg |
| Dihydro-3-(tetrapropenyl)furan-2,5-dione | Dermal | Rabbit | LD50 6,200 mg/kg |
| Dihydro-3-(tetrapropenyl)furan-2,5-dione | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 1.2 mg/l |
| Dihydro-3-(tetrapropenyl)furan-2,5-dione | Ingestion | Rat | LD50 > 2,000 mg/kg |
| 2,4,6-tris(dimethylaminomethyl)phenol | Dermal | Rat | LD50 1,280 mg/kg |
| 2,4,6-tris(dimethylaminomethyl)phenol | Ingestion | Rat | LD50 1,000 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|--|---------|---------------|
| Dihydro-3-(tetrapropenyl)furan-2,5-dione | Rabbit | Mild irritant |
| 2,4,6-tris(dimethylaminomethyl)phenol | Rabbit | Corrosive |

Serious Eye Damage/Irritation

| Name | Species | Value |
|--|---------|-------------------|
| Dihydro-3-(tetrapropenyl)furan-2,5-dione | Rabbit | Moderate irritant |
| 2,4,6-tris(dimethylaminomethyl)phenol | Rabbit | Corrosive |

Skin Sensitisation

| Name | Species | Value |
|--|------------|----------------|
| Dihydro-3-(tetrapropenyl)furan-2,5-dione | Human | Sensitising |
| 2,4,6-tris(dimethylaminomethyl)phenol | Guinea pig | Not classified |

Respiratory Sensitisation

| Name | Species | Value |
|--|-------------------|-------------|
| Dihydro-3-(tetrapropenyl)furan-2,5-dione | similar compounds | Sensitising |

Germ Cell Mutagenicity

| Name | Route | Value |
|------|-------|-------|
|------|-------|-------|

3M™ Scotchcast™ Electrical Resin 280 Part B

| | | |
|--|----------|---------------|
| Dihydro-3-(tetrapropenyl)furan-2,5-dione | In Vitro | Not mutagenic |
| 2,4,6-tris(dimethylaminomethyl)phenol | In Vitro | Not mutagenic |

Carcinogenicity

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

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

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

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

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|--|------------|------------------------|--|-------------------|---------------------|-------------------|
| Dihydro-3-(tetrapropenyl)furan-2,5-dione | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | similar compounds | NOAEL Not available | |
| 2,4,6-tris(dimethylaminomethyl)phenol | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | | NOAEL Not available | |

Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|---------------------------------------|--------|---|----------------|---------|---------------------|-------------------|
| 2,4,6-tris(dimethylaminomethyl)phenol | Dermal | skin liver nervous system auditory system hematopoietic system eyes | Not classified | Rat | NOAEL 125 mg/kg/day | 28 days |

Aspiration Hazard

For the component/components, either no data is currently available or the data is 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.

11.2. Information on other hazards

This material does not contain any substances that are assessed to be an endocrine disruptor for human health.

SECTION 12: Ecological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

12.1. Toxicity

No product test data available.

| Material | CAS # | Organism | Type | Exposure | Test endpoint | Test result |
|--|------------|------------|---|----------|---------------|-------------|
| Castor oil, oligomeric reaction products with maleic anhydride | 68308-83-8 | | Data not available or insufficient for classification | | | N/A |
| Dihydro-3-(tetrapropenyl)furan- | 26544-38-7 | Water flea | Estimated | 48 hours | EC50 | >100 mg/l |

| | | | | | | |
|--|------------|------------------|--------------|----------|------|-----------|
| 2,5-dione | | | | | | |
| Dihydro-3-(tetrapropenyl)furan-2,5-dione | 26544-38-7 | Activated sludge | Experimental | 3 hours | EC50 | 800 mg/l |
| Dihydro-3-(tetrapropenyl)furan-2,5-dione | 26544-38-7 | Green algae | Experimental | 96 hours | EC50 | 110 mg/l |
| Dihydro-3-(tetrapropenyl)furan-2,5-dione | 26544-38-7 | Rainbow trout | Experimental | 96 hours | LC50 | >100 mg/l |
| Dihydro-3-(tetrapropenyl)furan-2,5-dione | 26544-38-7 | Green algae | Experimental | 96 hours | NOEC | 33 mg/l |
| 2,4,6-tris(dimethylaminomethyl)phenol | 90-72-2 | | Experimental | 96 hours | LC50 | 718 mg/l |
| 2,4,6-tris(dimethylaminomethyl)phenol | 90-72-2 | Common Carp | Experimental | 96 hours | LC50 | >100 mg/l |
| 2,4,6-tris(dimethylaminomethyl)phenol | 90-72-2 | Green algae | Experimental | 72 hours | EC50 | 46.7 mg/l |
| 2,4,6-tris(dimethylaminomethyl)phenol | 90-72-2 | Water flea | Experimental | 48 hours | EC50 | >100 mg/l |
| 2,4,6-tris(dimethylaminomethyl)phenol | 90-72-2 | Green algae | Experimental | 72 hours | NOEC | 6.44 mg/l |

12.2. Persistence and degradability

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|--|------------|-----------------------------------|----------|----------------------|--------------------------------|--------------------------------|
| Castor oil, oligomeric reaction products with maleic anhydride | 68308-83-8 | Data not available - insufficient | | | N/A | |
| Dihydro-3-(tetrapropenyl)furan-2,5-dione | 26544-38-7 | Experimental Hydrolysis | | Hydrolytic half-life | 22 minutes (t _{1/2}) | Non-standard method |
| Dihydro-3-(tetrapropenyl)furan-2,5-dione | 26544-38-7 | Experimental Biodegradation | 28 days | BOD | 9.9 % BOD/ThBOD | OECD 301D - Closed bottle test |
| 2,4,6-tris(dimethylaminomethyl)phenol | 90-72-2 | Experimental Biodegradation | 28 days | BOD | 4 % BOD/ThBOD | OECD 301D - Closed bottle test |

12.3 : Bioaccumulative potential

| Material | Cas No. | Test type | Duration | Study Type | Test result | Protocol |
|--|------------|---|----------|------------------------|-------------|------------------------------------|
| Castor oil, oligomeric reaction products with maleic anhydride | 68308-83-8 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Dihydro-3-(tetrapropenyl)furan-2,5-dione | 26544-38-7 | Estimated Bioconcentration | | Bioaccumulation factor | 5.4 | Estimated: Bioconcentration factor |
| 2,4,6-tris(dimethylaminomethyl)phenol | 90-72-2 | Experimental Bioconcentration | | Log Kow | -0.66 | 830.7550 Part.Coef Shake Flask |

12.4. Mobility in soil

| Material | Cas No. | Test type | Study Type | Test result | Protocol |
|--|------------|-------------------------------|------------|-------------|--------------------------------|
| Dihydro-3-(tetrapropenyl)furan-2,5-dione | 26544-38-7 | Experimental Mobility in Soil | Koc | 825 l/kg | OECD 106 Adsp-Desb Batch Equil |

12.5. Results of the PBT and vPvB assessment

This material does not contain any substances that are assessed to be a PBT or vPvB

12.6. Endocrine disrupting properties

This material does not contain any substances that are assessed to be an endocrine disruptor for environmental effects

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. If no other disposal options are available, waste product that has been completely cured or polymerised may be placed in a landfill properly designed for industrial waste. 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.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of 3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor.

EU waste code (product as sold)

- 08 04 09* Waste adhesives and sealants containing organic solvents or other dangerous substances
- 20 01 27* Paint, inks, adhesives and resins containing dangerous substances

SECTION 14: Transportation information

Not hazardous for transportation.

| | Ground Transport (ADR) | Air Transport (IATA) | Marine Transport (IMDG) |
|--|-------------------------------|-----------------------------|--------------------------------|
| 14.1 UN number | No data available. | No data available. | No data available. |
| 14.2 UN proper shipping name | No data available. | No data available. | No data available. |
| 14.3 Transport hazard class(es) | No data available. | No data available. | No data available. |
| 14.4 Packing group | No data available. | No data available. | No data available. |

| | | | |
|--|--|--|--|
| 14.5 Environmental hazards | No data available. | No data available. | No data available. |
| 14.6 Special precautions for user | Please refer to the other sections of the SDS for further information. | Please refer to the other sections of the SDS for further information. | Please refer to the other sections of the SDS for further information. |
| 14.7 Transport in bulk according to Annex II of Marpol 73/78 and IBC Code | No data available. | No data available. | No data available. |
| Control Temperature | No data available. | No data available. | No data available. |
| Emergency Temperature | No data available. | No data available. | No data available. |
| ADR Classification Code | No data available. | No data available. | No data available. |
| IMDG Segregation Code | No data available. | No data available. | No data available. |

Please contact the address or phone number listed on the first page of the SDS for additional information on the transport/shipment of the material by rail (RID) or inland waterways (ADN).

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.

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Seveso hazard categories, Annex 1, Part 1
None

Seveso named dangerous substances, Annex 1, Part 2
None

15.2. Chemical Safety Assessment

A chemical safety assessment has not been carried out for this mixture. Chemical safety assessments for the contained substances may have been carried out by the registrants of the substances in accordance with Regulation (EC) No 1907/2006, as amended.

SECTION 16: Other information

List of relevant H statements

| | |
|------|--|
| H302 | Harmful if swallowed. |
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H413 | May cause long lasting harmful effects to aquatic life. |

Revision information:

EU Section 09: pH information information was added.
Industrial Mixing and Application: Section 16: Annex information was modified.
Professional Mixing and Application: Section 16: Annex information was deleted.
Professional Use of panel bonding Adhesives: Section 16: Annex information was added.
Label: CLP Classification information was modified.
Label: CLP Precautionary - Response information was modified.
Section 03: Composition table % Column heading information was added.
Section 3: Composition/ Information of ingredients table information was modified.
Section 03: Substance not applicable information was added.
Section 04: Information on toxicological effects information was modified.
Section 5: Hazardous combustion products table information was modified.
Section 8: DNEL table row information was modified.
Section 8: PNEC table row information was modified.
Section 09: Color information was added.
Section 9: Evaporation Rate information information was deleted.
Section 9: Explosive properties information information was deleted.
Section 09: Kinematic Viscosity information information was added.
Section 9: Melting point information information was modified.
Section 09: Odor information was added.
Sections 3 and 9: Odour, colour, grade information information was deleted.
Section 9: Oxidising properties information information was deleted.
Section 9: pH information information was deleted.
Section 9: Property description for optional properties information was modified.
Section 9: Vapour density value information was added.
Section 9: Vapour density value information was deleted.
Section 9: Viscosity information information was deleted.
Section 11: Acute Toxicity table information was modified.
Section 11: Classification disclaimer information was modified.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: No endocrine disruptor information available warning information was added.
Section 11: Serious Eye Damage/Irritation Table information was modified.
Section 11: Skin Corrosion/Irritation Table information was modified.
Section 11: Skin Sensitization Table information was modified.
Section 11: Target Organs - Repeated Table information was added.
Section 11: Target Organs - Repeated Table information was deleted.
Section 11: Target Organs - Single Table information was modified.

Section 12: 12.6. Endocrine Disrupting Properties information was added.
 Section 12: 12.7. Other adverse effects information was modified.
 Section 12: Component ecotoxicity information information was modified.
 Section 12: Contact manufacturer for more detail. information was deleted.
 Section 12: Mobility in soil information information was added.
 Section 12: No endocrine disruptor information available warning information was added.
 Section 12: Persistence and Degradability information information was modified.
 Section 12: Biocumulative potential information information was modified.
 Section 14 Classification Code – Main Heading information was added.
 Section 14 Classification Code – Regulation Data information was added.
 Section 14 Control Temperature – Main Heading information was added.
 Section 14 Control Temperature – Regulation Data information was added.
 Section 14 Disclaimer Information information was added.
 Section 14 Emergency Temperature – Main Heading information was added.
 Section 14 Emergency Temperature – Regulation Data information was added.
 Section 14 Hazard Class + Sub Risk – Main Heading information was added.
 Section 14 Hazard Class + Sub Risk – Regulation Data information was added.
 Section 14 Hazardous/Not Hazardous for Transportation information was added.
 Section 14 Other Dangerous Goods – Main Heading information was added.
 Section 14 Other Dangerous Goods – Regulation Data information was added.
 Section 14 Packing Group – Main Heading information was added.
 Section 14 Packing Group – Regulation Data information was added.
 Section 14 Proper Shipping Name information was added.
 Section 14 Regulations – Main Headings information was added.
 Section 14 Segregation – Regulation Data information was added.
 Section 14 Segregation Code – Main Heading information was added.
 Section 14 Special Precautions – Main Heading information was added.
 Section 14 Special Precautions – Regulation Data information was added.
 Section 14 Transport in bulk – Regulation Data information was added.
 Section 14 Transport in bulk according to Annex II of Marpol and the IBC Code – Main Heading information was added.
 Section 14 UN Number Column data information was added.
 Section 14 UN Number information was added.
 Section 14: Transportation classification information was deleted.
 Section 16: UK disclaimer information was deleted.
 Section 2: No PBT/vPvB information available warning information was added.

Annex

| 1. Title | |
|--|--|
| Substance identification | 2,4,6-tris(dimethylaminomethyl)phenol; EC No. 202-013-9; CAS Nbr 90-72-2; |
| Exposure Scenario Name | Industrial Mixing and Application |
| Lifecycle Stage | Use at industrial sites |
| Contributing activities | PROC 05 -Mixing or blending in batch processes PROC 08b -Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC 10 -Roller application or brushing PROC 13 -Treatment of articles by dipping and pouring ERC 06d -Use of reactive process regulators in polymerisation processes at industrial site (inclusion or not into/onto article) |
| Processes, tasks and activities covered | Application of product with a roller or brush. Application of product with applicator gun. Mixing or blending of solid or liquid materials. Transfers with dedicated controls, including loading, filling, dumping, bagging. Transfers without dedicated controls, including loading, filling, dumping, bagging. |

| 2. Operational conditions and risk management measures | |
|---|---|
| Operating Conditions | <p>Physical state:Liquid.</p> <p>General operating conditions: Duration of use: 8 hours/day; Emission days per year: 220 days/year; Indoors with good general ventilation; Outdoor use; Processing Temperature:: <= 40 degree Celsius;</p> <p>Task: Transferring Material; Duration of use: 4 hours/day;</p> |
| Risk management measures | <p>Under the operational conditions described above the following risk management measures apply:</p> <p>General risk management measures: Human health: None needed; Environmental: None needed; ; The following task-specific risk management measures apply in addition to those listed above:</p> <p>Task: Transferring Material; Human Health; Protective clothing / Wear suitable protective clothing; Face shield; Local exhaust ventilation;</p> <p>Task: Mixing; Human Health; Protective clothing / Wear suitable protective clothing; Face shield; Local exhaust ventilation;</p> |
| Waste management measures | Send to a municipal sewage treatment plant; |
| 3. Prediction of exposure | |
| Prediction of exposure | Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted. |

| 1. Title | |
|---|---|
| Substance identification | 2,4,6-tris(dimethylaminomethyl)phenol; EC No. 202-013-9; CAS Nbr 90-72-2; |
| Exposure Scenario Name | Professional Use of panel bonding Adhesives |
| Lifecycle Stage | Use at industrial sites |
| Contributing activities | PROC 05 -Mixing or blending in batch processes PROC 08a -Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC 08b -Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC 10 -Roller application or brushing PROC 13 -Treatment of articles by dipping and pouring ERC 08c -Widespread use leading to inclusion into/onto article (indoor) |
| Processes, tasks and activities covered | Application of product with a roller or brush. Application of product with applicator gun. Mixing or blending of solid or liquid materials. Transfers with dedicated controls, including loading, filling, dumping, bagging. Transfers without dedicated controls, including loading, filling, dumping, bagging. |
| 2. Operational conditions and risk management measures | |
| Operating Conditions | <p>Physical state:Liquid.</p> <p>General operating conditions: Duration of use: 8 hours/day;</p> |

| | |
|----------------------------------|---|
| | <p>Emission days per year: 220 days/year; Indoors with good general ventilation; Processing Temperature:: <= 40 degree Celsius;</p> <p>Task: Transferring Material; Indoors with enhanced general ventilation; Duration of use: 4 hours/day;</p> |
| Risk management measures | <p>Under the operational conditions described above the following risk management measures apply:</p> <p>General risk management measures: Human health: Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training. Refer to Section 8 of the SDS for specific glove material.;</p> <p>Environmental: Municipal Sewage Treatment Plant; ;</p> <p>The following task-specific risk management measures apply in addition to those listed above:</p> <p>Task: Transferring Material; Human Health; Protective clothing / Wear suitable protective clothing; Face shield;</p> <p>Task: Mixing; Human Health; Protective clothing / Wear suitable protective clothing; Face shield; Local exhaust ventilation;</p> |
| Waste management measures | <p>No use-specific waste management measures are required for this product. Refer to Section 13 of main SDS for disposal instructions:</p> |
| 3. Prediction of exposure | |
| Prediction of exposure | <p>Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted.</p> |

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