



Safety Data Sheet

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|---------------------------------------|------------|-------------------------|------------|
| Document group: | 07-4243-7 | Version number: | 12.04 |
| Revision date: | 19/06/2023 | Supersedes date: | 18/04/2023 |
| Transportation version number: | | | |

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™ Flexible Foam Adhesive PN 08463

Product Identification Numbers

60-9800-3647-3

7100045768

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

Identified uses

Automotive.

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

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:

07-3378-2, 07-5569-4

TRANSPORTATION INFORMATION

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

KIT LABEL

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

CLASSIFICATION:

Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319
Respiratory Sensitization, Category 1 - Resp. Sens. 1; H334
Skin Sensitization, Category 1 - Skin Sens. 1; H317
Germ Cell Mutagenicity, Category 2 - Muta. 2; H341
Carcinogenicity, Category 2 - Carc. 2; H351
Reproductive Toxicity, Category 1B - Repr. 1B; H360FD
Specific Target Organ Toxicity-Single Exposure, Category 1 - STOT SE 1; H370
Specific Target Organ Toxicity-Repeated Exposure, Category 1 - STOT RE 1; H372
Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H335
Hazardous to the Aquatic Environment (Chronic), Category 3 - Aquatic Chronic 3; H412

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



Contains:
Polymethylene polyphenylene isocyanate.; 4,4'-methylenediphenyl diisocyanate; Formaldehyde, oligomeric reaction products with aniline and phosgene; o-(p-isocyanatobenzyl)phenyl isocyanate; dibutyltin dilaurate

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. |
| H341 | Suspected of causing genetic defects. |
| H351 | Suspected of causing cancer. |
| H360FD | May damage fertility. May damage the unborn child. |
| H335 | May cause respiratory irritation. |

immune system |

immune system |

liver |
respiratory system |

H412 Harmful to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P201 Obtain special instructions before use.
P261A Avoid breathing vapours.
P280E Wear protective gloves.

Response:

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308 + P313 IF exposed or concerned: Get medical advice/attention.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.

SUPPLEMENTAL INFORMATION:

Supplemental Precautionary Statements:

Restricted to professional users.

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

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

Revision information:

Kit Information: CLP Target Organ Hazard Statement information was modified.
Kit: Component document group number(s) information was modified.



Safety Data Sheet

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| | | | |
|------------------------|------------|-------------------------|------------|
| Document group: | 07-5569-4 | Version number: | 12.03 |
| Revision date: | 17/11/2023 | Supersedes date: | 16/06/2023 |

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 Flexible Foam Adhesive PN 08463, Part B

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

Identified uses

Automotive.

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
Skin Sensitization, Category 1B - Skin Sens. 1B; H317
Germ Cell Mutagenicity, Category 2 - Muta. 2; H341
Reproductive Toxicity, Category 1B - Repr. 1B; H360FD
Specific Target Organ Toxicity-Single Exposure, Category 2 - STOT SE 2; H371
Specific Target Organ Toxicity-Repeated Exposure, Category 2 - STOT RE 2; H373
Hazardous to the Aquatic Environment (Chronic), Category 3 - Aquatic Chronic 3; H412

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 |
|----------------------|---------|-----------|---------|
| dibutyltin dilaurate | 77-58-7 | 201-039-8 | < 2 |

HAZARD STATEMENTS:

| | |
|--------|---|
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H317 | May cause an allergic skin reaction. |
| H341 | Suspected of causing genetic defects. |
| H360FD | May damage fertility. May damage the unborn child. |
| H371 | May cause damage to organs: immune system. |
| H373 | May cause damage to organs through prolonged or repeated exposure: immune system liver. |
| H412 | Harmful to aquatic life with long lasting effects. |

PRECAUTIONARY STATEMENTS

Prevention:

| | |
|-------|---|
| P201 | Obtain special instructions before use. |
| P280E | Wear protective gloves. |

Response:

| | |
|-------------|--|
| P308 + P313 | IF exposed or concerned: Get medical advice/attention. |
|-------------|--|

SUPPLEMENTAL INFORMATION:

Supplemental Precautionary Statements:

Restricted to professional users.

2% of the mixture consists of components of unknown acute inhalation toxicity.
 Contains 55% of components with unknown hazards to the aquatic environment.

2.3. Other hazards

Contains a substance that meets the criteria for PBT according to Regulation (EC) No 1907/2006, Annex XIII Contains a substance that meets the criteria for vPvB according to Regulation (EC) No 1907/2006, Annex XIII

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] |
|---|--|-----------|---|
| N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine) | (CAS-No.) 3033-62-3 (EC-No.) 221-220-5 | < 0.71 | EUH071 Acute Tox. 3, H311 Acute Tox. 4, H332 Acute Tox. 4, H332 Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 |
| Glycerol, propoxylated | (CAS-No.) 25791-96-2 (EC-No.) 500-044-5 | 30 - 60 | Substance not classified as hazardous |
| Glycerol poly(oxyethylene, oxypropylene) ether | (CAS-No.) 9082-00-2 | 30 - 60 | Substance not classified as hazardous |
| 1,4-diazabicyclooctane | (CAS-No.) 280-57-9 (EC-No.) 205-999-9 | 0.5 - 1.5 | Acute Tox. 4, H302 Eye Dam. 1, H318 |
| Siloxanes and Silicones, di-Me, reaction products with silica | (CAS-No.) 67762-90-7 | 3 - 7 | Substance with a national occupational exposure limit |
| Water | Mixture | 1 - 5 | Substance not classified as hazardous |
| 2,2' -oxybisethanol | (CAS-No.) 111-46-6 (EC-No.) 203-872-2 (REACH-No.) 01-2119457857-21 | 1 - 5 | Acute Tox. 4, H302 |
| octamethylcyclotetrasiloxane | (CAS-No.) 556-67-2 (EC-No.) 209-136-7 | < 0.05 | Repr. 2, H361f Aquatic Chronic 1, H410,M=10 Flam. Liq. 3, H226 |
| Oxydipropanol | (CAS-No.) 25265-71-8 (EC-No.) 246-770-3 (REACH-No.) 01-2119456811-38 | 1 - 5 | Substance not classified as hazardous |
| dibutyltin dilaurate | (CAS-No.) 77-58-7 (EC-No.) 201-039-8 | < 2 | Muta. 2, H341 Repr. 1B, H360FD STOT RE 1, H372 Acute Tox. 4, H302 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1B, H317 STOT SE 1, H370 Aquatic Acute 1, H400,M=1 Aquatic Chronic 1, H410,M=1 |

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

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

Irritation to the skin (localized redness, swelling, itching, and dryness). Allergic skin reaction (redness, swelling, blistering, and itching). Serious irritation to the eyes (significant redness, swelling, pain, tearing, and impaired vision). Target organ effects. See Section 11 for additional details. Target organ effects following prolonged or repeated exposure. 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

None inherent in this product.

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 detergent and water. Seal the container. Dispose of collected material as soon as possible.

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Do not use in a confined area with minimal air exchange. Do not handle until all safety precautions have been read and understood. 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. Use personal protective equipment (eg. gloves, respirators...) as required.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Store away from heat. Store away from areas where product may come into contact with food or pharmaceuticals.

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 |
|---|----------------|---------------|--|----------------------------|
| 2,2'-oxybisethanol | 111-46-6 | Ireland OELs | TWA(8 hours):100 mg/m ³ (23 ppm) | |
| N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine) | 3033-62-3 | Ireland OELs | TWA(8 hours):0.05 ppm;STEL(15 minutes):0.15 ppm | |
| Silicon dioxide | 67762-90-7 | Ireland OELs | TWA(Total inhalable dust)(8 hours):6 mg/m ³ ;TWA(as respirable dust)(8 hours):2.4 mg/m ³ | |
| TIN, ORGANIC COMPOUNDS | 77-58-7 | Ireland OELs | TWA(8 hours):0.1 mg/m ³ ;STEL(15 minutes):0.2 mg/m ³ | as Sn |

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.

Derived no effect level (DNEL)

| Ingredient | Degradation Product | Population | Human exposure pattern | DNEL |
|---------------------|---------------------|------------|---|----------------------|
| 2,2' -oxybisethanol | | Worker | Dermal, Long-term exposure (8 hours), Systemic effects | 106 mg/kg bw/d |
| 2,2' -oxybisethanol | | Worker | Inhalation, Long-term exposure (8 hours), Local effects | 60 mg/m ³ |

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

8.2. Exposure controls

In addition, refer to the annex for more information.

8.2.1. Engineering controls

Provide appropriate local exhaust ventilation on open containers. 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. Provide appropriate local exhaust ventilation for cutting, grinding, sanding or machining.

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.

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

| Material | Thickness (mm) | Breakthrough Time |
|-----------------|-------------------|-------------------|
| Neoprene. | No data available | No data available |
| Nitrile rubber. | 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: Neoprene apron.

Apron – Nitrile

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part

of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

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

Applicable Norms/Standards

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

8.2.3. Environmental exposure controls

Refer to Annex

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|--|
| Physical state | Liquid. |
| Specific Physical Form: | Flexible Foam |
| Colour | Black |
| Odor | Odourless |
| Odour threshold | <i>No data available.</i> |
| Melting point/freezing point | <i>Not applicable.</i> |
| Boiling point/boiling range | <i>Not applicable.</i> |
| Flammability (solid, gas) | Not applicable. |
| Flammable Limits(LEL) | <i>No data available.</i> |
| Flammable Limits(UEL) | <i>No data available.</i> |
| Flash point | ≥ 121.1 °C [<i>Test Method</i> : Tagliabue closed cup] |
| Autoignition temperature | <i>No data available.</i> |
| Decomposition temperature | <i>No data available.</i> |
| pH | <i>substance/mixture is non-soluble (in water)</i> |
| Kinematic Viscosity | <i>No data available.</i> |
| Water solubility | Moderate |
| Solubility- non-water | <i>No data available.</i> |
| Partition coefficient: n-octanol/water | <i>No data available.</i> |
| Vapour pressure | $\leq 186,158.4$ Pa [<i>@ 55 °C</i>] [<i>Details</i> : MITS data] |
| Density | 0.96 - 1.03 g/ml |
| Relative density | 0.96 - 1.03 [<i>Ref Std</i> : WATER=1] |
| Relative Vapour Density | <i>Not applicable.</i> |

9.2. Other information

9.2.2 Other safety characteristics

| | |
|-------------------------------|---------------------------|
| EU Volatile Organic Compounds | <i>No data available.</i> |
| Evaporation rate | <i>Not applicable.</i> |
| Molecular weight | <i>No data available.</i> |
| Percent volatile | 26.3 % weight |

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> |
|---------------------------------|------------------|
| Carbon monoxide | Not specified. |
| Carbon dioxide. | Not specified. |
| Toxic vapour, gas, particulate. | Not specified. |

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.

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. May cause additional health effects (see below).

Additional Health Effects:

Single exposure may cause target organ effects:

Liver effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice. Immunological effects: Signs/symptoms may include alterations in the number of circulating immune cells, allergic skin and/or respiratory reaction, and changes in immune function. Neurological effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and changes in blood pressure and heart rate. Kidney/Bladder effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

Prolonged or repeated exposure may cause target organ effects:

Liver effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice. Immunological effects: Signs/symptoms may include alterations in the number of circulating immune cells, allergic skin and/or respiratory reaction, and changes in immune function.

Reproductive/Developmental Toxicity:

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Genotoxicity:

Genotoxicity and Mutagenicity: May interact with genetic material and possibly alter gene expression.

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 |
| Glycerol poly(oxyethylene, oxypropylene) ether | Dermal | similar compounds | LD50 > 2,000 mg/kg |
| Glycerol poly(oxyethylene, oxypropylene) ether | Inhalation-Dust/Mist (4 hours) | similar compounds | LC50 > 3.2 mg/l |
| Glycerol poly(oxyethylene, oxypropylene) ether | Ingestion | similar compounds | LD50 > 5,000 mg/kg |
| Glycerol, propoxylated | Dermal | Rat | LD50 > 2,000 mg/kg |
| Glycerol, propoxylated | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 50 mg/l |
| Glycerol, propoxylated | Ingestion | Rat | LD50 4,600 mg/kg |
| Siloxanes and Silicones, di-Me, reaction products with silica | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| Siloxanes and Silicones, di-Me, reaction products with silica | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 0.691 mg/l |
| Siloxanes and Silicones, di-Me, reaction products with silica | Ingestion | Rat | LD50 > 5,110 mg/kg |
| Oxydipropanol | Dermal | Rabbit | LD50 > 5,010 mg/kg |
| Oxydipropanol | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 2.34 mg/l |
| Oxydipropanol | Ingestion | Rat | LD50 > 14,800 mg/kg |
| dibutyltin dilaurate | Dermal | Rat | LD50 > 2,000 mg/kg |
| dibutyltin dilaurate | Ingestion | Rat | LD50 1,290 mg/kg |
| 2,2'-oxybisethanol | Ingestion | Human | LD50 estimated to be 300 - 2,000 mg/kg |
| 2,2'-oxybisethanol | Dermal | Rabbit | LD50 13,300 mg/kg |
| 2,2'-oxybisethanol | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 4.6 mg/l |
| 1,4-diazabicyclooctane | Dermal | Rabbit | LD50 > 3,200 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 |
| N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine) | Dermal | Rabbit | LD50 311 mg/kg |
| N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine) | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 3.4 mg/l |
| N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine) | Inhalation- | Rat | LC50 > 2.2 mg/l |

| | | | |
|---|--------------------------------|-----|--------------------|
| | Vapour (4 hours) | | |
| N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine) | Ingestion | Rat | LD50 571 mg/kg |
| octamethylcyclotetrasiloxane | Dermal | Rat | LD50 > 2,400 mg/kg |
| octamethylcyclotetrasiloxane | Inhalation-Dust/Mist (4 hours) | Rat | LC50 36 mg/l |
| octamethylcyclotetrasiloxane | Ingestion | Rat | LD50 > 5,000 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|---|-------------------|---------------------------|
| Glycerol poly(oxyethylene, oxypropylene) ether | similar compounds | Minimal irritation |
| Glycerol, propoxylated | Rabbit | No significant irritation |
| Siloxanes and Silicones, di-Me, reaction products with silica | Rabbit | No significant irritation |
| Oxydipropanol | Rabbit | No significant irritation |
| dibutyltin dilaurate | Rabbit | Corrosive |
| 2,2'-oxybisethanol | Rabbit | No significant irritation |
| 1,4-diazabicyclooctane | Rabbit | Mild irritant |
| N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine) | Rabbit | Corrosive |
| octamethylcyclotetrasiloxane | Rabbit | Minimal irritation |

Serious Eye Damage/Irritation

| Name | Species | Value |
|---|-------------------|---------------------------|
| Glycerol poly(oxyethylene, oxypropylene) ether | similar compounds | Mild irritant |
| Glycerol, propoxylated | Rabbit | Mild irritant |
| Siloxanes and Silicones, di-Me, reaction products with silica | Rabbit | No significant irritation |
| Oxydipropanol | Rabbit | No significant irritation |
| dibutyltin dilaurate | Rabbit | Corrosive |
| 2,2'-oxybisethanol | Rabbit | Mild irritant |
| 1,4-diazabicyclooctane | Rabbit | Corrosive |
| N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine) | Rabbit | Corrosive |
| octamethylcyclotetrasiloxane | Rabbit | No significant irritation |

Skin Sensitisation

| Name | Species | Value |
|---|-------------------------|----------------|
| Glycerol poly(oxyethylene, oxypropylene) ether | similar compounds | Not classified |
| Siloxanes and Silicones, di-Me, reaction products with silica | Human and animal | Not classified |
| Oxydipropanol | Guinea pig | Not classified |
| dibutyltin dilaurate | Guinea pig | Sensitising |
| N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine) | Multiple animal species | Not classified |
| octamethylcyclotetrasiloxane | 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 |
|---|----------|--|
| Glycerol poly(oxyethylene, oxypropylene) ether | In Vitro | Not mutagenic |
| Siloxanes and Silicones, di-Me, reaction products with silica | In Vitro | Not mutagenic |
| Oxydipropanol | In Vitro | Not mutagenic |
| Oxydipropanol | In vivo | Not mutagenic |
| dibutyltin dilaurate | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| dibutyltin dilaurate | In vivo | Mutagenic |
| N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine) | In Vitro | Not mutagenic |
| N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine) | In vivo | Not mutagenic |
| octamethylcyclotetrasiloxane | In Vitro | Some positive data exist, but the data are not sufficient for classification |

Carcinogenicity

| Name | Route | Species | Value |
|---|----------------|-------------------------|--|
| Siloxanes and Silicones, di-Me, reaction products with silica | Not specified. | Mouse | Some positive data exist, but the data are not sufficient for classification |
| Oxydipropanol | Ingestion | Multiple animal species | Not carcinogenic |

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

| Name | Route | Value | Species | Test result | Exposure Duration |
|---|------------|--|---------|-----------------------|--------------------------|
| Siloxanes and Silicones, di-Me, reaction products with silica | Ingestion | Not classified for female reproduction | Rat | NOAEL 509 mg/kg/day | 1 generation |
| Siloxanes and Silicones, di-Me, reaction products with silica | Ingestion | Not classified for male reproduction | Rat | NOAEL 497 mg/kg/day | 1 generation |
| Siloxanes and Silicones, di-Me, reaction products with silica | Ingestion | Not classified for development | Rat | NOAEL 1,350 mg/kg/day | during organogenesis |
| Oxydipropanol | Ingestion | Not classified for development | Rat | NOAEL 5,000 mg/kg/day | during organogenesis |
| dibutyltin dilaurate | Ingestion | Toxic to female reproduction | Rat | NOAEL 2 mg/kg/day | premating into lactation |
| dibutyltin dilaurate | Ingestion | Toxic to development | Rat | NOAEL 2.5 mg/kg/day | during gestation |
| N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine) | Dermal | Not classified for development | Rabbit | NOAEL 12 mg/kg/day | during organogenesis |
| octamethylcyclotetrasiloxane | Inhalation | Not classified for male reproduction | Rat | NOAEL 8.5 mg/l | 2 generation |
| octamethylcyclotetrasiloxane | Ingestion | Toxic to female reproduction | Rabbit | NOAEL 50 mg/kg/day | during organogenesis |
| octamethylcyclotetrasiloxane | Inhalation | Toxic to female reproduction | Rat | NOAEL 3.6 mg/l | 2 generation |

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

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|----------------------|-----------|--|-----------------------------------|---------|---------------------|------------------------|
| dibutyltin dilaurate | Ingestion | immune system | Causes damage to organs | Rat | LOAEL 5 mg/kg | |
| 2,2' -oxybisethanol | Ingestion | liver nervous system kidney and/or bladder | Causes damage to organs | Human | NOAEL Not available | poisoning and/or abuse |
| 2,2' -oxybisethanol | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Human | NOAEL Not available | poisoning and/or abuse |

| | | | | | | |
|---|------------|------------------------|----------------------------------|------------------------|---------------------|--|
| N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine) | Inhalation | respiratory irritation | May cause respiratory irritation | similar health hazards | NOAEL Not available | |
|---|------------|------------------------|----------------------------------|------------------------|---------------------|--|

Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|---|------------|---|--|---------|-----------------------|-----------------------|
| Siloxanes and Silicones, di-Me, reaction products with silica | Inhalation | respiratory system silicosis | Not classified | Human | NOAEL Not available | occupational exposure |
| 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 |
| dibutyltin dilaurate | Ingestion | liver | Causes damage to organs through prolonged or repeated exposure | Rat | NOAEL 2 mg/kg/day | 2 weeks |
| dibutyltin dilaurate | Ingestion | immune system | Causes damage to organs through prolonged or repeated exposure | Rat | NOAEL 0.3 mg/kg/day | 28 days |
| N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine) | Dermal | skin heart endocrine system gastrointestinal tract hematopoietic system liver immune system muscles nervous system kidney and/or bladder respiratory system vascular system | Not classified | Rabbit | NOAEL 8 mg/kg/day | 90 days |
| N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine) | Inhalation | skin endocrine system eyes respiratory system heart hematopoietic system liver immune system nervous system kidney and/or bladder | Not classified | Rat | NOAEL 0.038 mg/l | 14 weeks |
| N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine) | Ingestion | gastrointestinal tract liver kidney and/or bladder respiratory system | Not classified | Rat | NOAEL 150 mg/kg/day | 7 days |
| N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine) | Ingestion | heart endocrine system hematopoietic system nervous system | Not classified | Rat | NOAEL 220 mg/kg/day | 7 days |
| octamethylcyclotetrasiloxane | Dermal | hematopoietic system | Not classified | Rabbit | NOAEL 960 mg/kg/day | 3 weeks |
| octamethylcyclotetrasiloxane | Inhalation | liver | Not classified | Rat | NOAEL 8.5 mg/l | 13 weeks |
| octamethylcyclotetrasiloxane | Inhalation | endocrine system immune system kidney and/or | Not classified | Rat | NOAEL 8.5 mg/l | 2 generation |

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| | | | | | | |
|------------------------------|------------|----------------------|----------------|-----|-----------------------|----------|
| | | bladder | | | | |
| octamethylcyclotetrasiloxane | Inhalation | hematopoietic system | Not classified | Rat | NOAEL 8.5 mg/l | 13 weeks |
| octamethylcyclotetrasiloxane | Ingestion | liver | Not classified | Rat | NOAEL 1,600 mg/kg/day | 2 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

No product test data available.

| Material | CAS # | Organism | Type | Exposure | Test endpoint | Test result |
|--|------------|------------------|---|------------|---------------|-------------|
| N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine) | 3033-62-3 | Activated sludge | Experimental | 30 minutes | EC20 | >720 mg/l |
| N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine) | 3033-62-3 | Green algae | Experimental | 72 hours | ErC50 | 24 mg/l |
| N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine) | 3033-62-3 | Water flea | Experimental | 48 hours | EC50 | 102 mg/l |
| N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine) | 3033-62-3 | Zebra Fish | Experimental | 96 hours | LC50 | 131.2 mg/l |
| N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine) | 3033-62-3 | Green algae | Experimental | 72 hours | ErC10 | 5 mg/l |
| Glycerol poly(oxyethylene, oxypropylene) ether | 9082-00-2 | N/A | Data not available or insufficient for classification | N/A | N/A | N/A |
| Glycerol, propoxylated | 25791-96-2 | Golden Orfe | Experimental | 96 hours | LC50 | >1,000 mg/l |
| Glycerol, propoxylated | 25791-96-2 | Green algae | Experimental | 72 hours | ErC50 | >100 mg/l |
| Glycerol, propoxylated | 25791-96-2 | Water flea | Experimental | 48 hours | EC50 | >100 mg/l |
| Glycerol, propoxylated | 25791-96-2 | Green algae | Experimental | 72 hours | NOEC | >100 mg/l |
| 1,4-diazabicyclooctane | 280-57-9 | Bacteria | Experimental | 17 hours | EC50 | 356 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 | ErC50 | 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 | ErC10 | 79 mg/l |
| Siloxanes and Silicones, di-Me, | 67762-90-7 | N/A | Data not available or insufficient for | N/A | N/A | N/A |

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| reaction products with silica | | | classification | | | |
|-------------------------------|------------|------------------|----------------------|------------|--------------------------------|--------------------------------|
| 2,2' -oxybisethanol | 111-46-6 | Activated sludge | Experimental | 30 minutes | EC20 | >1,995 mg/l |
| 2,2' -oxybisethanol | 111-46-6 | Bacteria | Experimental | 16 hours | LOEC | 8,000 mg/l |
| 2,2' -oxybisethanol | 111-46-6 | Fathead minnow | Experimental | 96 hours | LC50 | 75,200 mg/l |
| 2,2' -oxybisethanol | 111-46-6 | Water flea | Experimental | 48 hours | LC50 | 48,900 mg/l |
| 2,2' -oxybisethanol | 111-46-6 | Green algae | Analogous Compound | 72 hours | NOEC | 100 mg/l |
| 2,2' -oxybisethanol | 111-46-6 | Water flea | Experimental | 7 days | NOEC | 8,590 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 |
| Oxydipropanol | 25265-71-8 | Bacteria | Experimental | 18 hours | EC10 | 1,000 mg/l |
| Oxydipropanol | 25265-71-8 | Bobwhite quail | Experimental | 14 days | LD50 | >2,000 mg per kg of bodyweight |
| octamethylcyclotetrasil oxane | 556-67-2 | Blackworm | Experimental | 28 days | NOEC | 0.73 mg/kg (Dry Weight) |
| octamethylcyclotetrasil oxane | 556-67-2 | Midge | Experimental | 14 days | LC50 | >170 mg/kg (Dry Weight) |
| octamethylcyclotetrasil oxane | 556-67-2 | Mysid Shrimp | Experimental | 96 hours | LC50 | >0.0091 mg/l |
| octamethylcyclotetrasil oxane | 556-67-2 | Rainbow trout | Experimental | 96 hours | LC50 | >0.022 mg/l |
| octamethylcyclotetrasil oxane | 556-67-2 | Water flea | Experimental | 48 hours | EC50 | >0.015 mg/l |
| octamethylcyclotetrasil oxane | 556-67-2 | Rainbow trout | Experimental | 93 days | NOEC | 0.0044 mg/l |
| octamethylcyclotetrasil oxane | 556-67-2 | Water flea | Experimental | 21 days | NOEC | 0.015 mg/l |
| octamethylcyclotetrasil oxane | 556-67-2 | Activated sludge | Experimental | 3 hours | EC50 | >10,000 mg/l |
| dibutyltin dilaurate | 77-58-7 | Zebra Fish | Endpoint not reached | 96 hours | LC50 | >100 mg/l |
| dibutyltin dilaurate | 77-58-7 | Green algae | Experimental | 72 hours | No tox obs at lmt of water sol | >100 mg/l |
| dibutyltin dilaurate | 77-58-7 | Water flea | Experimental | 48 hours | IC50 | 0.17 mg/l |
| dibutyltin dilaurate | 77-58-7 | Activated sludge | Experimental | 3 hours | EC50 | >1,000 mg/l |

12.2. Persistence and degradability

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|--|------------|-------------------------------|----------|---------------|-----------------------------------|-----------------------------------|
| N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine) | 3033-62-3 | Experimental Biodegradation | 28 days | BOD | 0 %BOD/ThOD | OECD 301C - MITI test (I) |
| Glycerol poly(oxyethylene, oxypropylene) ether | 9082-00-2 | Modeled Biodegradation | 28 days | BOD | 20 %BOD/ThOD | Catalogic™ |
| Glycerol, propoxylated | 25791-96-2 | Experimental Biodegradation | 28 days | CO2 evolution | 38 %CO2 evolution/THCO2 evolution | OECD 301B - Modified sturm or CO2 |
| 1,4-diazabicyclooctane | 280-57-9 | Experimental Biodegradation | 28 days | CO2 evolution | 7 %CO2 evolution/THCO2 evolution | OECD 301B - Modified sturm or CO2 |
| Siloxanes and Silicones, di-Me, reaction products with | 67762-90-7 | Data not availbl-insufficient | N/A | N/A | N/A | N/A |

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| | | | | | | |
|------------------------------|------------|--|---------|--------------------------------|-------------------------------------|-------------------------------------|
| silica | | | | | | |
| 2,2' -oxybisethanol | 111-46-6 | Experimental Biodegradation | 28 days | Dissolv. Organic Carbon Deplet | 91.8 %removal of DOC | OECD 301A - DOC Die Away Test |
| Oxydipropanol | 25265-71-8 | Experimental Biodegradation | 28 days | BOD | 84.4 %BOD/Th OD | OECD 301F - Manometric respirometry |
| Oxydipropanol | 25265-71-8 | Experimental Aquatic Inherent Biodegrad. | 42 days | Dissolv. Organic Carbon Deplet | 83.6 %removal of DOC | OECD 302A - Modified SCAS Test |
| Oxydipropanol | 25265-71-8 | Experimental Biodegradation | 64 days | Dissolv. Organic Carbon Deplet | 23.6 %removal of DOC | OECD 306(Misc)-Biodegrad. Seaw |
| octamethylcyclotetrasiloxane | 556-67-2 | Experimental Biodegradation | 29 days | CO2 evolution | 3.7 %CO2 evolution/THC O2 evolution | OECD 310 CO2 Headspace |
| octamethylcyclotetrasiloxane | 556-67-2 | Experimental Photolysis | | Photolytic half-life (in air) | 31 days (t 1/2) | |
| octamethylcyclotetrasiloxane | 556-67-2 | Experimental Hydrolysis | | Hydrolytic half-life (pH 7) | 69.3-144 hours (t 1/2) | OECD 111 Hydrolysis func of pH |
| dibutyltin dilaurate | 77-58-7 | Experimental Biodegradation | 39 days | BOD | 23 %BOD/ThOD | OECD 301F - Manometric respirometry |
| dibutyltin dilaurate | 77-58-7 | Experimental Hydrolysis | | Hydrolytic half-life (pH 7) | ≤1 hours (t 1/2) | |

12.3 : Bioaccumulative potential

| Material | Cas No. | Test type | Duration | Study Type | Test result | Protocol |
|---|------------|---|----------|------------------------|-------------|---------------------------------|
| N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine) | 3033-62-3 | Experimental Bioconcentration | | Log Kow | -0.339 | OECD 107 log Kow shke flask mtd |
| Glycerol poly(oxyethylene, oxypropylene) ether | 9082-00-2 | Modeled Bioconcentration | | Bioaccumulation factor | 2 | Catalogic™ |
| Glycerol poly(oxyethylene, oxypropylene) ether | 9082-00-2 | Modeled Bioconcentration | | Log Kow | -2.6 | Episuite™ |
| Glycerol, propoxylated | 25791-96-2 | Experimental BCF - Fish | 42 days | Bioaccumulation factor | ≤7 | |
| 1,4-diazabicyclooctane | 280-57-9 | Experimental BCF - Fish | 42 days | Bioaccumulation factor | <13 | OECD305-Bioconcentration |
| Siloxanes and Silicones, di-Me, reaction products with silica | 67762-90-7 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| 2,2' -oxybisethanol | 111-46-6 | Experimental Bioconcentration | | Log Kow | -1.98 | |
| Oxydipropanol | 25265-71-8 | Experimental BCF - Fish | 42 days | Bioaccumulation factor | 4.6 | OECD305-Bioconcentration |
| Oxydipropanol | 25265-71-8 | Experimental Bioconcentration | | Log Kow | -0.462 | EC A.8 Partition Coefficient |
| octamethylcyclotetrasiloxane | 556-67-2 | Experimental BCF - Fish | 28 days | Bioaccumulation factor | 12400 | 40CFR 797.1520-Fish Bioaccumm |
| octamethylcyclotetrasiloxane | 556-67-2 | Experimental Bioconcentration | | Log Kow | 6.49 | OECD 123 log Kow slow stir |
| dibutyltin dilaurate | 77-58-7 | Experimental BCF - Fish | 56 days | Bioaccumulation factor | ≤110 | similar to OECD 305 |
| dibutyltin dilaurate | 77-58-7 | Experimental Bioconcentration | | Log Kow | 4.44 | OECD 107 log Kow shke flask mtd |

12.4. Mobility in soil

| Material | Cas No. | Test type | Study Type | Test result | Protocol |
|--|------------|--------------------------|------------|-------------|--------------------------|
| N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine) | 3033-62-3 | Modeled Mobility in Soil | Koc | 13 l/kg | Episuite™ |
| Glycerol poly(oxyethylene, oxypropylene) ether | 9082-00-2 | Modeled Mobility in Soil | Koc | 13 l/kg | Episuite™ |
| 1,4-diazabicyclooctane | 280-57-9 | Modeled Mobility in Soil | Koc | 3 l/kg | Episuite™ |
| Oxydipropanol | 25265-71-8 | Modeled Mobility in Soil | Koc | 1 l/kg | Episuite™ |
| octamethylcyclotetrasiloxane | 556-67-2 | Experimental | Koc | 16,600 l/kg | OECD 106 Adsp-Desb Batch |

| | | | | | |
|----|--|------------------|--|--|-------|
| ne | | Mobility in Soil | | | Equil |
|----|--|------------------|--|--|-------|

12.5. Results of the PBT and vPvB assessment

| Ingredient | CAS Nbr | PBT/vPvB status |
|------------------------------|----------------|--------------------------|
| octamethylcyclotetrasiloxane | 556-67-2 | Meets REACH PBT criteria |
| octamethylcyclotetrasiloxane | 556-67-2 | Meets REACH PBT criteria |

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

SECTION 14: Transportation information

Not hazardous for transportation.

| | Ground Transport (ADR) | Air Transport (IATA) | Marine Transport (IMDG) |
|--|-------------------------------|-----------------------------|--------------------------------|
| 14.1 UN number or ID 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 Marine Transport in bulk according to IMO instruments | 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

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> |
|------------------------------|----------------|
| octamethylcyclotetrasiloxane | 556-67-2 |

Restriction status: listed in REACH Annex XVII

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

Authorization status under REACH:

The following substance/s contained in this product might be or is/are subject to authorization in accordance with REACH:

| <u>Ingredient</u> | <u>CAS Nbr</u> |
|------------------------------|----------------|
| octamethylcyclotetrasiloxane | 556-67-2 |

Authorization status: listed in the Candidate List of Substances of Very High Concern for Authorization

Global inventory status

Contact 3M for more information. The components of this material are in compliance with the provisions of the Korea Chemical Control Act. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental

Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

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Seveso hazard categories, Annex 1, Part 1

None

Seveso named dangerous substances, Annex 1, Part 2

| Dangerous Substances | Identifier(s) | Qualifying quantity (tonnes) for the application of | |
|------------------------------|---------------|---|-------------------------|
| | | Lower-tier requirements | Upper-tier requirements |
| octamethylcyclotetrasiloxane | 556-67-2 | 100 | 200 |

Regulation (EU) No 649/2012

| Chemical | Identifier(s) | Annex I |
|----------------------|---------------|---------|
| dibutyltin dilaurate | 77-58-7 | Part 1 |

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

| | |
|--------|---|
| EUH071 | Corrosive to the respiratory tract. |
| H226 | Flammable liquid and vapour. |
| H302 | Harmful if swallowed. |
| H311 | Toxic in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H341 | Suspected of causing genetic defects. |
| H360FD | May damage fertility. May damage the unborn child. |
| H361f | Suspected of damaging fertility. |
| H370 | Causes damage to organs. |
| H371 | May cause damage to organs: immune system. |
| H372 | Causes damage to organs through prolonged or repeated exposure. |
| H373 | May cause damage to organs through prolonged or repeated exposure: immune system liver. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects. |

Revision information:

Section 3: Composition/ Information of ingredients table information was modified.

Section 12: Component ecotoxicity information information was modified.

Section 12: Mobility in soil information information was modified.

Section 12: Persistence and Degradability information information was modified.

Section 12:Biocumulative potential information information was modified.

Annex

| | |
|---|--|
| 1. Title | |
| Substance identification | 2,2' -oxybisethanol; EC No. 203-872-2; CAS Nbr 111-46-6; |
| Exposure Scenario Name | Professional Use of Adhesives and Sealants |
| Lifecycle Stage | Use at industrial sites |
| Contributing activities | PROC 13 -Treatment of articles by dipping and pouring ERC 08c -Widespread use leading to inclusion into/onto article (indoor) |
| Processes, tasks and activities covered | Application of product with applicator gun. |
| 2. Operational conditions and risk management measures | |
| Operating Conditions | Physical state: Liquid. General operating conditions: Duration of use: 8 hours/day; Emission days per year: <= 240 days per year; Indoor use; |
| Risk management measures | Under the operational conditions described above the following risk management measures apply: General risk management measures: Human health: Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Refer to Section 8 of the SDS for specific glove material.; Environmental: None needed; |
| Waste management measures | No use-specific waste management measures are required for this product. Refer to Section 13 of main SDS for disposal instructions: |
| 3. Prediction of exposure | |
| Prediction of exposure | Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted. |

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

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| | | | |
|------------------------|------------|-------------------------|------------|
| Document group: | 07-3378-2 | Version number: | 11.03 |
| Revision date: | 18/04/2023 | Supersedes date: | 02/06/2021 |

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 Flexible Foam/Part A, 08463

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

Identified uses

Automotive.

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 |
|--|------------|-----------|---------|
| Formaldehyde, oligomeric reaction products with aniline and phosgene | 32055-14-4 | 500-079-6 | 10 - 30 |
| Polymethylene polyphenylene isocyanate | 9016-87-9 | | 10 - 30 |
| o-(p-isocyanatobenzyl)phenyl isocyanate | 5873-54-1 | 227-534-9 | 1 - 10 |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | 202-966-0 | 1 - 10 |

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. |
| P280K | Wear protective gloves and respiratory protection. |

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. |

47% of the mixture consists of components of unknown acute oral toxicity.

Contains 51% 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. Contains a substance that meets the criteria for PBT according to Regulation (EC) No 1907/2006, Annex XIII Contains a substance that meets the criteria for vPvB according to Regulation (EC) No 1907/2006, Annex XIII

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] |
|--|--|---------|---|
| Urethane Prepolymer NJTSRN 04499600-6306 | Trade Secret | 30 - 60 | Substance not classified as hazardous |
| Formaldehyde, oligomeric reaction products with aniline and phosgene | (CAS-No.) 32055-14-4 (EC-No.) 500-079-6 | 10 - 30 | 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 |
| Polymethylene polyphenylene isocyanate | (CAS-No.) 9016-87-9 | 10 - 30 | 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 |
| o-(p-isocyanatobenzyl)phenyl isocyanate | (CAS-No.) 5873-54-1 (EC-No.) 227-534-9 | 1 - 10 | 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 |
| 4,4'-methylenediphenyl diisocyanate | (CAS-No.) 101-68-8 (EC-No.) 202-966-0 | 1 - 10 | 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 |
| Dimethyl Siloxane, Reaction Product | (CAS-No.) 67762-90-7 | 1 - 5 | Substance with a national occupational |

| | | | |
|------------------------------|--|--------|---|
| With Silica | | | exposure limit |
| octamethylcyclotetrasiloxane | (CAS-No.) 556-67-2 (EC-No.) 209-136-7 | < 0.02 | Repr. 2, H361f Aquatic Chronic 1, H410, M=10 Flam. Liq. 3, H226 |

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 |
|--|--|---|
| o-(p-isocyanatobenzyl)phenyl isocyanate | (CAS-No.) 5873-54-1 (EC-No.) 227-534-9 | (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 |
| Formaldehyde, oligomeric reaction products with aniline and phosgene | (CAS-No.) 32055-14-4 (EC-No.) 500-079-6 | (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 |
| Polymethylene polyphenylene isocyanate | (CAS-No.) 9016-87-9 | (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 |

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

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

Remove person to fresh air. If you feel unwell, get medical attention.

Skin contact

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye contact

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If swallowed

Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

No critical symptoms or effects. See Section 11.1, information on toxicological effects.

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

Not applicable

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

Substance

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

Condition

During combustion.
During combustion.
During combustion.
During combustion.
During combustion.

5.3. 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

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 container tightly closed to prevent contamination with water or air. If contamination

is suspected, do not reseal container. Store away from heat. Store away from amines.

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;TWA(8 hours):0.005 ppm | as NCO, Respiratory/Dermal Sensitizer |
| Silicon dioxide | 67762-90-7 | Ireland OELs | TWA(Total inhalable dust)(8 hours):6 mg/m ³ ;TWA(as respirable dust)(8 hours):2.4 mg/m ³ | |
| Free isocyanates | 9016-87-9 | Ireland OELs | TWA(8 hours):0.02 mg/m ³ ;STEL(15 minutes):0.07 mg/m ³ | as NCO |
| Polymethylene polyphenylene isocyanate | 9016-87-9 | Manufacturer determined | TWA(inhalable fraction)(8 hours):0.05 mg/m ³ ;CEIL(inhalable fraction):0.1 mg/m ³ | Dermal Sensitizer, Respiratory 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.

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

| Material | Thickness (mm) | Breakthrough Time |
|-----------------|-----------------------|--------------------------|
| Butyl rubber. | No data available | No data available |
| Neoprene. | No data available | No data available |
| Nitrile rubber. | 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

Neoprene apron.

Apron – Nitrile

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. |
| Specific Physical Form: | Paste |
| Colour | Brown |
| Odor | Odourless |
| 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 | <i>No data available.</i> |
| Water solubility | <i>Not applicable.</i> |
| Solubility- non-water | <i>No data available.</i> |
| Partition coefficient: n-octanol/water | <i>No data available.</i> |

| | |
|-------------------------|---|
| Vapour pressure | <=186,158.4 Pa [@ 55 °C] [Details: MITS data] |
| Density | 1.135 - 1.16 g/ml |
| Relative density | 1.135 - 1.16 [Ref.Std: WATER=1] |
| Relative Vapour Density | 8.5 [Ref.Std: AIR=1] |

9.2. Other information

9.2.2 Other safety characteristics

| | |
|-------------------------------|--------------------|
| EU Volatile Organic Compounds | No data available. |
| Evaporation rate | Not applicable. |
| Molecular weight | No data available. |
| Percent volatile | 0.1 % weight |

SECTION 10: Stability and reactivity

10.1 Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Heat.

10.5 Incompatible materials

Amines.

Alcohols.

Water

Reaction with water, alcohols, and amines is not hazardous if container can vent to the atmosphere to prevent pressure buildup.

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 |
| Polymethylene polyphenylene isocyanate | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| Polymethylene polyphenylene isocyanate | Inhalation-Dust/Mist (4 hours) | Rat | LC50 0.368 mg/l |
| Polymethylene polyphenylene isocyanate | Ingestion | Rat | LD50 31,600 mg/kg |
| Formaldehyde, oligomeric reaction products with aniline and phosgene | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| Formaldehyde, oligomeric reaction products with aniline and phosgene | Inhalation-Dust/Mist (4 hours) | Rat | LC50 0.368 mg/l |
| Formaldehyde, oligomeric reaction products with aniline and phosgene | Ingestion | Rat | LD50 31,600 mg/kg |
| o-(p-isocyanatobenzyl)phenyl isocyanate | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| 4,4'-methylenediphenyl diisocyanate | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| o-(p-isocyanatobenzyl)phenyl isocyanate | Inhalation-Dust/Mist (4 hours) | Rat | LC50 0.368 mg/l |
| o-(p-isocyanatobenzyl)phenyl isocyanate | Ingestion | Rat | LD50 31,600 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 |
| Dimethyl Siloxane, Reaction Product With Silica | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| Dimethyl Siloxane, Reaction Product With Silica | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 0.691 mg/l |
| Dimethyl Siloxane, Reaction Product With Silica | Ingestion | Rat | LD50 > 5,110 mg/kg |
| octamethylcyclotetrasiloxane | Dermal | Rat | LD50 > 2,400 mg/kg |

| | | | |
|------------------------------|--------------------------------|-----|--------------------|
| octamethylcyclotetrasiloxane | Inhalation-Dust/Mist (4 hours) | Rat | LC50 36 mg/l |
| octamethylcyclotetrasiloxane | Ingestion | Rat | LD50 > 5,000 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|--|-------------------------|---------------------------|
| Polymethylene polyphenylene isocyanate | official classification | Irritant |
| Formaldehyde, oligomeric reaction products with aniline and phosgene | official classification | Irritant |
| o-(p-isocyanatobenzyl)phenyl isocyanate | official classification | Irritant |
| 4,4'-methylenediphenyl diisocyanate | official classification | Irritant |
| Dimethyl Siloxane, Reaction Product With Silica | Rabbit | No significant irritation |
| octamethylcyclotetrasiloxane | Rabbit | Minimal irritation |

Serious Eye Damage/Irritation

| Name | Species | Value |
|--|-------------------------|---------------------------|
| Polymethylene polyphenylene isocyanate | official classification | Severe irritant |
| Formaldehyde, oligomeric reaction products with aniline and phosgene | official classification | Severe irritant |
| o-(p-isocyanatobenzyl)phenyl isocyanate | official classification | Severe irritant |
| 4,4'-methylenediphenyl diisocyanate | official classification | Severe irritant |
| Dimethyl Siloxane, Reaction Product With Silica | Rabbit | No significant irritation |
| octamethylcyclotetrasiloxane | Rabbit | No significant irritation |

Skin Sensitisation

| Name | Species | Value |
|--|-------------------------|----------------|
| Polymethylene polyphenylene isocyanate | official classification | Sensitising |
| Formaldehyde, oligomeric reaction products with aniline and phosgene | official classification | Sensitising |
| o-(p-isocyanatobenzyl)phenyl isocyanate | official classification | Sensitising |
| 4,4'-methylenediphenyl diisocyanate | official classification | Sensitising |
| Dimethyl Siloxane, Reaction Product With Silica | Human and animal | Not classified |
| octamethylcyclotetrasiloxane | Human and animal | Not classified |

Respiratory Sensitisation

| Name | Species | Value |
|--|---------|-------------|
| Polymethylene polyphenylene isocyanate | Human | Sensitising |
| Formaldehyde, oligomeric reaction products with aniline and phosgene | Human | Sensitising |
| o-(p-isocyanatobenzyl)phenyl isocyanate | Human | Sensitising |
| 4,4'-methylenediphenyl diisocyanate | Human | Sensitising |

Germ Cell Mutagenicity

| Name | Route | Value |
|--|----------|--|
| Polymethylene polyphenylene isocyanate | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Formaldehyde, oligomeric reaction products with aniline and phosgene | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| o-(p-isocyanatobenzyl)phenyl isocyanate | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| 4,4'-methylenediphenyl diisocyanate | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Dimethyl Siloxane, Reaction Product With Silica | In Vitro | Not mutagenic |
| octamethylcyclotetrasiloxane | In Vitro | Some positive data exist, but the data are not sufficient for classification |

Carcinogenicity

| Name | Route | Species | Value |
|--|----------------|---------|--|
| Polymethylene polyphenylene isocyanate | Inhalation | Rat | Some positive data exist, but the data are not sufficient for classification |
| Formaldehyde, oligomeric reaction products with aniline and phosgene | Inhalation | Rat | Some positive data exist, but the data are not sufficient for classification |
| o-(p-isocyanatobenzyl)phenyl isocyanate | Inhalation | Rat | Some positive data exist, but the data are not sufficient for classification |
| 4,4'-methylenediphenyl diisocyanate | Inhalation | Rat | Some positive data exist, but the data are not sufficient for classification |
| Dimethyl Siloxane, Reaction Product With Silica | Not specified. | Mouse | Some positive data exist, but the data are not sufficient for classification |

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

| Name | Route | Value | Species | Test result | Exposure Duration |
|--|------------|--|---------|-----------------------|----------------------|
| Polymethylene polyphenylene isocyanate | Inhalation | Not classified for development | Rat | NOAEL 0.004 mg/l | during organogenesis |
| Formaldehyde, oligomeric reaction products with aniline and phosgene | Inhalation | Not classified for development | Rat | NOAEL 0.004 mg/l | during organogenesis |
| o-(p-isocyanatobenzyl)phenyl isocyanate | Inhalation | Not classified for development | Rat | NOAEL 0.004 mg/l | during organogenesis |
| 4,4'-methylenediphenyl diisocyanate | Inhalation | Not classified for development | Rat | NOAEL 0.004 mg/l | during organogenesis |
| Dimethyl Siloxane, Reaction Product With Silica | Ingestion | Not classified for female reproduction | Rat | NOAEL 509 mg/kg/day | 1 generation |
| Dimethyl Siloxane, Reaction Product With Silica | Ingestion | Not classified for male reproduction | Rat | NOAEL 497 mg/kg/day | 1 generation |
| Dimethyl Siloxane, Reaction Product With Silica | Ingestion | Not classified for development | Rat | NOAEL 1,350 mg/kg/day | during organogenesis |
| octamethylcyclotetrasiloxane | Inhalation | Not classified for male reproduction | Rat | NOAEL 8.5 mg/l | 2 generation |
| octamethylcyclotetrasiloxane | Ingestion | Toxic to female reproduction | Rabbit | NOAEL 50 mg/kg/day | during organogenesis |
| octamethylcyclotetrasiloxane | Inhalation | Toxic to female reproduction | Rat | NOAEL 3.6 mg/l | 2 generation |

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

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|--|------------|------------------------|----------------------------------|-------------------------|---------------------|-------------------|
| Polymethylene polyphenylene isocyanate | Inhalation | respiratory irritation | May cause respiratory irritation | official classification | NOAEL Not available | |
| Formaldehyde, oligomeric reaction products with aniline and phosgene | Inhalation | respiratory irritation | May cause respiratory irritation | official classification | NOAEL Not available | |
| o-(p-isocyanatobenzyl)phenyl isocyanate | Inhalation | respiratory irritation | May cause respiratory irritation | official classification | NOAEL Not available | |
| 4,4'-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 |
|--|------------|--|--|---------|-----------------------|-----------------------|
| Polymethylene polyphenylene isocyanate | Inhalation | respiratory system | Causes damage to organs through prolonged or repeated exposure | Rat | LOAEL 0.004 mg/l | 13 weeks |
| Formaldehyde, oligomeric reaction products with aniline and phosgene | Inhalation | respiratory system | Causes damage to organs through prolonged or repeated exposure | Rat | LOAEL 0.004 mg/l | 13 weeks |
| o-(p-isocyanatobenzyl)phenyl isocyanate | Inhalation | respiratory system | Causes damage to organs through prolonged or repeated exposure | Rat | LOAEL 0.004 mg/l | 13 weeks |
| 4,4'-methylenediphenyl diisocyanate | Inhalation | respiratory system | Causes damage to organs through prolonged or repeated exposure | Rat | LOAEL 0.004 mg/l | 13 weeks |
| Dimethyl Siloxane, Reaction Product With Silica | Inhalation | respiratory system silicosis | Not classified | Human | NOAEL Not available | occupational exposure |
| octamethylcyclotetrasiloxane | Dermal | hematopoietic system | Not classified | Rabbit | NOAEL 960 mg/kg/day | 3 weeks |
| octamethylcyclotetrasiloxane | Inhalation | liver | Not classified | Rat | NOAEL 8.5 mg/l | 13 weeks |
| octamethylcyclotetrasiloxane | Inhalation | endocrine system immune system kidney and/or bladder | Not classified | Rat | NOAEL 8.5 mg/l | 2 generation |
| octamethylcyclotetrasiloxane | Inhalation | hematopoietic system | Not classified | Rat | NOAEL 8.5 mg/l | 13 weeks |
| octamethylcyclotetrasiloxane | Ingestion | liver | Not classified | Rat | NOAEL 1,600 mg/kg/day | 2 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

No product test data available.

| Material | CAS # | Organism | Type | Exposure | Test endpoint | Test result |
|---|--------------|------------------|---|----------|-----------------------------------|-------------|
| Urethane Prepolymer NJTSRN 04499600- 6306 | Trade Secret | N/A | Data not available or insufficient for classification | N/A | N/A | N/A |
| Formaldehyde, oligomeric reaction products with aniline and phosgene | 32055-14-4 | Green algae | Estimated | 72 hours | EL50 | >100 mg/l |
| Formaldehyde, oligomeric reaction products with aniline and phosgene | 32055-14-4 | Water flea | Estimated | 24 hours | EC50 | >100 mg/l |
| Formaldehyde, oligomeric reaction products with aniline and phosgene | 32055-14-4 | Green algae | Estimated | 72 hours | NOEL | 100 mg/l |
| Polymethylene polyphenylene isocyanate | 9016-87-9 | Green algae | Analogous Compound | 72 hours | No tox obs at lmt of water sol | >100 mg/l |
| Polymethylene polyphenylene isocyanate | 9016-87-9 | Water flea | Analogous Compound | 24 hours | No tox obs at lmt of water sol | >100 mg/l |
| Polymethylene polyphenylene isocyanate | 9016-87-9 | Green algae | Analogous Compound | 72 hours | No tox obs at lmt of water sol | >100 mg/l |
| Polymethylene polyphenylene isocyanate | 9016-87-9 | Activated sludge | Analogous Compound | 3 hours | EC50 | >100 mg/l |
| o-(p- isocyanatobenzyl)phen yl isocyanate | 5873-54-1 | Activated sludge | Analogous Compound | 3 hours | EC50 | >100 mg/l |
| o-(p- isocyanatobenzyl)phen yl isocyanate | 5873-54-1 | Green algae | Analogous Compound | 72 hours | No tox obs at lmt of water sol | >100 mg/l |
| o-(p- isocyanatobenzyl)phen yl isocyanate | 5873-54-1 | Water flea | Analogous Compound | 24 hours | No tox obs at lmt of water sol | >100 mg/l |
| o-(p- isocyanatobenzyl)phen yl isocyanate | 5873-54-1 | Zebra Fish | Analogous Compound | 96 hours | No tox obs at lmt of water sol | >100 mg/l |
| o-(p- isocyanatobenzyl)phen yl isocyanate | 5873-54-1 | Activated sludge | Estimated | 3 hours | EC50 | >100 mg/l |
| o-(p- isocyanatobenzyl)phen yl isocyanate | 5873-54-1 | Green algae | Estimated | 72 hours | EC50 | >1,640 mg/l |
| o-(p- isocyanatobenzyl)phen yl isocyanate | 5873-54-1 | Water flea | Estimated | 24 hours | EC50 | >1,000 mg/l |
| o-(p- isocyanatobenzyl)phen yl isocyanate | 5873-54-1 | Zebra Fish | Estimated | 96 hours | LC50 | >1,000 mg/l |
| o-(p- isocyanatobenzyl)phen yl isocyanate | 5873-54-1 | Green algae | Analogous Compound | 72 hours | NOEL | 100 mg/l |
| o-(p- isocyanatobenzyl)phen yl isocyanate | 5873-54-1 | Green algae | Estimated | 72 hours | NOEC | 1,640 mg/l |
| o-(p- isocyanatobenzyl)phen yl isocyanate | 5873-54-1 | Water flea | Estimated | 21 days | NOEC | 10 mg/l |

| | | | | | | |
|---|------------|------------------|---|----------|--------------------------------|-------------------------|
| o-(p-isocyanatobenzyl)phenyl isocyanate | 5873-54-1 | Water flea | Experimental | 21 days | NOEC | 100 mg/l |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | Activated sludge | Analogous Compound | 3 hours | EC50 | >100 mg/l |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | Green algae | Analogous Compound | 72 hours | No tox obs at lmt of water sol | >100 mg/l |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | Water flea | Analogous Compound | 24 hours | No tox obs at lmt of water sol | >100 mg/l |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | Zebra Fish | Analogous Compound | 96 hours | No tox obs at lmt of water sol | >100 mg/l |
| 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 | Analogous Compound | 72 hours | NOEL | 100 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 |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | Water flea | Experimental | 21 days | NOEC | 100 mg/l |
| Dimethyl Siloxane, Reaction Product With Silica | 67762-90-7 | N/A | Data not available or insufficient for classification | N/A | N/A | N/A |
| octamethylcyclotetrasiloxane | 556-67-2 | Blackworm | Experimental | 28 days | NOEC | 0.73 mg/kg (Dry Weight) |
| octamethylcyclotetrasiloxane | 556-67-2 | Midge | Experimental | 14 days | LC50 | >170 mg/kg (Dry Weight) |
| octamethylcyclotetrasiloxane | 556-67-2 | Mysid Shrimp | Experimental | 96 hours | LC50 | >0.0091 mg/l |
| octamethylcyclotetrasiloxane | 556-67-2 | Rainbow trout | Experimental | 96 hours | LC50 | >0.022 mg/l |
| octamethylcyclotetrasiloxane | 556-67-2 | Water flea | Experimental | 48 hours | EC50 | >0.015 mg/l |
| octamethylcyclotetrasiloxane | 556-67-2 | Rainbow trout | Experimental | 93 days | NOEC | 0.0044 mg/l |
| octamethylcyclotetrasiloxane | 556-67-2 | Water flea | Experimental | 21 days | NOEC | 0.015 mg/l |
| octamethylcyclotetrasiloxane | 556-67-2 | Activated sludge | Experimental | 3 hours | EC50 | >10,000 mg/l |

12.2. Persistence and degradability

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|--|--------------|--|----------|----------------------|------------------|--------------------------------|
| Urethane Prepolymer NJTSRN 04499600-6306 | Trade Secret | Data not availbl-insufficient | N/A | N/A | N/A | N/A |
| Formaldehyde, oligomeric reaction products with aniline and phosgene | 32055-14-4 | Data not availbl-insufficient | N/A | N/A | N/A | N/A |
| Polymethylene polyphenylene isocyanate | 9016-87-9 | Analogous Compound Aquatic Inherent Biodegrad. | 28 days | BOD | 0 %BOD/ThO D | OECD 302C - Modified MITI (II) |
| Polymethylene polyphenylene isocyanate | 9016-87-9 | Analogous Compound Hydrolysis | | Hydrolytic half-life | 20 hours (t 1/2) | |
| o-(p-isocyanatobenzyl)phenyl isocyanate | 5873-54-1 | Estimated Hydrolysis | | Hydrolytic half-life | 20 hours (t 1/2) | |
| o-(p-isocyanatobenzyl)phenyl | 5873-54-1 | Data not availbl-insufficient | N/A | N/A | N/A | N/A |

| | | | | | | |
|---|------------|------------------------------------|---------|-------------------------------|-------------------------------------|------------------------------------|
| isocyanate | | | | | | |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | Estimated Hydrolysis | | Hydrolytic half-life | 20 hours (t 1/2) | |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | Data not available or insufficient | N/A | N/A | N/A | N/A |
| Dimethyl Siloxane, Reaction Product With Silica | 67762-90-7 | Data not available or insufficient | N/A | N/A | N/A | N/A |
| octamethylcyclotetrasiloxane | 556-67-2 | Experimental Biodegradation | 29 days | CO2 evolution | 3.7 %CO2 evolution/THC O2 evolution | OECD 310 CO2 Headspace |
| octamethylcyclotetrasiloxane | 556-67-2 | Experimental Photolysis | | Photolytic half-life (in air) | 31 days (t 1/2) | |
| octamethylcyclotetrasiloxane | 556-67-2 | Experimental Hydrolysis | | Hydrolytic half-life (pH 7) | 69.3-144 hours (t 1/2) | OECD 111 Hydrolysis function of pH |

12.3 : Bioaccumulative potential

| Material | Cas No. | Test type | Duration | Study Type | Test result | Protocol |
|--|--------------|---|----------|------------------------|-------------|-------------------------------|
| Urethane Prepolymer NJTSRN 04499600-6306 | Trade Secret | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Formaldehyde, oligomeric reaction products with aniline and phosgene | 32055-14-4 | Estimated Bioconcentration | 28 days | Bioaccumulation factor | 200 | OECD305-Bioconcentration |
| Polymethylene polyphenylene isocyanate | 9016-87-9 | Analogous Compound BCF - Fish | 28 days | Bioaccumulation factor | 200 | OECD305-Bioconcentration |
| Polymethylene polyphenylene isocyanate | 9016-87-9 | Analogous Compound Bioconcentration | | Log Kow | 4.51 | |
| o-(p-isocyanatobenzyl)phenyl isocyanate | 5873-54-1 | Analogous Compound BCF - Fish | 28 days | Bioaccumulation factor | 200 | |
| o-(p-isocyanatobenzyl)phenyl isocyanate | 5873-54-1 | Experimental BCF - Fish | 28 days | Bioaccumulation factor | 200 | OECD305-Bioconcentration |
| o-(p-isocyanatobenzyl)phenyl isocyanate | 5873-54-1 | Experimental Bioconcentration | | Log Kow | 4.51 | OECD 117 log Kow HPLC method |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | Analogous Compound BCF - Fish | 28 days | Bioaccumulation factor | 200 | |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | Experimental BCF - Fish | 28 days | Bioaccumulation factor | 200 | OECD305-Bioconcentration |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | Experimental Bioconcentration | | Log Kow | 4.51 | OECD 117 log Kow HPLC method |
| Dimethyl Siloxane, Reaction Product With Silica | 67762-90-7 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| octamethylcyclotetrasiloxane | 556-67-2 | Experimental BCF - Fish | 28 days | Bioaccumulation factor | 12400 | 40CFR 797.1520-Fish Bioaccumm |
| octamethylcyclotetrasiloxane | 556-67-2 | Experimental Bioconcentration | | Log Kow | 6.49 | OECD 123 log Kow slow stir |

12.4. Mobility in soil

| Material | Cas No. | Test type | Study Type | Test result | Protocol |
|---|-----------|----------------------------|------------|--------------|-----------|
| o-(p-isocyanatobenzyl)phenyl isocyanate | 5873-54-1 | Modeled Mobility in Soil | Koc | 300,000 l/kg | Episuite™ |
| o-(p-isocyanatobenzyl)phenyl isocyanate | 5873-54-1 | Estimated Mobility in Soil | Koc | 34,000 l/kg | Episuite™ |
| 4,4'-methylenediphenyl | 101-68-8 | Modeled Mobility | Koc | 300,000 l/kg | Episuite™ |

| | | | | | |
|-------------------------------------|----------|-------------------------------|-----|-------------|--------------------------------|
| diisocyanate | | in Soil | | | |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | Estimated Mobility in Soil | Koc | 34,000 l/kg | Episuite™ |
| octamethylcyclotetrasiloxane | 556-67-2 | Experimental Mobility in Soil | Koc | 16,600 l/kg | OECD 106 Adsp-Desb Batch Equil |

12.5. Results of the PBT and vPvB assessment

| Ingredient | CAS Nbr | PBT/vPvB status |
|------------------------------|----------|--------------------------|
| octamethylcyclotetrasiloxane | 556-67-2 | Meets REACH PBT criteria |
| octamethylcyclotetrasiloxane | 556-67-2 | Meets REACH PBT criteria |

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
- 080501* Waste isocyanates

SECTION 14: Transportation information

Not hazardous for transportation.

| | Ground Transport (ADR) | Air Transport (IATA) | Marine Transport (IMDG) |
|-------------------------------------|------------------------|----------------------|-------------------------|
| 14.1 UN number or ID 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 Marine Transport in bulk according to IMO instruments | 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> |
|--|----------------|-------------------------|---|
| o-(p-isocyanatobenzyl)phenyl isocyanate | 5873-54-1 | 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 |
| o-(p-isocyanatobenzyl)phenyl isocyanate | 5873-54-1 | Gr. 3: Not classifiable | International Agency for Research on Cancer |
| Polymethylene polyphenylene isocyanate | 9016-87-9 | Gr. 3: Not classifiable | International Agency for Research on Cancer |
| Polymethylene polyphenylene isocyanate | 9016-87-9 | Carc. 2 | 3M classified according to Regulation (EC) No 1272/2008 |
| Formaldehyde, oligomeric reaction products with aniline and phosgene | 32055-14-4 | 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 |
|-------------------------------------|----------|---------|---|

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> |
|---|----------------|
| o-(p-isocyanatobenzyl)phenyl isocyanate | 5873-54-1 |
| octamethylcyclotetrasiloxane | 556-67-2 |
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 |
| Polymethylene polyphenylene isocyanate | 9016-87-9 |

Restriction status: listed in REACH Annex XVII

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

Authorization status under REACH:

The following substance/s contained in this product might be or is/are subject to authorization in accordance with REACH:

| <u>Ingredient</u> | <u>CAS Nbr</u> |
|------------------------------|----------------|
| octamethylcyclotetrasiloxane | 556-67-2 |

Authorization status: listed in the Candidate List of Substances of Very High Concern for Authorization

Global inventory status

Contact 3M for more information. The components of this material are in compliance with the provisions of the Korea Chemical Control Act. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the chemical notification requirements of TSCA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory.

DIRECTIVE 2012/18/EU

Seveso hazard categories, Annex 1, Part 1

None

Seveso named dangerous substances, Annex 1, Part 2

| Dangerous Substances | Identifier(s) | Qualifying quantity (tonnes) for the application of | |
|------------------------------|---------------|---|-------------------------|
| | | Lower-tier requirements | Upper-tier requirements |
| octamethylcyclotetrasiloxane | 556-67-2 | 100 | 200 |

Regulation (EU) No 649/2012

No chemicals listed

15.2. Chemical Safety Assessment

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

SECTION 16: Other information**List of relevant H statements**

| | |
|-------|--|
| H226 | Flammable liquid and vapour. |
| 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. |
| H361f | Suspected of damaging fertility. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H373 | May cause damage to organs through prolonged or repeated exposure: respiratory system. |
| H410 | Very toxic to aquatic life with long lasting effects. |

Revision information:

Label: CLP Precautionary - Prevention information was modified.

Label: CLP Precautionary - Response information was modified.

Label: CLP Supplemental Hazard Statements information was deleted.

Label: CLP Target Organ Hazard Statement information was modified.

Section 02: Regulation (EU) 2020/1149 Statement information was added.

Section 3: Composition/ Information of ingredients table information was modified.

Section 8: Occupational exposure limit table information was modified.

OEL Reg Agency Desc information was modified.

Section 9: Vapour density value information was modified.

Section 11: Acute Toxicity table information was modified.

Section 11: Carcinogenicity Table information was modified.

Section 11: Germ Cell Mutagenicity Table information was modified.

Section 11: Reproductive Toxicity Table information was modified.

Section 11: Respiratory Sensitization Table information was modified.

Section 11: Serious Eye Damage/Irritation Table information was modified.

Section 11: Skin Corrosion/Irritation Table information was modified.

Section 11: Skin Sensitization Table information was modified.

Section 11: Target Organs - Repeated Table information was added.

Section 11: Target Organs - Repeated Table information was deleted.

Section 11: Target Organs - Single Table information was modified.

Section 12: Component ecotoxicity information information was modified.

Section 12: Mobility in soil information information was modified.

Section 12: PBT/vPvB table row information was modified.

Section 12: Persistence and Degradability information information was modified.

Section 12: Biocumulative potential information information was modified.

Section 14 Multiplier – Main Heading information was deleted.

Section 14 Multiplier – Regulation Data information was deleted.

Section 14 Transport Category – Main Heading information was deleted.

Section 14 Transport Category – Regulation Data information was deleted.

Section 14 Marine transport in bulk according to IMO instruments – Main Heading information was modified.

Section 14 Transport Not Permitted – Main Heading information was deleted.

Section 14 Transport Not Permitted – Regulation Data information was deleted.

Section 14 Tunnel Code – Main Heading information was deleted.

Section 14 Tunnel Code – Regulation Data information was deleted.

Section 14 UN Number information was modified.

Section 15: Carcinogenicity information information was modified.

Section 15: Restrictions on manufacture ingredients information information was modified.

Section 15: Seveso Substance Text 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.

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