



Safety Data Sheet

Copyright,2020, 3M Company All rights reserved. Copying and/or downloading of this information for the purpose of properly utilizing 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

| | | | |
|---------------------------------------|-------------------|-------------------------|------------|
| Document group: | 28-8647-1 | Version number: | 11.02 |
| Revision date: | 15/06/2020 | Supersedes date: | 27/09/2018 |
| Transportation version number: | 1.00 (26/09/2011) | | |

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

IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

3M™ Scotchcast™ Flexible Power Cable Splicing Kits with 2131 Resin (82-F1, 82-F2, 82-BF1, ALK-8 series)

Product Identification Numbers

80-6114-6835-8

7000006240

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 Ireland Limited, The Iveagh Building, The Park, Carrickmines, Dublin 18. |
| Telephone: | +353 1 280 3555 |
| E Mail: | tox.uk@mmm.com |
| Website: | www.3M.com |

1.4. Emergency telephone number

+44 (0)1344 858 000

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

28-7666-2, 28-7650-6

TRANSPORTATION INFORMATION

80-6114-6835-8

Not hazardous for transportation

KIT LABEL

2.1. Classification of the substance or mixture CLP REGULATION (EC) No 1272/2008

CLASSIFICATION:

Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318
Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
Respiratory Sensitization, Category 1 - Resp. Sens. 1; H334
Skin Sensitization, Category 1 - Skin Sens. 1; H317
Carcinogenicity, Category 2 - Carc. 2; H351
Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H335
Specific Target Organ Toxicity-Repeated Exposure, Category 2 - STOT RE 2; H373

For full text of H phrases, see Section 16.

2.2. Label elements CLP REGULATION (EC) No 1272/2008

SIGNAL WORD

DANGER.

Symbols:

GHS05 (Corrosion) | GHS07 (Exclamation mark) | GHS08 (Health Hazard) |

Pictograms



Contains:

4,4'-methylenediphenyl diisocyanate; Polyoxyalkylenes; methylenediphenyl diisocyanate; 1,1'-Phenyliminodipropyl-2-ol; 1,1'-Methylenebis[isocyanatobenzene], homopolymer

HAZARD STATEMENTS:

| | |
|------|--|
| H318 | Causes serious eye damage. |
| H315 | Causes skin irritation. |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H317 | May cause an allergic skin reaction. |
| H335 | May cause respiratory irritation. |
| H351 | Suspected of causing cancer. |
| H373 | May cause damage to organs through prolonged or repeated exposure: respiratory system |

PRECAUTIONARY STATEMENTS

Prevention:

| | |
|-------|---|
| P260A | Do not breathe vapours. |
| P280B | Wear protective gloves and eye/face protection. |

Response:

| | |
|-------------|--|
| P304 + P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
|-------------|--|

P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTRE or doctor/physician.

For containers not exceeding 125 ml the following Hazard and Precautionary statements may be used:

<=125 ml Hazard statements

H318 Causes serious eye damage.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.

<=125 ml Precautionary statements

Prevention:

P260A Do not breathe vapours.
P280B Wear protective gloves and eye/face protection.

Response:

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTRE or doctor/physician.

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

Revision information:

Label: CLP Ingredients - kit components information was modified.
Section 1: Product name information was modified.
Section 2: <125ml Hazard - Health information was modified.



Safety Data Sheet

Copyright,2021, 3M Company All rights reserved. Copying and/or downloading of this information for the purpose of properly utilizing 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

| | | | |
|------------------------|------------|-------------------------|------------|
| Document group: | 28-7650-6 | Version number: | 10.00 |
| Revision date: | 16/12/2021 | Supersedes date: | 10/06/2020 |

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™ Flame-Retardant Compound 2131 (Part A)

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 Ireland Limited, The Iveagh Building, The Park, Carrickmines, Dublin 18.
Telephone: +353 1 280 3555
E Mail: tox.uk@mmm.com
Website: www.3M.com

1.4. Emergency telephone number

Emergency medical information: 8am-10pm (seven days) contact National Poisons Information Centre, Beaumont Hospital, Dublin 9 DOV2NO, Ireland. Telephone Number: +353 (0)1 809 2166

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
Carcinogenicity, Category 2 - Carc. 2; H351
Specific Target Organ Toxicity-Repeated Exposure, Category 2 - STOT RE 2; H373
Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H335

For full text of H phrases, see Section 16.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

SIGNAL WORD

DANGER.

Symbols

GHS07 (Exclamation mark) | GHS08 (Health Hazard) |

Pictograms



Ingredients:

| Ingredient | CAS Nbr | EC No. | % by Wt |
|---|-------------|-----------|---------|
| Polyoxyalkylenes | 154517-54-1 | | 35 - 45 |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | 202-966-0 | 25 - 35 |
| 1,1'-Methylenebis[isocyanatobenzene], homopolymer | 39310-05-9 | | 5 - 15 |
| methylenediphenyl diisocyanate | 26447-40-5 | 247-714-0 | < 2 |

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. |
| H351 | Suspected of causing cancer. |
| H335 | May cause respiratory irritation. |
| H373 | May cause damage to organs through prolonged or repeated exposure: respiratory system. |

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. |
| P333 + P313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P342 + P311 | If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician. |

For containers not exceeding 125 ml the following Hazard and Precautionary statements may be used:

<=125 ml Hazard statements

| | |
|------|--|
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H317 | May cause an allergic skin reaction. |
| H351 | Suspected of causing cancer. |

<=125 ml 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.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
 P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.

Contains 45% of components with unknown hazards to the aquatic environment.

Information required per Regulation (EU) 2020/1149 as regards diisocyanates:

As from 24 August 2023 adequate training is required before industrial or professional use. Further information can be found at feica.eu/Puinfo

2.3. Other hazards

Persons previously sensitised to isocyanates may develop a cross-sensitisation reaction to other isocyanates.
 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] |
|---|--|---------|---|
| Polyoxyalkylenes | (CAS-No.) 154517-54-1 | 35 - 45 | Resp. Sens. 1, H334 Skin Sens. 1, H317 |
| 4,4'-methylenediphenyl diisocyanate | (CAS-No.) 101-68-8 (EC-No.) 202-966-0 | 25 - 35 | Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373 Nota 2,C |
| Diundecyl phthalate, branched and linear | (CAS-No.) 85507-79-5 (EC-No.) 287-401-6 | <= 15 | Substance not classified as hazardous |
| Diundecyl phthalate | (CAS-No.) 3648-20-2 (EC-No.) 222-884-9 | <= 15 | Aquatic Chronic 3, H412 |
| 1,1'-Methylenebis[isocyanatobenzene], homopolymer | (CAS-No.) 39310-05-9 | 5 - 15 | Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 |

| | | | |
|--------------------------------|--|-----|---|
| | | | Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373 |
| methylenediphenyl diisocyanate | (CAS-No.) 26447-40-5 (EC-No.) 247-714-0 | < 2 | Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373 Nota 2,C |

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 |
|---|--|---|
| methylenediphenyl diisocyanate | (CAS-No.) 26447-40-5 (EC-No.) 247-714-0 | (C >= 5%) Skin Irrit. 2, H315 (C >= 5%) Eye Irrit. 2, H319 (C >= 0.1%) Resp. Sens. 1, H334 (C >= 5%) STOT SE 3, H335 |
| 1,1'-Methylenebis[isocyanatobenzene], homopolymer | (CAS-No.) 39310-05-9 | (C >= 5%) Skin Irrit. 2, H315 (C >= 5%) Eye Irrit. 2, H319 (C >= 0.1%) Resp. Sens. 1, H334 (C >= 5%) STOT SE 3, H335 |
| 4,4'-methylenediphenyl diisocyanate | (CAS-No.) 101-68-8 (EC-No.) 202-966-0 | (C >= 5%) Skin Irrit. 2, H315 (C >= 5%) Eye Irrit. 2, H319 (C >= 0.1%) Resp. Sens. 1, H334 (C >= 5%) STOT SE 3, H335 |

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

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

Irritating to the respiratory tract (coughing, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain).

Allergic respiratory reaction (difficulty breathing, wheezing, cough, and tightness of chest). 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). Target organ effects. See Section 11 for additional details.

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

Not applicable.

SECTION 5: Fire-fighting measures

5.1. 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

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

Hazardous Decomposition or By-Products

Substance

Carbon monoxide
Carbon dioxide.
Hydrogen cyanide.
Oxides of nitrogen.

Condition

During combustion.
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. 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 authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. 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. Do not use in a confined area with minimal air exchange. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Protect from sunlight. Store away from heat. Store away from strong bases. Store away from areas where product may come into contact with food or pharmaceuticals. 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

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 | CAS Nbr | Agency | Limit type | Additional comments |
|-------------------------------------|----------|--------------|--------------------------------|-------------------------------|
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | Ireland OELs | TWA(as NCO)(8 hours):0.005 ppm | Respiratory/Dermal Sensitizer |

Ireland OELs : Ireland. OELs
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

Biological limit values

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

Recommended monitoring procedures: Information on recommended monitoring procedures can be obtained from Indust. Inspect./Ministry (IE)

8.2. Exposure controls

8.2.1. Engineering controls

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

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

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 |
|------------------|-----------------------|--------------------------|
| Butyl rubber. | No data available | No data available |
| Fluoroelastomer | No data available | No data available |
| 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 – Butyl rubber
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.

Applicable Norms/Standards
Use a respirator conforming to EN 140 or EN 136

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|--|
| Physical state | Liquid. |
| Colour | Light Straw |
| Odor | Pungent Odor |
| Odour threshold | <i>No data available.</i> |
| Melting point/freezing point | <i>Not applicable.</i> |
| Boiling point/boiling range | >=148.9 °C |
| Flammability (solid, gas) | Not applicable. |
| Flammable Limits(LEL) | <i>No data available.</i> |
| Flammable Limits(UEL) | <i>No data available.</i> |
| Flash point | >=148.9 °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 | 740.740740740741 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 | 1.08 [<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 | No data available. |
| Evaporation rate | No data available. |
| Molecular weight | 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 may occur.

10.4 Conditions to avoid

None known.

10.5 Incompatible materials

Strong bases.

Alcohols.

Water

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 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. May cause additional health effects (see below).

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

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

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:

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

Additional information:

Persons previously sensitised to isocyanates may develop a cross-sensitisation reaction to other isocyanates.

Toxicological Data

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

Acute Toxicity

| Name | Route | Species | Value |
|---|--------------------------------|---------|--|
| Overall product | Ingestion | | No data available; calculated ATE >5,000 mg/kg |
| Polyoxyalkylenes | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| Polyoxyalkylenes | Ingestion | | LD50 estimated to be 2,000 - 5,000 mg/kg |
| 4,4'-methylenediphenyl diisocyanate | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| 4,4'-methylenediphenyl diisocyanate | Inhalation-Dust/Mist (4 hours) | Rat | LC50 0.368 mg/l |
| 4,4'-methylenediphenyl diisocyanate | Ingestion | Rat | LD50 31,600 mg/kg |
| Diundecyl phthalate | Dermal | Rabbit | LD50 > 7,900 mg/kg |
| Diundecyl phthalate, branched and linear | Dermal | Rat | LD50 > 2,000 mg/kg |
| Diundecyl phthalate, branched and linear | Ingestion | Rat | LD50 > 15,800 mg/kg |
| Diundecyl phthalate | Ingestion | Rat | LD50 > 15,000 mg/kg |
| 1,1'-Methylenebis[isocyanatobenzene], homopolymer | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| 1,1'-Methylenebis[isocyanatobenzene], homopolymer | Inhalation-Dust/Mist (4 hours) | Rat | LC50 0.368 mg/l |
| 1,1'-Methylenebis[isocyanatobenzene], homopolymer | Ingestion | Rat | LD50 31,600 mg/kg |
| methylenediphenyl diisocyanate | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| methylenediphenyl diisocyanate | Inhalation-Dust/Mist (4 hours) | Rat | LC50 0.368 mg/l |
| methylenediphenyl diisocyanate | Ingestion | Rat | LD50 31,600 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|---|-------------------------|---------------------------|
| 4,4'-methylenediphenyl diisocyanate | official classification | Irritant |
| Diundecyl phthalate, branched and linear | Rabbit | No significant irritation |
| 1,1'-Methylenebis[isocyanatobenzene], homopolymer | official classification | Irritant |

3M™ Scotchcast™ Flame-Retardant Compound 2131 (Part A)

| | | |
|--------------------------------|-------------------------|----------|
| methylenediphenyl diisocyanate | official classification | Irritant |
|--------------------------------|-------------------------|----------|

Serious Eye Damage/Irritation

| Name | Species | Value |
|---|-------------------------|-----------------|
| 4,4'-methylenediphenyl diisocyanate | official classification | Severe irritant |
| Diundecyl phthalate, branched and linear | Rabbit | Mild irritant |
| 1,1'-Methylenebis[isocyanatobenzene], homopolymer | official classification | Severe irritant |
| methylenediphenyl diisocyanate | official classification | Severe irritant |

Skin Sensitisation

| Name | Species | Value |
|---|-------------------------|----------------|
| 4,4'-methylenediphenyl diisocyanate | official classification | Sensitising |
| Diundecyl phthalate, branched and linear | Human | Not classified |
| 1,1'-Methylenebis[isocyanatobenzene], homopolymer | official classification | Sensitising |
| methylenediphenyl diisocyanate | official classification | Sensitising |

Respiratory Sensitisation

| Name | Species | Value |
|---|---------|-------------|
| 4,4'-methylenediphenyl diisocyanate | Human | Sensitising |
| 1,1'-Methylenebis[isocyanatobenzene], homopolymer | Human | Sensitising |
| methylenediphenyl diisocyanate | Human | Sensitising |

Germ Cell Mutagenicity

| Name | Route | Value |
|---|----------|--|
| 4,4'-methylenediphenyl diisocyanate | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Diundecyl phthalate, branched and linear | In Vitro | Not mutagenic |
| 1,1'-Methylenebis[isocyanatobenzene], homopolymer | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| methylenediphenyl diisocyanate | In Vitro | Some positive data exist, but the data are not sufficient for classification |

Carcinogenicity

| Name | Route | Species | Value |
|---|------------|---------|--|
| 4,4'-methylenediphenyl diisocyanate | Inhalation | Rat | Some positive data exist, but the data are not sufficient for classification |
| 1,1'-Methylenebis[isocyanatobenzene], homopolymer | Inhalation | Rat | Some positive data exist, but the data are not sufficient for classification |
| methylenediphenyl diisocyanate | Inhalation | Rat | Some positive data exist, but the data are not sufficient for classification |

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

3M™ Scotchcast™ Flame-Retardant Compound 2131 (Part A)

| Name | Route | Value | Species | Test result | Exposure Duration |
|---|------------|--------------------------------------|---------|--------------------------|----------------------|
| 4,4'-methylenediphenyl diisocyanate | Inhalation | Not classified for development | Rat | NOAEL 0.004 mg/l | during organogenesis |
| Diundecyl phthalate, branched and linear | Ingestion | Not classified for male reproduction | Rat | NOAEL 2,100 mg/kg/day | 21 days |
| Diundecyl phthalate, branched and linear | Ingestion | Not classified for development | Rat | NOAEL 1,000 mg/kg/day | during gestation |
| 1,1'-Methylenebis[isocyanatobenzene], homopolymer | Inhalation | Not classified for development | Rat | NOAEL 0.004 mg/l | during organogenesis |
| methylenediphenyl diisocyanate | Inhalation | Not classified for development | Rat | NOAEL 0.004 mg/l | during organogenesis |

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

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|---|------------|------------------------|----------------------------------|-------------------------|---------------------|-------------------|
| 4,4'-methylenediphenyl diisocyanate | Inhalation | respiratory irritation | May cause respiratory irritation | official classification | NOAEL Not available | |
| 1,1'-Methylenebis[isocyanatobenzene], homopolymer | Inhalation | respiratory irritation | May cause respiratory irritation | official classification | NOAEL Not available | |
| methylenediphenyl diisocyanate | Inhalation | respiratory irritation | May cause respiratory irritation | official classification | NOAEL Not available | |

Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|---|------------|--------------------|--|---------|--------------------------|-------------------|
| 4,4'-methylenediphenyl diisocyanate | Inhalation | respiratory system | Causes damage to organs through prolonged or repeated exposure | Rat | LOAEL 0.004 mg/l | 13 weeks |
| Diundecyl phthalate, branched and linear | Ingestion | liver | Not classified | Rat | NOAEL 2,100 mg/kg/day | 21 days |
| 1,1'-Methylenebis[isocyanatobenzene], homopolymer | Inhalation | respiratory system | Causes damage to organs through prolonged or repeated exposure | Rat | LOAEL 0.004 mg/l | 13 weeks |
| methylenediphenyl diisocyanate | Inhalation | respiratory system | Causes damage to organs through prolonged or repeated exposure | Rat | LOAEL 0.004 mg/l | 13 weeks |

Aspiration Hazard

For the component/components, either no data 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

3M™ Scotchcast™ Flame-Retardant Compound 2131 (Part A)

No product test data available.

| Material | CAS # | Organism | Type | Exposure | Test endpoint | Test result |
|---|-------------|-------------------|---|----------|---------------|---------------------------|
| Polyoxyalkylenes | 154517-54-1 | | Data not available or insufficient for classification | | | N/A |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | Activated sludge | Estimated | 3 hours | EC50 | >100 mg/l |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | Green algae | Estimated | 72 hours | EC50 | >1,640 mg/l |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | Water flea | Estimated | 24 hours | EC50 | >1,000 mg/l |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | Zebra Fish | Estimated | 96 hours | LC50 | >1,000 mg/l |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | Green algae | Estimated | 72 hours | NOEC | 1,640 mg/l |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | Water flea | Estimated | 21 days | NOEC | 10 mg/l |
| Diundecyl phthalate, branched and linear | 85507-79-5 | Green algae | Estimated | 72 hours | EC50 | >100 mg/l |
| Diundecyl phthalate, branched and linear | 85507-79-5 | Rainbow trout | Estimated | 96 hours | LC50 | >100 mg/l |
| Diundecyl phthalate, branched and linear | 85507-79-5 | Sheepshead Minnow | Estimated | 96 hours | LC50 | >100 mg/l |
| Diundecyl phthalate, branched and linear | 85507-79-5 | Green algae | Estimated | 72 hours | NOEC | 100 mg/l |
| Diundecyl phthalate, branched and linear | 85507-79-5 | Rainbow trout | Estimated | 155 days | NOEC | 100 mg/l |
| 1,1'-Methylenebis[isocyanatobenzene], homopolymer | 39310-05-9 | Water flea | Estimated | 24 hours | EC50 | >100 mg/l |
| Diundecyl phthalate | 3648-20-2 | Fathead minnow | Experimental | 96 hours | LC50 | >100 mg/l |
| Diundecyl phthalate | 3648-20-2 | Water flea | Experimental | 21 days | NOEC | 0.35 mg/l |
| methylenediphenyl diisocyanate | 26447-40-5 | Green algae | Analogous Compound | 72 hours | EC50 | >1,640 mg/l |
| methylenediphenyl diisocyanate | 26447-40-5 | Water flea | Analogous Compound | 24 hours | EC50 | >1,000 mg/l |
| methylenediphenyl diisocyanate | 26447-40-5 | Zebra Fish | Analogous Compound | 96 hours | LC50 | >1,000 mg/l |
| methylenediphenyl diisocyanate | 26447-40-5 | Green algae | Analogous Compound | 72 hours | NOEC | 1,640 mg/l |
| methylenediphenyl diisocyanate | 26447-40-5 | Water flea | Analogous Compound | 21 days | NOEC | 10 mg/l |
| methylenediphenyl diisocyanate | 26447-40-5 | Activated sludge | Analogous Compound | 3 hours | EC50 | >100 mg/l |
| methylenediphenyl diisocyanate | 26447-40-5 | Lettuce | Analogous Compound | 17 days | NOEC | 1,000 mg/kg (Dry Weight) |
| methylenediphenyl diisocyanate | 26447-40-5 | Redworm | Analogous Compound | 14 days | LC50 | >1,000 mg/kg (Dry Weight) |

12.2. Persistence and degradability

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|--|-------------|------------------------------------|----------|----------------------|------------------|-----------------------------------|
| Polyoxyalkylenes | 154517-54-1 | Data not available or insufficient | | | N/A | |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | Estimated Hydrolysis | | Hydrolytic half-life | 20 hours (t 1/2) | Non-standard method |
| Diundecyl phthalate, branched and linear | 85507-79-5 | Experimental Biodegradation | 28 days | CO2 evolution | 66 % weight | OECD 301B - Modified sturm or CO2 |
| 1,1'-Methylenebis[isocyanatobenzene] | 39310-05-9 | Estimated Hydrolysis | | Hydrolytic half-life | <2 hours (t 1/2) | Non-standard method |

3M™ Scotchcast™ Flame-Retardant Compound 2131 (Part A)

| | | | | | | |
|---|------------|--|---------|-----------------------------|------------------|--------------------------------|
| nzene], homopolymer | | | | | | |
| 1,1'-Methylenebis[isocyanatobenzene], homopolymer | 39310-05-9 | Estimated Biodegradation | 28 days | BOD | 0 % weight | OECD 301C - MITI test (I) |
| Diundecyl phthalate | 3648-20-2 | Experimental Biodegradation | 28 days | CO2 evolution | 76 % weight | Non-standard method |
| methylenediphenyl diisocyanate | 26447-40-5 | Analogous Compound Hydrolysis | | Hydrolytic half-life (pH 7) | <2 hours (t 1/2) | |
| methylenediphenyl diisocyanate | 26447-40-5 | Analogous Compound Biodegradation | 28 days | BOD | 0 % BOD/ThBOD | OECD 301C - MITI test (I) |
| methylenediphenyl diisocyanate | 26447-40-5 | Analogous Compound Aquatic Inherent Biodegrad. | 28 days | BOD | 0 % BOD/ThBOD | OECD 302C - Modified MITI (II) |

12.3 : Bioaccumulative potential

| Material | Cas No. | Test type | Duration | Study Type | Test result | Protocol |
|---|-------------|---|----------|------------------------|-------------|--|
| Polyoxyalkylenes | 154517-54-1 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | Experimental BCF-Carp | 28 days | Bioaccumulation factor | 200 | OECD 305E - Bioaccumulation flow-through fish test |
| Diundecyl phthalate, branched and linear | 85507-79-5 | Estimated Bioconcentration | | Bioaccumulation factor | 7.4 | Estimated: Bioconcentration factor |
| 1,1'-Methylenebis[isocyanatobenzene], homopolymer | 39310-05-9 | Estimated BCF-Carp | 28 days | Bioaccumulation factor | 200 | Non-standard method |
| Diundecyl phthalate | 3648-20-2 | Estimated Bioconcentration | | Bioaccumulation factor | 7.4 | Estimated: Bioconcentration factor |
| methylenediphenyl diisocyanate | 26447-40-5 | Analogous Compound BCF-Carp | 28 days | Bioaccumulation factor | 200 | OECD305-Bioconcentration |
| methylenediphenyl diisocyanate | 26447-40-5 | Analogous Compound Bioconcentration | | Log Kow | 4.51 | OECD 117 log Kow HPLC method |

12.4. Mobility in soil

| Material | Cas No. | Test type | Study Type | Test result | Protocol |
|-------------------------------------|------------|----------------------------|------------|--------------|-----------|
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | Estimated Mobility in Soil | Koc | 34,000 l/kg | Episuite™ |
| methylenediphenyl diisocyanate | 26447-40-5 | Modeled Mobility in Soil | Koc | 300,000 l/kg | Episuite™ |

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 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.

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.

ADR/IMDG/IATA: Not restricted for transport.

| | 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

Carcinogenicity

| <u>Ingredient</u> | <u>CAS Nbr</u> | <u>Classification</u> | <u>Regulation</u> |
|---|----------------|-------------------------|---|
| methylenediphenyl diisocyanate | 26447-40-5 | Carc. 2 | Regulation (EC) No. 1272/2008, Table 3.1 |
| methylenediphenyl diisocyanate | 26447-40-5 | Gr. 3: Not classifiable | International Agency for Research on Cancer |
| 1,1'-Methylenebis[isocyanatobenzene], homopolymer | 39310-05-9 | Carc. 2 | 3M classified according to Regulation (EC) No 1272/2008 |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | Carc. 2 | Regulation (EC) No. 1272/2008, Table 3.1 |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | Gr. 3: Not classifiable | International Agency for Research on Cancer |

Restrictions on the manufacture, placing on the market and use:

The following substance(s) contained in this product is/are subject through Annex XVII of REACH regulation to restrictions on the manufacture, placing on the market and use when present in certain dangerous substances, mixtures and articles. Users of this product are required to comply with the restrictions placed upon it by the aforementioned provision.

| <u>Ingredient</u> | <u>CAS Nbr</u> |
|-------------------------------------|----------------|
| methylenediphenyl diisocyanate | 26447-40-5 |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 |

Restriction status: listed in REACH Annex XVII

Restricted uses: See Annex XVII to Regulation (EC) No 1907/2006 for Conditions of Restriction

Global inventory status

Contact 3M for more 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. 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
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

| | |
|------|--|
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H335 | May cause respiratory irritation. |
| H351 | Suspected of causing cancer. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H373 | May cause damage to organs through prolonged or repeated exposure: respiratory system. |
| H412 | Harmful to aquatic life with long lasting effects. |

Revision information:

EU Section 09: pH information information was added.
Section 1: Emergency telephone information was modified.
Section 2: <125ml Precautionary - Prevention information was modified.
Section 2: <125ml Precautionary - Response information was modified.
Label: CLP Classification information was modified.
Label: CLP Precautionary - Prevention information was modified.
Label: CLP Precautionary - Response information was modified.
Label: CLP Target Organ Hazard Statement information was modified.
Section 02: Regulation (EU) 2020/1149 Statement information was added.
Section 03: Composition table % Column heading information was added.
Section 3: Composition/ Information of ingredients table information was modified.
Section 03: SCL table information was added.
Section 03: Substance not applicable information was added.
Section 04: First Aid - Symptoms and Effects (CLP) information was added.
Section 04: Information on toxicological effects information was modified.
Section 8: Occupational exposure limit table information was modified.
OEL Reg Agency Desc information was modified.
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 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: Classification disclaimer information was modified.
Section 11: No endocrine disruptor information available warning information was added.
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: 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: Bioaccumulative potential information information was modified.
Section 13: Standard Phrase Category Waste GHS 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: Regulations - Inventories information was added.
Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material. information was modified.
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 Ireland MSDSs are available at www.3M.com



Safety Data Sheet

Copyright, 2018, 3M Company All rights reserved. Copying and/or downloading of this information for the purpose of properly utilising 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

Document group: 28-7666-2 **Version number:** 10.00
Revision date: 06/07/2018 **Supersedes date:** 09/09/2016
Transportation version number: 1.00 (09/06/2011)

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™ Flame Retardant Resin 2131 (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 Ireland Limited, The Iveagh Building, The Park, Carrickmines, Dublin 18.
Telephone: +353 1 280 3555
E Mail: tox.uk@mmm.com
Website: www.3M.com

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

CLASSIFICATION:

Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318

For full text of H phrases, see Section 16.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

SIGNAL WORD

DANGER.

Symbols:

GHS05 (Corrosion) |

Pictograms



Ingredients:

| Ingredient | CAS Nbr | EC No. | % by Wt |
|-------------------------------|-----------|-----------|---------|
| 1,1'-Phenyliminodipropan-2-ol | 3077-13-2 | 221-360-7 | < 10 |

HAZARD STATEMENTS:

H318 Causes serious eye damage.

PRECAUTIONARY STATEMENTS

Prevention:

P280A Wear eye/face protection.

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.
 P310 Immediately call a POISON CENTRE or doctor/physician.

For containers not exceeding 125 ml the following Hazard and Precautionary statements may be used:

<=125 ml Hazard statements

H318 Causes serious eye damage.

<=125 ml Precautionary statements

Prevention:

P280A Wear eye/face protection.

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.
 P310 Immediately call a POISON CENTRE or doctor/physician.

8% of the mixture consists of components of unknown acute oral toxicity.

Contains 6% of components with unknown hazards to the aquatic environment.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

| Ingredient | CAS Nbr | EC No. | REACH Registration No. | % by Wt | Classification |
|--------------------------------------|------------|--------|------------------------|---------|-----------------------------|
| 1,3-Butadiene, homopolymer, hydroxy- | 69102-90-5 | | | 20 - 30 | Substance not classified as |

3M Scotchcast™ Flame Retardant Resin 2131 (Part B)

| | | | | | |
|--|------------|-----------|------------------|---------|--|
| terminated | | | | | hazardous |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | 84852-53-9 | 284-366-9 | | 22 - 25 | Substance not classified as hazardous |
| Diundecyl phthalate, branched and linear | 85507-79-5 | 287-401-6 | | 10 - 20 | Substance not classified as hazardous |
| Silicic acid, aluminum potassium sodium salt | 12736-96-8 | 235-787-1 | | 1 - 10 | Substance not classified as hazardous |
| Propane-1,2-diol, propoxylated | 25322-69-4 | 500-039-8 | | 5 - 10 | Substance not classified as hazardous |
| Diantimony pentoxide | 1314-60-9 | 215-237-7 | | 5 - 10 | Substance not classified as hazardous |
| Castor oil | 8001-79-4 | 232-293-8 | | 1 - 10 | Substance not classified as hazardous |
| 1,1'-Phenyliminodipropan-2-ol | 3077-13-2 | 221-360-7 | | < 10 | Eye Dam. 1, H318 |
| Oxydipropanol | 25265-71-8 | 246-770-3 | 01-2119456811-38 | 3 - 6 | Substance not classified as hazardous |
| Carbon black | 1333-86-4 | 215-609-9 | | < 2 | Substance with a Community level exposure limit in the workplace |
| Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate | 2082-79-3 | 218-216-0 | | < 1 | Substance not classified as hazardous |
| Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica | 68909-20-6 | 272-697-1 | | 0.5 - 1 | Substance not classified as hazardous |
| 1,4-diazabicyclooctane | 280-57-9 | 205-999-9 | | < 1 | Acute Tox. 4, H302; 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

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. 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

Carbon monoxide.
Carbon dioxide.
Oxides of nitrogen.
Oxides of antimony.

Condition

During combustion.
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 handle until all safety precautions have been read and understood. 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. Avoid release to the environment. Use personal protective equipment (eg. gloves, respirators...) as required.

7.2. Conditions for safe storage including any incompatibilities

Keep container tightly closed. Keep cool. Store away from heat. 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

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 | CAS Nbr | Agency | Limit type | Additional comments |
|-------------------|----------------|---------------|--|----------------------------|
| Carbon black | 1333-86-4 | UK HSC | TWA: 3.5 mg/m ³ ; STEL: 7 mg/m ³ | |

UK HSC : UK Health and Safety Commission
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

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

Use with appropriate local exhaust ventilation. Provide appropriate local exhaust ventilation on open containers.

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.

Applicable Norms/Standards

Use eye/face protection conforming to EN 166

Skin/hand protection

No chemical protective gloves are required.

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|---|
| Physical state | Liquid. |
| Appearance/Odour | Smooth black liquid with pungent odour. |
| Odour threshold | <i>No data available.</i> |
| pH | <i>Not applicable.</i> |
| Boiling point/boiling range | > 143.3 °C |
| Melting point | <i>Not applicable.</i> |
| Flammability (solid, gas) | Not applicable. |
| Explosive properties | Not classified |
| Oxidising properties | Not classified |
| Flash point | > 143.3 °C [Test Method: Closed Cup] |
| Autoignition temperature | <i>No data available.</i> |
| Flammable Limits(LEL) | <i>No data available.</i> |
| Flammable Limits(UEL) | <i>No data available.</i> |
| Vapour pressure | < 186,158.4 Pa [@ 55 °C] |
| Relative density | 1.29 [Ref Std: WATER=1] |
| Water solubility | Nil |
| Solubility- non-water | <i>No data available.</i> |
| Partition coefficient: n-octanol/water | <i>No data available.</i> |
| Evaporation rate | <i>No data available.</i> |
| Vapour density | <i>No data available.</i> |
| Decomposition temperature | <i>No data available.</i> |
| Viscosity | 5,500 mPa-s |
| Density | <i>No data available.</i> |

9.2. Other information

| | |
|--------------------------------------|---------------------------|
| EU Volatile Organic Compounds | <i>No data available.</i> |
| Molecular weight | <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 polymerisation will not occur.

10.4 Conditions to avoid

None known.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

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

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 3M assessments.

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. May cause additional health effects (see below).

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

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

Additional Health Effects:

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

Toxicological Data

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

Acute Toxicity

| Name | Route | Species | Value |
|--|--------------------------------|---------|--|
| Overall product | Dermal | | No data available; calculated ATE >5,000 mg/kg |
| Overall product | Inhalation-Dust/Mist(4 hr) | | No data available; calculated ATE >12.5 mg/l |
| Overall product | Ingestion | | No data available; calculated ATE >5,000 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 |
| Propane-1,2-diol, propoxylated | Dermal | Rabbit | LD50 > 10,000 mg/kg |
| Propane-1,2-diol, propoxylated | Ingestion | Rat | LD50 > 2,000 mg/kg |
| 1,1'-Phenyliminodipropan-2-ol | Dermal | Rabbit | LD50 > 2,000 mg/kg |
| 1,1'-Phenyliminodipropan-2-ol | Ingestion | Rat | LD50 3,800 mg/kg |
| Castor oil | Dermal | | LD50 estimated to be > 5,000 |
| Castor oil | Ingestion | | LD50 estimated to be > 5,000 |
| Oxydipropanol | Dermal | Rabbit | LD50 > 5,010 mg/kg |
| Oxydipropanol | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 2.34 mg/l |
| Oxydipropanol | Ingestion | Rat | LD50 > 5,010 mg/kg |
| Carbon black | Dermal | Rabbit | LD50 > 3,000 mg/kg |
| Carbon black | Ingestion | Rat | LD50 > 8,000 mg/kg |

3M Scotchcast™ Flame Retardant Resin 2131 (Part B)

| | | | |
|--|--------------------------------|--------|--------------------|
| Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| 1,4-diazabicyclooctane | Dermal | Rabbit | LD50 > 3,200 mg/kg |
| Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 0.691 mg/l |
| Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica | Ingestion | Rat | LD50 > 5,110 mg/kg |
| 1,4-diazabicyclooctane | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 5.05 mg/l |
| 1,4-diazabicyclooctane | Ingestion | Rat | LD50 1,870 mg/kg |
| Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate | Dermal | Rat | LD50 > 2,000 mg/kg |
| Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 1.8 mg/l |
| Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate | Ingestion | Rat | LD50 > 5,000 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|--|------------------------|---------------------------|
| Propane-1,2-diol, propoxylated | Rabbit | No significant irritation |
| 1,1'-Phenyliminodipropyl-2-ol | Professional judgement | Minimal irritation |
| Castor oil | Human | Minimal irritation |
| Oxydipropanol | Rabbit | No significant irritation |
| Carbon black | Rabbit | No significant irritation |
| Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica | Rabbit | No significant irritation |
| 1,4-diazabicyclooctane | Rabbit | Mild irritant |
| Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate | Rabbit | Minimal irritation |

Serious Eye Damage/Irritation

| Name | Species | Value |
|--|------------------------|---------------------------|
| Propane-1,2-diol, propoxylated | Rabbit | No significant irritation |
| 1,1'-Phenyliminodipropyl-2-ol | Professional judgement | Corrosive |
| Castor oil | Rabbit | Mild irritant |
| Oxydipropanol | Rabbit | No significant irritation |
| Carbon black | Rabbit | No significant irritation |
| Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica | Rabbit | No significant irritation |
| 1,4-diazabicyclooctane | Rabbit | Corrosive |
| Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate | Rabbit | Mild irritant |

Skin Sensitisation

| Name | Species | Value |
|--|------------------|----------------|
| Castor oil | Human | Not classified |
| Oxydipropanol | Guinea pig | Not classified |
| Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica | Human and animal | Not classified |
| Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate | Human and animal | Not classified |

Respiratory Sensitisation

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

Germ Cell Mutagenicity

| Name | Route | Value |
|--|----------|--|
| Castor oil | In Vitro | Not mutagenic |
| Castor oil | In vivo | Not mutagenic |
| Oxydipropanol | In Vitro | Not mutagenic |
| Oxydipropanol | In vivo | Not mutagenic |
| Carbon black | In Vitro | Not mutagenic |
| Carbon black | In vivo | Some positive data exist, but the data are not sufficient for classification |
| Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica | In Vitro | Not mutagenic |
| Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate | In Vitro | Not mutagenic |
| Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate | In vivo | Not mutagenic |

Carcinogenicity

| Name | Route | Species | Value |
|--|----------------|-------------------------|--|
| Oxydipropanol | Ingestion | Multiple animal species | Not carcinogenic |
| Carbon black | Dermal | Mouse | Not carcinogenic |
| Carbon black | Ingestion | Mouse | Not carcinogenic |
| Carbon black | Inhalation | Rat | Carcinogenic. |
| Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica | Not specified. | Mouse | Some positive data exist, but the data are not sufficient for classification |
| Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate | Ingestion | Mouse | Not carcinogenic |

Reproductive Toxicity

Reproductive and/or Developmental Effects

| Name | Route | Value | Species | Test result | Exposure Duration |
|--|-----------|--|---------|-----------------------|----------------------|
| Oxydipropanol | Ingestion | Not classified for development | Rat | NOAEL 5,000 mg/kg/day | during organogenesis |
| Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica | Ingestion | Not classified for female reproduction | Rat | NOAEL 509 mg/kg/day | 1 generation |
| Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica | Ingestion | Not classified for male reproduction | Rat | NOAEL 497 mg/kg/day | 1 generation |
| Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica | Ingestion | Not classified for development | Rat | NOAEL 1,350 mg/kg/day | during organogenesis |
| Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate | Ingestion | Not classified for female reproduction | Rat | NOAEL 421 mg/kg/day | 2 generation |
| Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate | Ingestion | Not classified for male reproduction | Rat | NOAEL 375 mg/kg/day | 2 generation |
| Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate | Ingestion | Not classified for development | Rat | NOAEL 421 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 |
|------------|-----------|--------------------------------------|----------------|---------|-----------------------|-------------------|
| Castor oil | Ingestion | heart hematopoietic system liver | Not classified | Rat | NOAEL 4,800 mg/kg/day | 13 weeks |
| Castor oil | Ingestion | kidney and/or | Not classified | Mouse | NOAEL | 13 weeks |

3M Scotchcast™ Flame Retardant Resin 2131 (Part B)

| | | | | | | |
|--|------------|--|--|-------|-----------------------|-----------------------|
| | | bladder | | | 13,000 mg/kg/day | |
| Oxydipropanol | Ingestion | respiratory system | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 470 mg/kg/day | 105 weeks |
| Oxydipropanol | Ingestion | heart | Not classified | Rat | NOAEL 470 mg/kg/day | 105 weeks |
| Oxydipropanol | Ingestion | endocrine system liver | Not classified | Rat | NOAEL 3,040 mg/kg/day | 105 weeks |
| Oxydipropanol | Ingestion | kidney and/or bladder | Not classified | Rat | NOAEL 115 mg/kg/day | 105 weeks |
| Oxydipropanol | 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 |
| Carbon black | Inhalation | pneumoconiosis | Not classified | Human | NOAEL Not available | occupational exposure |
| Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica | Inhalation | respiratory system silicosis | Not classified | Human | NOAEL Not available | occupational exposure |
| Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate | Ingestion | liver kidney and/or bladder heart endocrine system respiratory system | Not classified | Rat | NOAEL 300 mg/kg/day | 28 days |
| Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate | Ingestion | hematopoietic system | 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.

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 |
|--|------------|---------------|---|----------|------------------|-------------|
| 1,3-Butadiene, homopolymer, hydroxy-terminated | 69102-90-5 | | Data not available or insufficient for classification | | | |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | 84852-53-9 | Green algae | Experimental | 96 hours | Effect Level 50% | >100 mg/l |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | 84852-53-9 | Rainbow trout | Experimental | 96 hours | LC50 | >100 mg/l |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | 84852-53-9 | Water flea | Experimental | 48 hours | Effect Level 50% | >100 mg/l |

3M Scotchcast™ Flame Retardant Resin 2131 (Part B)

| | | | | | | |
|---|------------|-------------------|---|----------|---------------------|-------------|
| zene] | | | | | | |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | 84852-53-9 | Green algae | Experimental | 96 hours | No obs Effect Level | >100 mg/l |
| Diundecyl phthalate, branched and linear | 85507-79-5 | Green algae | Estimated | 72 hours | EC50 | >100 mg/l |
| Diundecyl phthalate, branched and linear | 85507-79-5 | Rainbow trout | Estimated | 96 hours | LC50 | >100 mg/l |
| Diundecyl phthalate, branched and linear | 85507-79-5 | Sheepshead Minnow | Estimated | 96 hours | LC50 | >100 mg/l |
| Diundecyl phthalate, branched and linear | 85507-79-5 | Green algae | Estimated | 72 hours | NOEC | 100 mg/l |
| Diundecyl phthalate, branched and linear | 85507-79-5 | Rainbow trout | Estimated | 155 days | NOEC | 100 mg/l |
| Silicic acid, aluminum potassium sodium salt | 12736-96-8 | Green algae | Estimated | 96 hours | EC50 | >100 mg/l |
| Silicic acid, aluminum potassium sodium salt | 12736-96-8 | Zebra Fish | Estimated | 96 hours | LC50 | >100 mg/l |
| Silicic acid, aluminum potassium sodium salt | 12736-96-8 | Green algae | Estimated | 72 hours | NOEC | >100 mg/l |
| Silicic acid, aluminum potassium sodium salt | 12736-96-8 | Water flea | Estimated | 21 days | NOEC | >100 mg/l |
| Diantimony pentoxide | 1314-60-9 | Fish other | Estimated | 96 hours | LC50 | 9.2 mg/l |
| Diantimony pentoxide | 1314-60-9 | Green algae | Estimated | 72 hours | EC50 | >48.6 mg/l |
| Diantimony pentoxide | 1314-60-9 | Fathead minnow | Estimated | 28 days | NOEC | 1.5 mg/l |
| Diantimony pentoxide | 1314-60-9 | Green algae | Estimated | 72 hours | NOEC | 2.8 mg/l |
| Diantimony pentoxide | 1314-60-9 | Water flea | Estimated | 21 days | NOEC | 2.32 mg/l |
| Castor oil | 8001-79-4 | Zebra Fish | Estimated | 96 hours | LC50 | >100 mg/l |
| 1,1'-Phenyliminodipropyl-2-ol | 3077-13-2 | | Data not available or insufficient for classification | | | |
| Propane-1,2-diol, propoxylated | 25322-69-4 | Green algae | Experimental | 72 hours | EC50 | >100 mg/l |
| Propane-1,2-diol, propoxylated | 25322-69-4 | Water flea | Experimental | 48 hours | EC50 | 105.8 mg/l |
| Propane-1,2-diol, propoxylated | 25322-69-4 | Zebra Fish | Experimental | 96 hours | LC50 | >100 mg/l |
| Propane-1,2-diol, propoxylated | 25322-69-4 | Green algae | Experimental | 72 hours | NOEC | >100 mg/l |
| Propane-1,2-diol, propoxylated | 25322-69-4 | Water flea | Experimental | 21 days | NOEC | >=10 mg/l |
| Oxydipropylol | 25265-71-8 | Goldfish | Experimental | 96 hours | LC50 | >5,000 mg/l |
| Oxydipropylol | 25265-71-8 | Green algae | Experimental | 72 hours | EC50 | >100 mg/l |
| Oxydipropylol | 25265-71-8 | Water flea | Experimental | 48 hours | EC50 | >100 mg/l |
| Oxydipropylol | 25265-71-8 | Green algae | Experimental | 72 hours | NOEC | 100 mg/l |
| Carbon black | 1333-86-4 | | Data not available or insufficient for classification | | | |
| Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate | 2082-79-3 | Bluegill | Experimental | 96 hours | LC50 | >100 mg/l |
| Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate | 2082-79-3 | Green algae | Experimental | 72 hours | EC50 | >100 mg/l |

3M Scotchcast™ Flame Retardant Resin 2131 (Part B)

| | | | | | | |
|--|------------|-------------|--------------|----------|--------------------------|-----------|
| Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate | 2082-79-3 | Water flea | Experimental | 24 hours | EC50 | >100 mg/l |
| Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate | 2082-79-3 | Green algae | Experimental | 72 hours | NOEC | >100 mg/l |
| Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate | 2082-79-3 | Water flea | Experimental | 21 days | NOEC | >100 mg/l |
| Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica | 68909-20-6 | Algae | Estimated | 72 hours | EC50 | >100 mg/l |
| 1,4-diazabicyclooctane | 280-57-9 | Common Carp | Experimental | 96 hours | LC50 | >100 mg/l |
| 1,4-diazabicyclooctane | 280-57-9 | Green Algae | Experimental | 72 hours | EC50 | 180 mg/l |
| 1,4-diazabicyclooctane | 280-57-9 | Water flea | Experimental | 48 hours | EC50 | >100 mg/l |
| 1,4-diazabicyclooctane | 280-57-9 | Green Algae | Experimental | 72 hours | Effect Concentration 10% | 79 mg/l |

12.2. Persistence and degradability

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|--|------------|-----------------------------------|----------|---------------|------------------|-------------------------------------|
| 1,3-Butadiene, homopolymer, hydroxy-terminated | 69102-90-5 | Data not available - insufficient | | | N/A | |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | 84852-53-9 | Experimental Biodegradation | 28 days | BOD | 0 % BOD/ThBOD | OECD 301C - MITI test (I) |
| Diundecyl phthalate, branched and linear | 85507-79-5 | Experimental Biodegradation | 28 days | CO2 evolution | 66 % weight | OECD 301B - Modified sturm or CO2 |
| Silicic acid, aluminum potassium sodium salt | 12736-96-8 | Data not available - insufficient | | | N/A | |
| Diantimony pentoxide | 1314-60-9 | Data not available - insufficient | | | N/A | |
| Castor oil | 8001-79-4 | Estimated Biodegradation | 28 days | BOD | 64 % weight | OECD 301D - Closed bottle test |
| 1,1'-Phenyliminodipropyl-2-ol | 3077-13-2 | Estimated Biodegradation | 28 days | BOD | 6 % weight | OECD 301C - MITI test (I) |
| Propane-1,2-diol, propoxylated | 25322-69-4 | Experimental Biodegradation | 28 days | BOD | 89 % weight | OECD 301F - Manometric respirometry |
| Oxydipropyl alcohol | 25265-71-8 | Experimental Biodegradation | 28 days | BOD | 84.4 % BOD/ThBOD | OECD 301F - Manometric respirometry |
| Carbon black | 1333-86-4 | Data not available - insufficient | | | N/A | |
| Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate | 2082-79-3 | Experimental Biodegradation | 28 days | BOD | 31 % weight | OECD 301C - MITI test (I) |
| Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica | 68909-20-6 | Data not available - insufficient | | | N/A | |
| 1,4-diazabicyclooctane | 280-57-9 | Experimental Biodegradation | 28 days | CO2 evolution | 7 % weight | OECD 301B - Modified sturm or CO2 |

12.3 : Bioaccumulative potential

| Material | Cas No. | Test type | Duration | Study Type | Test result | Protocol |
|--------------------------------------|------------|--|----------|------------|-------------|----------|
| 1,3-Butadiene, homopolymer, hydroxy- | 69102-90-5 | Data not available or insufficient for | N/A | N/A | N/A | N/A |

3M Scotchcast™ Flame Retardant Resin 2131 (Part B)

| terminated | | classification | | | | |
|--|------------|---|---------|------------------------|--------|--|
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | 84852-53-9 | Experimental Bioconcentration | | Log Kow | 3.55 | Other methods |
| Diundecyl phthalate, branched and linear | 85507-79-5 | Estimated Bioconcentration | | Bioaccumulation factor | 7.4 | Estimated: Bioconcentration factor |
| Silicic acid, aluminum potassium sodium salt | 12736-96-8 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Diantimony pentoxide | 1314-60-9 | Estimated BCF - Other | 23 days | Bioaccumulation factor | <=28.6 | Other methods |
| Castor oil | 8001-79-4 | Estimated Bioconcentration | | Bioaccumulation factor | 7.4 | Estimated: Bioconcentration factor |
| 1,1'-Phenyliminodipropan-2-ol | 3077-13-2 | Estimated Bioconcentration | | Bioaccumulation factor | 2.8 | Estimated: Bioconcentration factor |
| Propane-1,2-diol, propoxylated | 25322-69-4 | Experimental Bioconcentration | | Log Kow | <0.9 | Other methods |
| Oxydipropanol | 25265-71-8 | Experimental BCF-Carp | 42 days | Bioaccumulation factor | 4.6 | OECD 305E - Bioaccumulation flow-through fish test |
| Carbon black | 1333-86-4 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate | 2082-79-3 | Experimental BCF-Carp | 42 days | Bioaccumulation factor | <12 | Other methods |
| Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica | 68909-20-6 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| 1,4-diazabicyclooctane | 280-57-9 | Experimental BCF-Carp | 42 days | Bioaccumulation factor | <13 | OECD 305E - Bioaccumulation flow-through fish test |

12.4. Mobility in soil

Please contact manufacturer for more details

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. Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

See Section 11.1 Information on toxicological effects

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.

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

ADR/IMDG/IATA: Not restricted for transport.

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

| <u>Ingredient</u> | <u>CAS Nbr</u> | <u>Classification</u> | <u>Regulation</u> |
|-------------------|----------------|-------------------------------|---|
| Carbon black | 1333-86-4 | Grp. 2B: Possible human carc. | International Agency for Research on Cancer |

Global inventory status

Contact 3M for more information. 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.

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.
H318 Causes serious eye damage.

Revision information:

Section 2: <125ml Hazard - Health information was added.
Section 2: <125ml Precautionary - Prevention information was added.
Section 2: <125ml Precautionary - Response information was added.
CLP: Ingredient table information was modified.
Section 3: Composition/ Information of ingredients table information was added.
Section 3: Composition/ Information of ingredients table information was deleted.
Section 5: Fire - Advice for fire fighters information information was modified.
Section 9: Property description for optional properties information was modified.
Section 9: Vapour pressure value information was modified.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Skin Sensitization Table information was modified.
Section 11: Target Organs - Repeated Table information was modified.
Section 12: Component ecotoxicity information information was modified.
Section 12: No PBT/vPvB information available warning information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 12: Biocumulative potential information information was modified.
Section 13: Standard Phrase Category Waste GHS information was modified.
Section 15: Chemical Safety Assessment information was modified.

Section 15: Regulations - Inventories information was modified.

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.

3M Ireland MSDSs are available at www.3M.com