# Safety Data Sheet



| | | | |
|---|---|---|---|
| **Document group:** | 28-8293-4 | **Version number:** | 11.02 |
| **Revision date:** | 15/06/2020 | **Supersedes date:** | 27/09/2018 |

**Transportation version number:** 1.00 (11/01/2011)

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™ Flame-Retardant Compound 2131 (Parts A and B)

**Product Identification Numbers**

| | | | |
|---|---|---|---|
| 80-6114-6815-0 | 80-6114-6817-6 | KE-2351-0891-4 | KE-2351-0893-0 |
| 7000058842 | 7000058844 | 7000092517 | 7000092519 |

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

**Identified uses**

Electrical resin.

### 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

**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

80-6114-6815-0, 80-6114-6817-6, KE-2351-0891-4, KE-2351-0893-0

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'-Phenyliminodipropan-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 2: <125ml Hazard - Health information was modified.

# Safety Data Sheet



| | | | |
|---|---|---|---|
| **Document group:** | 28-7666-2 | **Version number:** | 10.00 |
| **Revision date:** | 06/07/2018 | **Supersedes date:** | 09/09/2016 |

**Transportation version number:** 1.00 (11/01/2011)

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)

**Product Identification Numbers**
80-6114-6841-6

7000058848

### 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**

**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-terminated | 69102-90-5 | | | 20 - 30 | Substance not classified as 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 | Condition |
|---|---|
| Carbon monoxide. | During combustion. |
| Carbon dioxide. | During combustion. |
| Oxides of nitrogen. | During combustion. |
| Oxides of antimony. | 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/m³; STEL: 7 mg/m³ | |

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

**9.2. Other information**

| | |
|---|---|
| **EU Volatile Organic Compounds** | *No data available.* |
| **Molecular weight** | *No data available.* |

## 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**

| **Substance** | **Condition** |
|---|---|

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 |
| 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'-Phenyliminodipropan-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'-Phenyliminodipropan-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 bladder | Not classified | Mouse | NOAEL 13,000 mg/kg/day | 13 weeks |
| 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 |
| 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'-Phenyliminodipropan-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 |
| Oxydipropanol | 25265-71-8 | Goldfish | Experimental | 96 hours | LC50 | >5,000 mg/l |
| Oxydipropanol | 25265-71-8 | Green algae | Experimental | 72 hours | EC50 | >100 mg/l |
| Oxydipropanol | 25265-71-8 | Water flea | Experimental | 48 hours | EC50 | >100 mg/l |
| Oxydipropanol | 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 |
| 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 availbl-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 availbl-insufficient | | | N/A | |
| Diantimony pentoxide | 1314-60-9 | Data not availbl-insufficient | | | N/A | |
| Castor oil | 8001-79-4 | Estimated Biodegradation | 28 days | BOD | 64 % weight | OECD 301D - Closed bottle test |
| 1,1'-Phenyliminodipropan-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 |
| Oxydipropanol | 25265-71-8 | Experimental Biodegradation | 28 days | BOD | 84.4 % BOD/ThBOD | OECD 301F - Manometric respirometry |
| Carbon black | 1333-86-4 | Data not availbl-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 availbl-insufficient | | | N/A | |
| 1,4-diazabicyclooctane | 280-57-9 | Experimental | 28 days | CO2 evolution | 7 % weight | OECD 301B - Modified |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | Biodegradation | | | | sturm or CO2 |

**12.3 : Bioaccumulative potential**

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

80-6114-6841-6

Not hazardous for transportation

## SECTION 15: Regulatory information

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

**Carcinogenicity**

| Ingredient | CAS Nbr | Classification | Regulation |
|---|---|---|---|
| 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 01: SAP Material Numbers information was added.
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:Bioccumulative 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 United Kingdom MSDSs are available at www.3M.com/uk**

# Safety Data Sheet



| | | | |
|---|---|---|---|
| **Document group:** | 28-7650-6 | **Version number:** | 10.00 |
| **Revision date:** | 10/06/2020 | **Supersedes date:** | 27/09/2018 |

**Transportation version number:** 1.00 (11/01/2011)

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 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 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**

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

| | |
|---|---|
| H319 | Causes serious eye irritation. |
| 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. |
| P280E | Wear protective gloves. |

**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. |
| P333 + P313 | If skin irritation or rash occurs: Get medical advice/attention. |

**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:**

| | |
|---|---|
| P260A | Do not breathe vapours. |
| P280E | Wear protective gloves. |

**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. |
| P333 + P313 | If skin irritation or rash occurs: Get medical advice/attention. |

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

### 2.3. Other hazards

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

## SECTION 3: Composition/information on ingredients

| Ingredient | CAS Nbr | EC No. | REACH Registration No. | % by Wt | Classification |
|---|---|---|---|---|---|
| Polyoxyalkylenes | 154517-54-1 | | | 35 - 45 | Resp. Sens. 1, H334; Skin Sens. 1, H317 |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | 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 | 85507-79-5 | 287-401-6 | | <= 15 | Substance not classified as hazardous |
| Diundecyl phthalate | 3648-20-2 | 222-884-9 | | <= 15 | Aquatic Chronic 3, H412 |
| 1,1'-Methylenebis[isocyanatobenzene], homopolymer | 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 | 26447-40-5 | 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

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

**Hazardous Decomposition or By-Products**

| Substance | Condition |
|---|---|
| Carbon monoxide | During combustion. |
| Carbon dioxide. | During combustion. |
| Hydrogen cyanide. | During combustion. |
| Oxides of nitrogen. | 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 |
|---|---|---|---|---|
| Free isocyanates | 101-68-8 | UK HSC | TWA(as NCO):0.02 mg/m3;STEL(as NCO):0.07 mg/m3 | Respiratory Sensitizer |
| Free isocyanates | 26447-40-5 | UK HSC | TWA(as NCO):0.02 mg/m3;STEL(as NCO):0.07 mg/m3 | Respiratory Sensitizer |

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

**Biological limit values**

| Ingredient | CAS Nbr | Agency | Determinant | Biological Specimen | Sampling Time | Value | Additional comments |
|---|---|---|---|---|---|---|---|
| Free isocyanates | 101-68-8 | UK EH40 BMGVs | Isocyanate-derived diamine | Creatinine in urine | EPE | 1 umol/mol | |
| Free isocyanates | 26447-40-5 | UK EH40 BMGVs | Isocyanate-derived diamine | Creatinine in urine | EPE | 1 umol/mol | |

UK EH40 BMGVs : UK. EH40 Biological Monitoring Guidance Values (BMGVs)

EPE: At the end of the period of exposure.

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

**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**

| | |
|---|---|
| **Appearance** | |
| **Physical state** | Liquid. |
| **Colour** | Light Straw |
| **Odor** | Pungent Odor |
| **Odour threshold** | *No data available.* |
| **pH** | *Not applicable.* |
| **Boiling point/boiling range** | >=148.9 ºC |
| **Melting point** | *Not applicable.* |
| **Flammability (solid, gas)** | Not applicable. |
| **Explosive properties** | Not classified |
| **Oxidising properties** | Not classified |
| **Flash point** | >=148.9 ºC [*Test Method:*Closed Cup] |
| **Autoignition temperature** | *No data available.* |
| **Flammable Limits(LEL)** | *No data available.* |
| **Flammable Limits(UEL)** | *No data available.* |
| **Vapour pressure** | *No data available.* |
| **Relative density** | 1.08 [*Ref Std:*WATER=1] |
| **Water solubility** | Nil |
| **Solubility- non-water** | *No data available.* |
| **Partition coefficient: n-octanol/water** | *No data available.* |
| **Evaporation rate** | *No data available.* |
| **Vapour density** | *No data available.* |
| **Decomposition temperature** | *No data available.* |
| **Viscosity** | 700 - 900 mPa-s |
| **Density** | *No data available.* |

**9.2. Other information**

| | |
|---|---|
| **Average particle size** | *No data available.* |
| **Bulk density** | *No data available.* |
| **EU Volatile Organic Compounds** | *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**

| Substance | Condition |
|---|---|
| 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. 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 |
| 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

| 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.**

# 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 |
|---|---|---|---|---|---|---|
| Polyoxyalkylenes | 154517-54-1 | | Data not available or insufficient for classification | | | |
| 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 | EC50 | >1,640 mg/l |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | Water flea | Estimated | 21 days | NOEC | 10 mg/l |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | Green algae | Estimated | 72 hours | NOEC | 1,640 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 | Sheepshead Minnow | Estimated | 96 hours | LC50 | >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 | Rainbow trout | Estimated | 155 days | NOEC | 100 mg/l |
| Diundecyl phthalate, branched and linear | 85507-79-5 | Green algae | Estimated | 72 hours | 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 | Water flea | Estimated | | EC50 | >100 mg/l |

**12.2. Persistence and degradability**

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|---|---|---|---|---|---|---|
| Polyoxyalkylenes | 154517-54-1 | Data not availbl-insufficient | | | N/A | |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | Estimated Hydrolysis | | Hydrolytic half-life | 20 hours (t 1/2) | Other methods |
| 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], homopolymer | 39310-05-9 | Estimated Hydrolysis | | Hydrolytic half-life | <2 hours (t 1/2) | Other methods |
| 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 | Other methods |
| methylenediphenyl diisocyanate | 26447-40-5 | Estimated Hydrolysis | | Hydrolytic half-life | <2 hours (t 1/2) | Other methods |
| methylenediphenyl diisocyanate | 26447-40-5 | Estimated Biodegradation | 28 days | BOD | 0 % weight | OECD 301C - MITI test (I) |

**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 | Other methods |
| Diundecyl phthalate | 3648-20-2 | Estimated Bioconcentration | | Bioaccumulation factor | 7.4 | Estimated: Bioconcentration factor |
| methylenediphenyl diisocyanate | 26447-40-5 | Estimated BCF-Carp | 28 days | Bioaccumulation factor | 200 | Other methods |

**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**
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. 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**

| Ingredient | CAS Nbr | Classification | Regulation |
|---|---|---|---|
| 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.

| Ingredient | CAS Nbr |
|---|---|
| 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

**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. |
| H412 | Harmful to aquatic life with long lasting effects. |

**Revision information:**
CLP: Ingredient table information was modified.
Label: CLP Percent Unknown information was deleted.
Section 3: Composition/ Information of ingredients table information was modified.
Section 5: Hazardous combustion products table information was modified.
Section 7: Precautions safe handling information information was modified.
BLV Reg Agency Desc information was added.
Section 8: BLV table information was added.
Section 8: BLV information was deleted.
Legend description information was added.
Section 09: Color information was added.
Section 09: Odor information was added.
Sections 3 and 9: Odour, colour, grade information information was deleted.
Section 10: Materials and conditions to avoid physical property information was deleted.
Section 11: Acute Toxicity table information was modified.
Section 11: Aspiration Hazard Table information was deleted.
Section 11: Aspiration Hazard text information was added.
Section 11: Carcinogenicity Table information was modified.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: Health Effects - Ingestion information information was modified.
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 modified.
Section 11: Target Organs - Single Table information was modified.
Section 12: Component ecotoxicity information information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 12:Bioccumulative potential information information was modified.
Section 15: Carcinogenicity information information was modified.
Section 15: Regulations - Inventories information was deleted.
Section 15: Restrictions on manufacture ingredients information 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.
Sectio 16: UK disclaimer information was deleted.

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**