



## Safety Data Sheet

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|                        |            |                         |            |
|------------------------|------------|-------------------------|------------|
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This Safety Data Sheet has been prepared in accordance with the REACH Regulation (1907/2006), as amended for GB.

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

#### 1.1. Product identifier

3M™ Automotive Adhesion Promoter, 06396

#### Product Identification Numbers

70-0706-9843-9      FS-9100-4256-3

7100009578      7000080124

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

#### 1.4. Emergency telephone number

+44 (0)1344 858 000

### SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

The retained CLP Regulation (EU) No 1272/2008 as amended for Great Britain

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.

Aspiration hazard classification does not apply due to the kinematic viscosity of the product.

**CLASSIFICATION:**

Flammable Liquid, Category 2 - Flam. Liq. 2; H225  
 Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315  
 Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319  
 Skin Sensitization, Category 1 - Skin Sens. 1; H317  
 Specific Target Organ Toxicity-Repeated Exposure, Category 2 - STOT RE 2; H373  
 Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H336  
 Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H335  
 Hazardous to the Aquatic Environment (Acute), Category 1 - Aquatic Acute 1; H400  
 Hazardous to the Aquatic Environment (Chronic), Category 1 - Aquatic Chronic 1; H410

For full text of H phrases, see Section 16.

**2.2. Label elements****The retained CLP Regulation (EU) No 1272/2008 as amended for Great Britain****SIGNAL WORD**

DANGER.

**Symbols**

GHS02 (Flame) | GHS07 (Exclamation mark) | GHS08 (Health Hazard) | GHS09 (Environment) |

**Pictograms**

| Ingredient                                    | CAS Nbr   | EC No.    | % by Wt |
|---|-----------|-----------|---------|
| cyclohexane                                   | 110-82-7  | 203-806-2 | 30 - 60 |
| Reaction mass of ethylbenzene and xylene      |           | 905-588-0 | 20 - 40 |
| 2-(3,4-Epoxy cyclohexyl)ethyltrimethoxysilane | 3388-04-3 | 222-217-1 | < 0.5   |
| bis-[4-(2,3-epoxypropoxy)phenyl]propane       | 1675-54-3 | 216-823-5 | < 0.5   |

**HAZARD STATEMENTS:**

|      |   |
|------|---|
| H225 | Highly flammable liquid and vapour.   |
| H315 | Causes skin irritation.   |
| H319 | Causes serious eye irritation.  |
| H317 | May cause an allergic skin reaction.  |
| H336 | May cause drowsiness or dizziness.  |
| H335 | May cause respiratory irritation.   |
| H373 | May cause damage to organs through prolonged or repeated exposure: nervous system   sensory organs. |
| H410 | Very toxic to aquatic life with long lasting effects.   |

**PRECAUTIONARY STATEMENTS****General:**

P102 Keep out of reach of children.

**Prevention:**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P260A Do not breathe vapours.  
P271 Use only outdoors or in a well-ventilated area.  
P273 Avoid release to the environment.  
P280E Wear protective gloves.

**Response:**

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

**Disposal:**

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

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

**<=125 ml Hazard statements**

H317 May cause an allergic skin reaction.  
H336 May cause drowsiness or dizziness.  
H335 May cause respiratory irritation.  
H373 May cause damage to organs through prolonged or repeated exposure: nervous system | sensory organs.

**<=125 ml Precautionary statements**

**General:**

P102 Keep out of reach of children.

**Prevention:**

P260A Do not breathe vapours.  
P271 Use only outdoors or in a well-ventilated area.  
P280E Wear protective gloves.

**Response:**

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

**Disposal:**

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

2% of the mixture consists of components of unknown acute oral toxicity.

2% of the mixture consists of components of unknown acute dermal toxicity.

**2.3. Other hazards**

None known.

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

**SECTION 3: Composition/information on ingredients**

**3.1. Substances**

Not applicable

**3.2. Mixtures**

| Ingredient  | Identifier(s)                             | %       | Classification according to Regulation (EC) No. 1272/2008 [CLP], as amended for GB  |
|---|---|---------|---|
| cyclohexane   | (CAS-No.) 110-82-7<br>(EC-No.) 203-806-2  | 30 - 60 | Flam. Liq. 2, H225<br>Asp. Tox. 1, H304<br>Skin Irrit. 2, H315<br>STOT SE 3, H336<br>Aquatic Acute 1, H400,M=1<br>Aquatic Chronic 1, H410,M=1   |
| Reaction mass of ethylbenzene and xylene                          | (EC-No.) 905-588-0                        | 20 - 40 | Acute Tox. 4, H332<br>Acute Tox. 4, H312<br>Aquatic Chronic 3, H412<br>Flam. Liq. 3, H226<br>Asp. Tox. 1, H304<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>STOT SE 3, H335<br>STOT RE 2, H373           |
| ethanol   | (CAS-No.) 64-17-5<br>(EC-No.) 200-578-6   | 5 - 10  | Flam. Liq. 2, H225<br>Eye Irrit. 2, H319  |
| Acrylate Polymer  | Trade Secret                              | 1 - 5   | Substance not classified as hazardous   |
| 2,5-Furandione, reaction products with polypropylene, chlorinated | (CAS-No.) 68609-36-9                      | 1 - 5   | Substance not classified as hazardous   |
| xylene  | (CAS-No.) 1330-20-7<br>(EC-No.) 215-535-7 | 1 - 5   | Flam. Liq. 3, H226<br>Acute Tox. 4, H332<br>Acute Tox. 4, H312<br>Skin Irrit. 2, H315<br>Nota C<br>Asp. Tox. 1, H304<br>Eye Irrit. 2, H319<br>STOT SE 3, H335<br>STOT RE 2, H373<br>Aquatic Chronic 3, H412 |
| ethyl acetate   | (CAS-No.) 141-78-6<br>(EC-No.) 205-500-4  | 1 - 5   | Flam. Liq. 2, H225<br>Eye Irrit. 2, H319<br>STOT SE 3, H336<br>EUH066   |
| 2-(3,4-Epoxy)cyclohexyl)ethyltrimethoxysilane                     | (CAS-No.) 3388-04-3<br>(EC-No.) 222-217-1 | < 0.5   | Aquatic Chronic 3, H412<br>Skin Sens. 1, H317   |
| bis-[4-(2,3-epoxypropoxy)phenyl]propane                           | (CAS-No.) 1675-54-3<br>(EC-No.) 216-823-5 | < 0.5   | Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Skin Sens. 1, H317<br>Aquatic Chronic 2, H411  |
| methanol  | (CAS-No.) 67-56-1<br>(EC-No.) 200-659-6   | < 0.5   | Flam. Liq. 2, H225<br>Acute Tox. 3, H331<br>Acute Tox. 3, H311<br>Acute Tox. 3, H301<br>STOT SE 1, H370   |
| toluene   | (CAS-No.) 108-88-3<br>(EC-No.) 203-625-9  | < 0.3   | Flam. Liq. 2, H225<br>Asp. Tox. 1, H304<br>Skin Irrit. 2, H315<br>Repr. 2, H361d  |

|                  |  |        |  |
|------------------|--|--------|--|
|                  |  |        | STOT SE 3, H336<br>STOT RE 2, H373<br>Aquatic Chronic 3, H412  |
| chlorobenzene    | (CAS-No.) 108-90-7<br>(EC-No.) 203-628-5 | < 0.2  | Flam. Liq. 3, H226<br>Acute Tox. 4, H332<br>Skin Irrit. 2, H315<br>Aquatic Chronic 2, H411<br>Aquatic Acute 1, H400,M=1                  |
| maleic anhydride | (CAS-No.) 108-31-6<br>(EC-No.) 203-571-6 | < 0.02 | EUH071<br>Acute Tox. 4, H302<br>Skin Corr. 1B, H314<br>Eye Dam. 1, H318<br>Resp. Sens. 1, H334<br>Skin Sens. 1A, H317<br>STOT RE 1, H372 |

Any entry in the Identifier(s) column that begins with the numbers 6, 7, 8, or 9 are a Provisional List Number provided by ECHA pending publication of the official EC Inventory Number for the substance.  
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                                 |
|---|---|---|
| bis-[4-(2,3-epoxipropoxy)phenyl]propane | (CAS-No.) 1675-54-3<br>(EC-No.) 216-823-5 | (C >= 5%) Skin Irrit. 2, H315<br>(C >= 5%) Eye Irrit. 2, H319 |
| ethanol                                 | (CAS-No.) 64-17-5<br>(EC-No.) 200-578-6   | (C >= 50%) Eye Irrit. 2, H319                                 |
| maleic anhydride                        | (CAS-No.) 108-31-6<br>(EC-No.) 203-571-6  | (C >= 0.001%) Skin Sens. 1A, H317                             |
| methanol                                | (CAS-No.) 67-56-1<br>(EC-No.) 200-659-6   | (C >= 10%) STOT SE 1, H370<br>(3% <= C < 10%) STOT SE 2, H371 |

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 for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

#### If swallowed

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

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

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

Irritating to the respiratory tract (coughing, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain). 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). Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness). Target organ effects. See Section 11 for additional details.

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

Not applicable

### SECTION 5: Fire-fighting measures

#### 5.1. Extinguishing media

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

#### 5.2. Special hazards arising from the substance or mixture

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

#### Hazardous Decomposition or By-Products

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

#### 5.3. Advice for fire-fighters

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. 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. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. 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. Warning! A motor could be an ignition source and could cause flammable gases or vapours in the spill area to burn or explode. Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS.

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

Contain spill. Cover spill area with a fire-extinguishing foam. 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 using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible.

#### 6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. 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. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Use personal protective equipment (eg. gloves, respirators...) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapour accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

### 7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from heat. Store away from acids. Store away from oxidising agents.

### 7.3. Specific end use(s)

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

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

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    |
|------------------|-----------|--------|--|------------------------|
| maleic anhydride | 108-31-6  | UK HSE | TWA: 1 mg/m <sup>3</sup> ; STEL: 3 mg/m <sup>3</sup>                       | Respiratory Sensitizer |
| toluene          | 108-88-3  | UK HSE | TWA: 191 mg/m <sup>3</sup> (50 ppm); STEL: 384 mg/m <sup>3</sup> (100 ppm) | SKIN                   |
| chlorobenzene    | 108-90-7  | UK HSE | TWA:4.7 mg/m <sup>3</sup> (1 ppm);STEL:14 mg/m <sup>3</sup> (3 ppm)        | SKIN                   |
| cyclohexane      | 110-82-7  | UK HSE | TWA:350 mg/m <sup>3</sup> (100 ppm);STEL:1050 mg/m <sup>3</sup> (300 ppm)  |                        |
| xylene           | 1330-20-7 | UK HSE | TWA:220 mg/m <sup>3</sup> (50 ppm);STEL:441 mg/m <sup>3</sup> (100 ppm)    | SKIN                   |
| ethyl acetate    | 141-78-6  | UK HSE | TWA:734 mg/m <sup>3</sup> (200 ppm);STEL:1468 mg/m <sup>3</sup> (400 ppm)  |                        |
| ethanol          | 64-17-5   | UK HSE | TWA:1920 mg/m <sup>3</sup> (1000 ppm)                                      |                        |
| methanol         | 67-56-1   | UK HSE | TWA:266 mg/m <sup>3</sup> (200 ppm)  | SKIN                   |

ppm);STEL:333 mg/m3(250 ppm)

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

### Biological limit values

| Ingredient    | CAS Nbr   | Agency        | Determinant          | Biological Specimen | Sampling Time | Value        | Additional comments |
|---------------|-----------|---------------|----------------------|---------------------|---------------|--------------|---------------------|
| chlorobenzene | 108-90-7  | UK EH40 BMGVs | 4-Chlorocatechol     | Creatinine in urine | EOS           | 5 mmol/mol   |                     |
| xylene        | 1330-20-7 | UK EH40 BMGVs | Methyl hippuric acid | Creatinine in urine | EOS           | 650 mmol/mol |                     |

UK EH40 BMGVs : UK. EH40 Biological Monitoring Guidance Values (BMGVs)  
EOS: End of shift.

## 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. Use explosion-proof ventilation equipment.

### 8.2.2. Personal protective equipment (PPE)

#### Eye/face protection

None required.

#### Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity. Gloves made from the following material(s) are recommended:

| Material         | Thickness (mm) | Breakthrough Time |
|------------------|----------------|-------------------|
| Polymer laminate | >.3            | > 4 hours         |

The glove data presented are based on the substance driving dermal toxicity and the conditions present at the time of testing. Breakthrough time may be altered when the glove is subjected to use conditions that place additional stress on the glove.

#### Applicable Norms/Standards

Use gloves tested to EN 374

If this product is used in a manner that presents a higher potential for exposure (e.g., spraying, high splash potential, etc.), then use of a protective apron may be necessary. See recommended glove material(s) for determining appropriate apron material(s). If a glove material is not available as an apron, polymer laminate is a suitable option.

### 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

Half facepiece or full facepiece supplied-air respirator

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

#### Applicable Norms/Standards

Use a respirator conforming to EN 140 or EN 136

Use a respirator conforming to EN 140 or EN 136: filter type A

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|   |  |
|---|--|
| <b>Physical state</b>                         | Liquid.  |
| <b>Specific Physical Form:</b>                | Sponge holding approximately 2 milliliters of liquid.                                  |
| <b>Colour</b>                                 | Yellow   |
| <b>Odor</b>                                   | Mild Solvent   |
| <b>Odour threshold</b>                        | <i>No data available.</i>  |
| <b>Melting point/freezing point</b>           | <i>Not applicable.</i>   |
| <b>Boiling point/boiling range</b>            | 73.1 °C [ <i>Test Method:</i> Tested per ASTM protocol]<br>[ <i>Details:</i> @760mmHg] |
| <b>Flammability</b>                           | Flammable Liquid: Category 2.  |
| <b>Flammable Limits(LEL)</b>                  | 1 % [ <i>Test Method:</i> Estimated]   |
| <b>Flammable Limits(UEL)</b>                  | 6 % [ <i>Test Method:</i> Estimated]   |
| <b>Flash point</b>                            | 1.1 °C [ <i>Test Method:</i> Setaflash]  |
| <b>Autoignition temperature</b>               | 430 °C   |
| <b>Decomposition temperature</b>              | <i>No data available.</i>  |
| <b>pH</b>                                     | 4.4 - 5 [ <i>Test Method:</i> Tested per ASTM protocol]<br>[ <i>Details:</i> @23°C]    |
| <b>Kinematic Viscosity</b>                    | 30.5 mm <sup>2</sup> /sec  |
| <b>Water solubility</b>                       | 10 %   |
| <b>Solubility- non-water</b>                  | <i>No data available.</i>  |
| <b>Partition coefficient: n-octanol/water</b> | <i>No data available.</i>  |
| <b>Vapour pressure</b>                        | 83.2 mm Hg [ <i>@ 20 °C</i> ] [ <i>Test Method:</i> Tested per ASTM protocol]          |
| <b>Density</b>                                | 0.82 g/ml  |
| <b>Relative density</b>                       | 0.82 [ <i>Ref Std:</i> WATER=1]  |
| <b>Relative Vapour Density</b>                | 1.7 [ <i>Test Method:</i> Estimated] [ <i>Ref Std:</i> AIR=1]                          |
| <b>Particle Characteristics</b>               | <i>Not applicable.</i>   |

### 9.2. Other information

#### 9.2.2 Other safety characteristics

EU Volatile Organic Compounds

*No data available.*

Evaporation rate

6.4 [*Test Method:* Estimated] [*Ref Std:* XYLENE=1]

Molecular weight

*Not applicable.*

Percent volatile

approximately 95 %

## 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.

Sparks and/or flames.

#### 10.5 Incompatible materials

Strong acids.

Strong oxidising agents.

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

#### 11.1. Information on hazard classes as defined in the retained CLP Regulation (EU) No 1272/2008, as amended for Great Britain.

##### Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

##### Inhalation

May be harmful if inhaled. Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. May cause additional health effects (see below).

##### Skin contact

May be harmful in contact with skin. Mild Skin Irritation: Signs/symptoms may include localised redness, swelling, itching, and dryness. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching. May cause additional health effects (see below).

##### Eye contact

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

##### 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:

Auditory effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears. Central

nervous system (CNS) depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

**Prolonged or repeated exposure may cause target organ effects:**

Auditory effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

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.

**Reproductive/Developmental Toxicity:**

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

**Carcinogenicity:**

Contains a chemical or chemicals which can cause cancer.

**Additional information:**

This product contains ethanol. Alcoholic beverages and ethanol in alcoholic beverages have been classified by the International Agency for Research on Cancer as carcinogenic to humans. There are also data associating human consumption of alcoholic beverages with developmental toxicity and liver toxicity. Exposure to ethanol during the foreseeable use of this product is not expected to cause cancer, developmental toxicity, or liver toxicity.

**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 >2,000 - =5,000 mg/kg |
| Overall product   | Inhalation-Vapour(4 hr)     |            | No data available; calculated ATE >20 - =50 mg/l        |
| Overall product   | Ingestion                   |            | No data available; calculated ATE >5,000 mg/kg          |
| cyclohexane   | Dermal                      | Rat        | LD50 > 2,000 mg/kg                                      |
| cyclohexane   | Inhalation-Vapour (4 hours) | Rat        | LC50 > 32.9 mg/l  |
| cyclohexane   | Ingestion                   | Rat        | LD50 6,200 mg/kg  |
| Reaction mass of ethylbenzene and xylene                          | Dermal                      | Rabbit     | LD50 > 4,200 mg/kg                                      |
| Reaction mass of ethylbenzene and xylene                          | Inhalation-Vapour (4 hours) | Rat        | LC50 29 mg/l  |
| Reaction mass of ethylbenzene and xylene                          | Ingestion                   | Rat        | LD50 3,523 mg/kg  |
| ethanol   | Dermal                      | Rabbit     | LD50 > 15,800 mg/kg                                     |
| ethanol   | Inhalation-Vapour (4 hours) | Rat        | LC50 124.7 mg/l   |
| ethanol   | Ingestion                   | Rat        | LD50 17,800 mg/kg                                       |
| xylene  | Dermal                      | Rabbit     | LD50 > 4,200 mg/kg                                      |
| xylene  | Inhalation-Vapour (4 hours) | Rat        | LC50 29 mg/l  |
| xylene  | Ingestion                   | Rat        | LD50 3,523 mg/kg  |
| ethyl acetate   | Dermal                      | Rabbit     | LD50 > 18,000 mg/kg                                     |
| ethyl acetate   | Inhalation-Vapour (4 hours) | Rat        | LC50 70.5 mg/l  |
| ethyl acetate   | Ingestion                   | Rat        | LD50 5,620 mg/kg  |
| 2,5-Furandione, reaction products with polypropylene, chlorinated | Dermal                      | Guinea pig | LD50 > 1,000 mg/kg                                      |
| 2,5-Furandione, reaction products with polypropylene,             | Ingestion                   | Rat        | LD50 > 3,200 mg/kg                                      |

|   |                             |        |  |
|---|-----------------------------|--------|--|
| chlorinated methanol                          | Dermal                      |        | LD50 estimated to be 1,000 - 2,000 mg/kg |
| methanol                                      | Inhalation-Vapour           |        | LC50 estimated to be 10 - 20 mg/l        |
| methanol                                      | Ingestion                   |        | LD50 estimated to be 50 - 300 mg/kg      |
| 2-(3,4-Epoxy cyclohexyl)ethyltrimethoxysilane | Dermal                      | Rabbit | LD50 6,700 mg/kg                         |
| 2-(3,4-Epoxy cyclohexyl)ethyltrimethoxysilane | Inhalation-Vapour (4 hours) | Rat    | LC50 > 7 mg/l                            |
| 2-(3,4-Epoxy cyclohexyl)ethyltrimethoxysilane | Ingestion                   | Rat    | LD50 13,100 mg/kg                        |
| bis-[4-(2,3-epoxypropoxy)phenyl]propane       | Dermal                      | Rat    | LD50 > 1,600 mg/kg                       |
| bis-[4-(2,3-epoxypropoxy)phenyl]propane       | Ingestion                   | Rat    | LD50 > 1,000 mg/kg                       |
| toluene                                       | Dermal                      | Rat    | LD50 12,000 mg/kg                        |
| toluene                                       | Inhalation-Vapour (4 hours) | Rat    | LC50 30 mg/l                             |
| toluene                                       | Ingestion                   | Rat    | LD50 5,550 mg/kg                         |
| chlorobenzene                                 | Dermal                      | Rabbit | LD50 2,212 mg/kg                         |
| chlorobenzene                                 | Inhalation-Vapour (4 hours) | Rat    | LC50 16.7 mg/l                           |
| chlorobenzene                                 | Ingestion                   | Rat    | LD50 1,419 mg/kg                         |
| maleic anhydride                              | Dermal                      | Rabbit | LD50 2,620 mg/kg                         |
| maleic anhydride                              | Ingestion                   | Rat    | LD50 1,030 mg/kg                         |

ATE = acute toxicity estimate

#### Skin Corrosion/Irritation

| Name  | Species          | Value                     |
|---|------------------|---------------------------|
| cyclohexane   | Rabbit           | Mild irritant             |
| Reaction mass of ethylbenzene and xylene                          | Rabbit           | Mild irritant             |
| ethanol   | Rabbit           | No significant irritation |
| xylene  | Rabbit           | Mild irritant             |
| ethyl acetate   | Rabbit           | Minimal irritation        |
| 2,5-Furandione, reaction products with polypropylene, chlorinated | Guinea pig       | No significant irritation |
| methanol  | Rabbit           | Mild irritant             |
| 2-(3,4-Epoxy cyclohexyl)ethyltrimethoxysilane                     | Rabbit           | Minimal irritation        |
| bis-[4-(2,3-epoxypropoxy)phenyl]propane                           | Rabbit           | Mild irritant             |
| toluene   | Rabbit           | Irritant                  |
| chlorobenzene   | Rabbit           | Irritant                  |
| maleic anhydride  | Human and animal | Corrosive                 |

#### Serious Eye Damage/Irritation

| Name  | Species                | Value                     |
|---|------------------------|---------------------------|
| cyclohexane   | Rabbit                 | Mild irritant             |
| Reaction mass of ethylbenzene and xylene                          | Rabbit                 | Mild irritant             |
| ethanol   | Rabbit                 | Severe irritant           |
| xylene  | Rabbit                 | Mild irritant             |
| ethyl acetate   | Rabbit                 | Mild irritant             |
| 2,5-Furandione, reaction products with polypropylene, chlorinated | Professional judgement | Mild irritant             |
| methanol  | Rabbit                 | Moderate irritant         |
| 2-(3,4-Epoxy cyclohexyl)ethyltrimethoxysilane                     | Rabbit                 | No significant irritation |
| bis-[4-(2,3-epoxypropoxy)phenyl]propane                           | Rabbit                 | Moderate irritant         |
| toluene   | Rabbit                 | Moderate irritant         |
| chlorobenzene   | Rabbit                 | Mild irritant             |
| maleic anhydride  | Rabbit                 | Corrosive                 |

**Skin Sensitisation**

| Name  | Species                 | Value          |
|---|-------------------------|----------------|
| ethanol                                       | Human                   | Not classified |
| ethyl acetate                                 | Guinea pig              | Not classified |
| methanol                                      | Guinea pig              | Not classified |
| 2-(3,4-Epoxy cyclohexyl)ethyltrimethoxysilane | similar compounds       | Sensitising    |
| bis-[4-(2,3-epoxypropoxy)phenyl]propane       | Human and animal        | Sensitising    |
| toluene                                       | Guinea pig              | Not classified |
| chlorobenzene                                 | Multiple animal species | Not classified |
| maleic anhydride                              | Multiple animal species | Sensitising    |

**Respiratory Sensitisation**

| Name                                    | Species | Value          |
|---|---------|----------------|
| bis-[4-(2,3-epoxypropoxy)phenyl]propane | Human   | Not classified |
| maleic anhydride                        | Human   | Sensitising    |

**Germ Cell Mutagenicity**

| Name  | Route    | Value  |
|---|----------|--|
| cyclohexane                                   | In Vitro | Not mutagenic  |
| cyclohexane                                   | In vivo  | Some positive data exist, but the data are not sufficient for classification |
| Reaction mass of ethylbenzene and xylene      | In Vitro | Not mutagenic  |
| Reaction mass of ethylbenzene and xylene      | In vivo  | Not mutagenic  |
| ethanol                                       | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| ethanol                                       | In vivo  | Some positive data exist, but the data are not sufficient for classification |
| xylene  | In Vitro | Not mutagenic  |
| xylene  | In vivo  | Not mutagenic  |
| ethyl acetate                                 | In Vitro | Not mutagenic  |
| ethyl acetate                                 | In vivo  | Not mutagenic  |
| methanol                                      | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| methanol                                      | In vivo  | Some positive data exist, but the data are not sufficient for classification |
| 2-(3,4-Epoxy cyclohexyl)ethyltrimethoxysilane | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| bis-[4-(2,3-epoxypropoxy)phenyl]propane       | In vivo  | Not mutagenic  |
| bis-[4-(2,3-epoxypropoxy)phenyl]propane       | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| toluene                                       | In Vitro | Not mutagenic  |
| toluene                                       | In vivo  | Not mutagenic  |
| chlorobenzene                                 | In Vitro | Not mutagenic  |
| maleic anhydride                              | In vivo  | Not mutagenic  |
| maleic anhydride                              | In Vitro | Some positive data exist, but the data are not sufficient for classification |

**Carcinogenicity**

| Name  | Route      | Species                 | Value  |
|---|------------|-------------------------|--|
| Reaction mass of ethylbenzene and xylene      | Dermal     | Rat                     | Not carcinogenic   |
| Reaction mass of ethylbenzene and xylene      | Ingestion  | Multiple animal species | Not carcinogenic   |
| Reaction mass of ethylbenzene and xylene      | Inhalation | Human                   | Some positive data exist, but the data are not sufficient for classification |
| ethanol                                       | Ingestion  | Multiple animal species | Some positive data exist, but the data are not sufficient for classification |
| xylene  | Dermal     | Rat                     | Not carcinogenic   |
| xylene  | Ingestion  | Multiple animal species | Not carcinogenic   |
| xylene  | Inhalation | Human                   | Some positive data exist, but the data are not sufficient for classification |
| methanol                                      | Inhalation | Multiple animal species | Not carcinogenic   |
| 2-(3,4-Epoxy)cyclohexyl)ethyltrimethoxysilane | Dermal     | Mouse                   | Some positive data exist, but the data are not sufficient for classification |
| bis-[4-(2,3-epoxypropoxy)phenyl]propane       | Dermal     | Mouse                   | Some positive data exist, but the data are not sufficient for classification |
| toluene                                       | Dermal     | Mouse                   | Some positive data exist, but the data are not sufficient for classification |
| toluene                                       | Ingestion  | Rat                     | Some positive data exist, but the data are not sufficient for classification |
| toluene                                       | Inhalation | Mouse                   | Some positive data exist, but the data are not sufficient for classification |
| chlorobenzene                                 | Ingestion  | Multiple animal species | Not carcinogenic   |

## Reproductive Toxicity

### Reproductive and/or Developmental Effects

| Name                                     | Route      | Value                                  | Species                 | Test result           | Exposure Duration            |
|--|------------|--|-------------------------|-----------------------|------------------------------|
| cyclohexane                              | Inhalation | Not classified for female reproduction | Rat                     | NOAEL 24 mg/l         | 2 generation                 |
| cyclohexane                              | Inhalation | Not classified for male reproduction   | Rat                     | NOAEL 24 mg/l         | 2 generation                 |
| cyclohexane                              | Inhalation | Not classified for development         | Rat                     | NOAEL 6.9 mg/l        | 2 generation                 |
| Reaction mass of ethylbenzene and xylene | Inhalation | Not classified for female reproduction | Human                   | NOAEL Not available   | occupational exposure        |
| Reaction mass of ethylbenzene and xylene | Ingestion  | Not classified for development         | Mouse                   | NOAEL Not available   | during organogenesis         |
| Reaction mass of ethylbenzene and xylene | Inhalation | Not classified for development         | Multiple animal species | NOAEL Not available   | during gestation             |
| ethanol                                  | Inhalation | Not classified for development         | Rat                     | NOAEL 38 mg/l         | during gestation             |
| ethanol                                  | Ingestion  | Not classified for development         | Rat                     | NOAEL 5,200 mg/kg/day | premating & during gestation |
| xylene                                   | Inhalation | Not classified for female reproduction | Human                   | NOAEL Not available   | occupational exposure        |
| xylene                                   | Ingestion  | Not classified for development         | Mouse                   | NOAEL Not available   | during organogenesis         |
| xylene                                   | Inhalation | Not classified for development         | Multiple animal species | NOAEL Not available   | during gestation             |
| methanol                                 | Ingestion  | Not classified for male reproduction   | Rat                     | NOAEL 1,600 mg/kg/day | 21 days                      |

|   |            |  |        |                       |                        |
|---|------------|--|--------|-----------------------|------------------------|
| methanol                                      | Ingestion  | Toxic to development                   | Mouse  | LOAEL 4,000 mg/kg/day | during organogenesis   |
| methanol                                      | Inhalation | Toxic to development                   | Mouse  | NOAEL 1.3 mg/l        | during organogenesis   |
| 2-(3,4-Epoxy cyclohexyl)ethyltrimethoxysilane | Ingestion  | Not classified for development         | Rabbit | NOAEL 0.27 mg/kg/day  | during organogenesis   |
| bis-[4-(2,3-epoxypropoxy)phenyl]propane       | Ingestion  | Not classified for female reproduction | Rat    | NOAEL 750 mg/kg/day   | 2 generation           |
| bis-[4-(2,3-epoxypropoxy)phenyl]propane       | Ingestion  | Not classified for male reproduction   | Rat    | NOAEL 750 mg/kg/day   | 2 generation           |
| bis-[4-(2,3-epoxypropoxy)phenyl]propane       | Dermal     | Not classified for development         | Rabbit | NOAEL 300 mg/kg/day   | during organogenesis   |
| bis-[4-(2,3-epoxypropoxy)phenyl]propane       | Ingestion  | Not classified for development         | Rat    | NOAEL 750 mg/kg/day   | 2 generation           |
| toluene                                       | Inhalation | Not classified for female reproduction | Human  | NOAEL Not available   | occupational exposure  |
| toluene                                       | Inhalation | Not classified for male reproduction   | Rat    | NOAEL 2.3 mg/l        | 1 generation           |
| toluene                                       | Ingestion  | Toxic to development                   | Rat    | LOAEL 520 mg/kg/day   | during gestation       |
| toluene                                       | Inhalation | Toxic to development                   | Human  | NOAEL Not available   | poisoning and/or abuse |
| chlorobenzene                                 | Inhalation | Not classified for female reproduction | Rat    | NOAEL 2.07 mg/l       | 2 generation           |
| chlorobenzene                                 | Ingestion  | Not classified for development         | Rat    | NOAEL 300 mg/kg/day   | during organogenesis   |
| chlorobenzene                                 | Inhalation | Not classified for development         | Rat    | NOAEL 2.07 mg/l       | 2 generation           |
| chlorobenzene                                 | Inhalation | Not classified for male reproduction   | Rat    | NOAEL 2.07 mg/l       | 2 generation           |
| maleic anhydride                              | Ingestion  | Not classified for female reproduction | Rat    | NOAEL 55 mg/kg/day    | 2 generation           |
| maleic anhydride                              | Ingestion  | Not classified for male reproduction   | Rat    | NOAEL 55 mg/kg/day    | 2 generation           |
| maleic anhydride                              | Ingestion  | Not classified for development         | Rat    | NOAEL 140 mg/kg/day   | during organogenesis   |

**Lactation**

| Name                                     | Route     | Species | Value  |
|--|-----------|---------|--|
| Reaction mass of ethylbenzene and xylene | Ingestion | Mouse   | Not classified for effects on or via lactation |
| xylene                                   | Ingestion | Mouse   | Not classified for effects on or via lactation |

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

| Name                                     | Route      | Target Organ(s)                   | Value  | Species                | Test result         | Exposure Duration |
|--|------------|-----------------------------------|--|------------------------|---------------------|-------------------|
| cyclohexane                              | Inhalation | central nervous system depression | May cause drowsiness or dizziness  | Human and animal       | NOAEL Not available |                   |
| cyclohexane                              | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | Human and animal       | NOAEL Not available |                   |
| cyclohexane                              | Ingestion  | central nervous system depression | May cause drowsiness or dizziness  | Professional judgement | NOAEL Not available |                   |
| Reaction mass of ethylbenzene and xylene | Inhalation | auditory system                   | Causes damage to organs  | Rat                    | LOAEL 6.3 mg/l      | 8 hours           |
| Reaction mass of ethylbenzene and xylene | Inhalation | central nervous system depression | May cause drowsiness or dizziness  | Human                  | NOAEL Not available |                   |
| Reaction mass of ethylbenzene and xylene | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | Human                  | NOAEL Not available |                   |

|  |            |                                   |  |                         |                     |                        |
|--|------------|-----------------------------------|--|-------------------------|---------------------|------------------------|
| Reaction mass of ethylbenzene and xylene | Inhalation | eyes                              | Not classified   | Rat                     | NOAEL 3.5 mg/l      | not available          |
| Reaction mass of ethylbenzene and xylene | Inhalation | liver                             | Not classified   | Multiple animal species | NOAEL Not available |                        |
| Reaction mass of ethylbenzene and xylene | Ingestion  | central nervous system depression | May cause drowsiness or dizziness  | Multiple animal species | NOAEL Not available |                        |
| Reaction mass of ethylbenzene and xylene | Ingestion  | eyes                              | Not classified   | Rat                     | NOAEL 250 mg/kg     | not applicable         |
| ethanol                                  | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | Human                   | LOAEL 9.4 mg/l      | not available          |
| ethanol                                  | Inhalation | central nervous system depression | Not classified   | Human and animal        | NOAEL not available |                        |
| ethanol                                  | Ingestion  | central nervous system depression | Not classified   | Multiple animal species | NOAEL not available |                        |
| ethanol                                  | Ingestion  | kidney and/or bladder             | Not classified   | Dog                     | NOAEL 3,000 mg/kg   |                        |
| xylene                                   | Inhalation | auditory system                   | Causes damage to organs  | Rat                     | LOAEL 6.3 mg/l      | 8 hours                |
| xylene                                   | Inhalation | central nervous system depression | May cause drowsiness or dizziness  | Human                   | NOAEL Not available |                        |
| xylene                                   | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | Human                   | NOAEL Not available |                        |
| xylene                                   | Inhalation | eyes                              | Not classified   | Rat                     | NOAEL 3.5 mg/l      | not available          |
| xylene                                   | Inhalation | liver                             | Not classified   | Multiple animal species | NOAEL Not available |                        |
| xylene                                   | Ingestion  | central nervous system depression | May cause drowsiness or dizziness  | Multiple animal species | NOAEL Not available |                        |
| xylene                                   | Ingestion  | eyes                              | Not classified   | Rat                     | NOAEL 250 mg/kg     | not applicable         |
| ethyl acetate                            | Inhalation | central nervous system depression | May cause drowsiness or dizziness  | Human                   | NOAEL Not available |                        |
| ethyl acetate                            | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | Human                   | NOAEL Not available |                        |
| ethyl acetate                            | Ingestion  | central nervous system depression | May cause drowsiness or dizziness  | Human                   | NOAEL Not available |                        |
| methanol                                 | Inhalation | blindness                         | Causes damage to organs  | Human                   | NOAEL Not available | occupational exposure  |
| methanol                                 | Inhalation | central nervous system depression | May cause drowsiness or dizziness  | Human                   | NOAEL Not available | not available          |
| methanol                                 | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL Not available | 6 hours                |
| methanol                                 | Ingestion  | blindness                         | Causes damage to organs  | Human                   | NOAEL Not available | poisoning and/or abuse |
| methanol                                 | Ingestion  | central nervous system depression | May cause drowsiness or dizziness  | Human                   | NOAEL Not available | poisoning and/or abuse |
| bis-[4-(2,3-epoxypropoxy)phenyl]propane  | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | similar health hazards  | NOAEL Not available |                        |
| toluene                                  | Inhalation | central nervous system depression | May cause drowsiness or dizziness  | Human                   | NOAEL Not available |                        |
| toluene                                  | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | Human                   | NOAEL Not available |                        |
| toluene                                  | Inhalation | immune system                     | Not classified   | Mouse                   | NOAEL 0.004 mg/l    | 3 hours                |
| toluene                                  | Ingestion  | central nervous system depression | May cause drowsiness or dizziness  | Human                   | NOAEL Not available | poisoning and/or abuse |

|                  |            |                                   |  |       |                     |                       |
|------------------|------------|-----------------------------------|--|-------|---------------------|-----------------------|
| chlorobenzene    | Inhalation | central nervous system depression | May cause drowsiness or dizziness  | Human | NOAEL Not available |                       |
| chlorobenzene    | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | Human | NOAEL Not available | occupational exposure |
| maleic anhydride | Inhalation | respiratory irritation            | May cause respiratory irritation   | Human | NOAEL Not available |                       |

**Specific Target Organ Toxicity - repeated exposure**

| Name                                     | Route      | Target Organ(s)  | Value  | Species                 | Test result           | Exposure Duration |
|--|------------|--|--|-------------------------|-----------------------|-------------------|
| cyclohexane                              | Inhalation | liver  | Not classified   | Rat                     | NOAEL 24 mg/l         | 90 days           |
| cyclohexane                              | Inhalation | auditory system  | Not classified   | Rat                     | NOAEL 1.7 mg/l        | 90 days           |
| cyclohexane                              | Inhalation | kidney and/or bladder  | Not classified   | Rabbit                  | NOAEL 2.7 mg/l        | 10 weeks          |
| cyclohexane                              | Inhalation | hematopoietic system   | Not classified   | Mouse                   | NOAEL 24 mg/l         | 14 weeks          |
| cyclohexane                              | Inhalation | peripheral nervous system  | Not classified   | Rat                     | NOAEL 8.6 mg/l        | 30 weeks          |
| Reaction mass of ethylbenzene and xylene | Inhalation | nervous system   | Causes damage to organs through prolonged or repeated exposure               | Rat                     | LOAEL 0.4 mg/l        | 4 weeks           |
| Reaction mass of ethylbenzene and xylene | Inhalation | auditory system  | May cause damage to organs though prolonged or repeated exposure             | Rat                     | LOAEL 7.8 mg/l        | 5 days            |
| Reaction mass of ethylbenzene and xylene | Inhalation | liver  | Not classified   | Multiple animal species | NOAEL Not available   |                   |
| Reaction mass of ethylbenzene and xylene | Inhalation | heart   endocrine system   gastrointestinal tract   hematopoietic system   muscles   kidney and/or bladder   respiratory system                | Not classified   | Multiple animal species | NOAEL 3.5 mg/l        | 13 weeks          |
| Reaction mass of ethylbenzene and xylene | Ingestion  | auditory system  | Not classified   | Rat                     | NOAEL 900 mg/kg/day   | 2 weeks           |
| Reaction mass of ethylbenzene and xylene | Ingestion  | kidney and/or bladder  | Not classified   | Rat                     | NOAEL 1,500 mg/kg/day | 90 days           |
| Reaction mass of ethylbenzene and xylene | Ingestion  | liver  | Not classified   | Multiple animal species | NOAEL Not available   |                   |
| Reaction mass of ethylbenzene and xylene | Ingestion  | heart   skin   endocrine system   bone, teeth, nails, and/or hair   hematopoietic system   immune system   nervous system   respiratory system | Not classified   | Mouse                   | NOAEL 1,000 mg/kg/day | 103 weeks         |
| ethanol                                  | Inhalation | liver  | Some positive data exist, but the data are not sufficient for classification | Rabbit                  | LOAEL 124 mg/l        | 365 days          |
| ethanol                                  | Inhalation | hematopoietic system   immune system   | Not classified   | Rat                     | NOAEL 25 mg/l         | 14 days           |
| ethanol                                  | Ingestion  | liver  | Some positive data exist, but the data are not sufficient for classification | Rat                     | LOAEL 8,000 mg/kg/day | 4 months          |
| ethanol                                  | Ingestion  | kidney and/or bladder  | Not classified   | Dog                     | NOAEL 3,000 mg/kg/day | 7 days            |
| xylene                                   | Inhalation | nervous system   | Causes damage to organs through  | Rat                     | LOAEL 0.4             | 4 weeks           |

|   |            |  |  |                         |                       |                        |
|---|------------|--|--|-------------------------|-----------------------|------------------------|
|   |            |  | prolonged or repeated exposure   |                         | mg/l                  |                        |
| xylene                                  | Inhalation | auditory system  | May cause damage to organs though prolonged or repeated exposure             | Rat                     | LOAEL 7.8 mg/l        | 5 days                 |
| xylene                                  | Inhalation | liver  | Not classified   | Multiple animal species | NOAEL Not available   |                        |
| xylene                                  | Inhalation | heart   endocrine system   gastrointestinal tract   hematopoietic system   muscles   kidney and/or bladder   respiratory system                | Not classified   | Multiple animal species | NOAEL 3.5 mg/l        | 13 weeks               |
| xylene                                  | Ingestion  | auditory system  | Not classified   | Rat                     | NOAEL 900 mg/kg/day   | 2 weeks                |
| xylene                                  | Ingestion  | kidney and/or bladder  | Not classified   | Rat                     | NOAEL 1,500 mg/kg/day | 90 days                |
| xylene                                  | Ingestion  | liver  | Not classified   | Multiple animal species | NOAEL Not available   |                        |
| xylene                                  | Ingestion  | heart   skin   endocrine system   bone, teeth, nails, and/or hair   hematopoietic system   immune system   nervous system   respiratory system | Not classified   | Mouse                   | NOAEL 1,000 mg/kg/day | 103 weeks              |
| ethyl acetate                           | Inhalation | endocrine system   liver   nervous system  | Not classified   | Rat                     | NOAEL 0.043 mg/l      | 90 days                |
| ethyl acetate                           | Inhalation | hematopoietic system   | Not classified   | Rabbit                  | LOAEL 16 mg/l         | 40 days                |
| ethyl acetate                           | Ingestion  | hematopoietic system   liver   kidney and/or bladder   | Not classified   | Rat                     | NOAEL 3,600 mg/kg/day | 90 days                |
| methanol                                | Inhalation | liver  | Not classified   | Rat                     | NOAEL 6.55 mg/l       | 4 weeks                |
| methanol                                | Inhalation | respiratory system   | Not classified   | Rat                     | NOAEL 13.1 mg/l       | 6 weeks                |
| methanol                                | Ingestion  | liver   nervous system   | Not classified   | Rat                     | NOAEL 2,500 mg/kg/day | 90 days                |
| bis-[4-(2,3-epoxipropoxy)phenyl]propane | Dermal     | liver  | Not classified   | Rat                     | NOAEL 1,000 mg/kg/day | 2 years                |
| bis-[4-(2,3-epoxipropoxy)phenyl]propane | Dermal     | nervous system   | Not classified   | Rat                     | NOAEL 1,000 mg/kg/day | 13 weeks               |
| bis-[4-(2,3-epoxipropoxy)phenyl]propane | Ingestion  | auditory system   heart   endocrine system   hematopoietic system   liver   eyes   kidney and/or bladder                                       | Not classified   | Rat                     | NOAEL 1,000 mg/kg/day | 28 days                |
| toluene                                 | Inhalation | auditory system   nervous system   eyes   olfactory system   | Causes damage to organs through prolonged or repeated exposure               | Human                   | NOAEL Not available   | poisoning and/or abuse |
| toluene                                 | Inhalation | respiratory system   | Some positive data exist, but the data are not sufficient for classification | Rat                     | LOAEL 2.3 mg/l        | 15 months              |

|                  |            |   |  |                         |                       |                       |
|------------------|------------|---|--|-------------------------|-----------------------|-----------------------|
| toluene          | Inhalation | heart   liver   kidney and/or bladder   | Not classified   | Rat                     | NOAEL 11.3 mg/l       | 15 weeks              |
| toluene          | Inhalation | endocrine system  | Not classified   | Rat                     | NOAEL 1.1 mg/l        | 4 weeks               |
| toluene          | Inhalation | immune system   | Not classified   | Mouse                   | NOAEL Not available   | 20 days               |
| toluene          | Inhalation | bone, teeth, nails, and/or hair   | Not classified   | Mouse                   | NOAEL 1.1 mg/l        | 8 weeks               |
| toluene          | Inhalation | hematopoietic system   vascular system  | Not classified   | Human                   | NOAEL Not available   | occupational exposure |
| toluene          | Inhalation | gastrointestinal tract  | Not classified   | Multiple animal species | NOAEL 11.3 mg/l       | 15 weeks              |
| toluene          | Ingestion  | nervous system  | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 625 mg/kg/day   | 13 weeks              |
| toluene          | Ingestion  | heart   | Not classified   | Rat                     | NOAEL 2,500 mg/kg/day | 13 weeks              |
| toluene          | Ingestion  | liver   kidney and/or bladder   | Not classified   | Multiple animal species | NOAEL 2,500 mg/kg/day | 13 weeks              |
| toluene          | Ingestion  | hematopoietic system  | Not classified   | Mouse                   | NOAEL 600 mg/kg/day   | 14 days               |
| toluene          | Ingestion  | endocrine system  | Not classified   | Mouse                   | NOAEL 105 mg/kg/day   | 28 days               |
| toluene          | Ingestion  | immune system   | Not classified   | Mouse                   | NOAEL 105 mg/kg/day   | 4 weeks               |
| chlorobenzene    | Inhalation | kidney and/or bladder   | Some positive data exist, but the data are not sufficient for classification | Rat                     | LOAEL 0.69 mg/l       | 2 generation          |
| chlorobenzene    | Inhalation | liver   | Not classified   | Rat                     | NOAEL 2.1 mg/l        | 2 generation          |
| chlorobenzene    | Inhalation | blood   | Not classified   | Rat                     | NOAEL 0.35 mg/l       | 24 weeks              |
| chlorobenzene    | Ingestion  | bone marrow   | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 250 mg/kg/day   | 13 weeks              |
| chlorobenzene    | Ingestion  | liver   | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 188 mg/kg/day   | 192 days              |
| chlorobenzene    | Ingestion  | kidney and/or bladder   | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 125 mg/kg/day   | 13 weeks              |
| chlorobenzene    | Ingestion  | immune system   | Not classified   | Rat                     | NOAEL 750 mg/kg/day   | 13 weeks              |
| maleic anhydride | Inhalation | respiratory system  | Causes damage to organs through prolonged or repeated exposure               | Rat                     | LOAEL 0.0011 mg/l     | 6 months              |
| maleic anhydride | Inhalation | endocrine system   hematopoietic system   nervous system   kidney and/or bladder   heart   liver   eyes | Not classified   | Rat                     | NOAEL 0.0098 mg/l     | 6 months              |
| maleic anhydride | Ingestion  | kidney and/or bladder   | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 55 mg/kg/day    | 80 days               |
| maleic anhydride | Ingestion  | liver   | Some positive data exist, but the data are not sufficient for classification | Rat                     | LOAEL 250 mg/kg/day   | 183 days              |
| maleic anhydride | Ingestion  | heart   nervous system  | Not classified   | Rat                     | NOAEL 600 mg/kg/day   | 183 days              |
| maleic anhydride | Ingestion  | gastrointestinal tract  | Not classified   | Rat                     | NOAEL 150 mg/kg/day   | 80 days               |
| maleic anhydride | Ingestion  | hematopoietic system  | Not classified   | Dog                     | NOAEL 60 mg/kg/day    | 90 days               |
| maleic anhydride | Ingestion  | skin   endocrine  | Not classified   | Rat                     | NOAEL 150             | 80 days               |

|  |  |  |  |  |           |  |
|--|--|--|--|--|-----------|--|
|  |  | system   immune<br>system   eyes  <br>respiratory system |  |  | mg/kg/day |  |
|--|--|--|--|--|-----------|--|

**Aspiration Hazard**

| Name                                     | Value             |
|--|-------------------|
| cyclohexane                              | Aspiration hazard |
| Reaction mass of ethylbenzene and xylene | Aspiration hazard |
| xylene                                   | Aspiration hazard |
| toluene                                  | Aspiration hazard |

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 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               |
|--|-----------|------------------|--------------------|------------|---------------|---------------------------|
| cyclohexane                              | 110-82-7  | Fathead minnow   | Experimental       | 96 hours   | LC50          | 4.53 mg/l                 |
| cyclohexane                              | 110-82-7  | Water flea       | Experimental       | 48 hours   | EC50          | 0.9 mg/l                  |
| cyclohexane                              | 110-82-7  | Bacteria         | Experimental       | 24 hours   | IC50          | 97 mg/l                   |
| Reaction mass of ethylbenzene and xylene | 905-588-0 | Green algae      | Analogous Compound | 73 hours   | ErC50         | 4.36 mg/l                 |
| Reaction mass of ethylbenzene and xylene | 905-588-0 | Rainbow trout    | Analogous Compound | 96 hours   | LC50          | 2.6 mg/l                  |
| Reaction mass of ethylbenzene and xylene | 905-588-0 | Water flea       | Analogous Compound | 48 hours   | EC50          | 3.82 mg/l                 |
| Reaction mass of ethylbenzene and xylene | 905-588-0 | Green algae      | Analogous Compound | 73 hours   | NOEC          | 0.44 mg/l                 |
| Reaction mass of ethylbenzene and xylene | 905-588-0 | Rainbow trout    | Analogous Compound | 56 days    | NOEC          | 1.3 mg/l                  |
| Reaction mass of ethylbenzene and xylene | 905-588-0 | Water flea       | Analogous Compound | 7 days     | NOEC          | 0.96 mg/l                 |
| Reaction mass of ethylbenzene and xylene | 905-588-0 | Activated sludge | Analogous Compound | 30 minutes | EC50          | >198 mg/l                 |
| Reaction mass of ethylbenzene and xylene | 905-588-0 | Redworm          | Analogous Compound | 56 days    | NOEC          | 42.6 mg/kg (Dry Weight)   |
| Reaction mass of ethylbenzene and xylene | 905-588-0 | Soil microbes    | Analogous Compound | 28 days    | EC50          | >1,000 mg/kg (Dry Weight) |

**3M™ Automotive Adhesion Promoter, 06396**

|   |              |                  |   |            |       |                           |
|---|--------------|------------------|---|------------|-------|---------------------------|
| ethanol   | 64-17-5      | Fathead minnow   | Experimental  | 96 hours   | LC50  | 14,200 mg/l               |
| ethanol   | 64-17-5      | Fish             | Experimental  | 96 hours   | LC50  | 11,000 mg/l               |
| ethanol   | 64-17-5      | Green algae      | Experimental  | 72 hours   | EC50  | 275 mg/l                  |
| ethanol   | 64-17-5      | Water flea       | Experimental  | 48 hours   | LC50  | 5,012 mg/l                |
| ethanol   | 64-17-5      | Green algae      | Experimental  | 72 hours   | ErC10 | 11.5 mg/l                 |
| ethanol   | 64-17-5      | Water flea       | Experimental  | 10 days    | NOEC  | 9.6 mg/l                  |
| 2,5-Furandione, reaction products with polypropylene, chlorinated | 68609-36-9   | N/A              | Data not available or insufficient for classification | N/A        | N/A   | N/A                       |
| Acrylate Polymer  | Trade Secret | N/A              | Data not available or insufficient for classification | N/A        | N/A   | N/A                       |
| ethyl acetate   | 141-78-6     | Bacteria         | Experimental  | 18 hours   | EC10  | 2,900 mg/l                |
| ethyl acetate   | 141-78-6     | Fish             | Experimental  | 96 hours   | LC50  | 212.5 mg/l                |
| ethyl acetate   | 141-78-6     | Invertebrate     | Experimental  | 48 hours   | EC50  | 165 mg/l                  |
| ethyl acetate   | 141-78-6     | Green algae      | Experimental  | 72 hours   | NOEC  | >100 mg/l                 |
| ethyl acetate   | 141-78-6     | Water flea       | Experimental  | 21 days    | NOEC  | 2.4 mg/l                  |
| xylene  | 1330-20-7    | Green algae      | Analogous Compound                                    | 73 hours   | ErC50 | 4.36 mg/l                 |
| xylene  | 1330-20-7    | Rainbow trout    | Analogous Compound                                    | 96 hours   | LC50  | 2.6 mg/l                  |
| xylene  | 1330-20-7    | Water flea       | Analogous Compound                                    | 48 hours   | EC50  | 3.82 mg/l                 |
| xylene  | 1330-20-7    | Green algae      | Analogous Compound                                    | 73 hours   | NOEC  | 0.44 mg/l                 |
| xylene  | 1330-20-7    | Water flea       | Analogous Compound                                    | 7 days     | NOEC  | 0.96 mg/l                 |
| xylene  | 1330-20-7    | Rainbow trout    | Experimental  | 56 days    | NOEC  | 1.3 mg/l                  |
| xylene  | 1330-20-7    | Activated sludge | Analogous Compound                                    | 30 minutes | EC50  | >198 mg/l                 |
| xylene  | 1330-20-7    | Redworm          | Experimental  | 56 days    | NOEC  | 42.6 mg/kg (Dry Weight)   |
| xylene  | 1330-20-7    | Soil microbes    | Experimental  | 28 days    | EC50  | >1,000 mg/kg (Dry Weight) |
| 2-(3,4-Epoxy)cyclohexylethyltrimethoxysilane                      | 3388-04-3    | Activated sludge | Estimated   | 30 minutes | IC50  | >100 mg/l                 |
| 2-(3,4-Epoxy)cyclohexylethyltrimethoxysilane                      | 3388-04-3    | Green algae      | Estimated   | 72 hours   | EC50  | 280 mg/l                  |
| 2-(3,4-Epoxy)cyclohexylethyltrimethoxysilane                      | 3388-04-3    | Rainbow trout    | Estimated   | 96 hours   | LC50  | 180 mg/l                  |
| 2-(3,4-Epoxy)cyclohexylethyltrimethoxysilane                      | 3388-04-3    | Water flea       | Estimated   | 48 hours   | EC50  | 20 mg/l                   |
| 2-(3,4-Epoxy)cyclohexylethyltrimethoxysilane                      | 3388-04-3    | Green algae      | Estimated   | 72 hours   | NOEC  | 1 mg/l                    |

|   |           |                               |                    |           |       |                           |
|---|-----------|-------------------------------|--------------------|-----------|-------|---------------------------|
| bis-[4-(2,3-epoxipropoxy)phenyl]propane | 1675-54-3 | Activated sludge              | Analogous Compound | 3 hours   | IC50  | >100 mg/l                 |
| bis-[4-(2,3-epoxipropoxy)phenyl]propane | 1675-54-3 | Rainbow trout                 | Estimated          | 96 hours  | LC50  | 2 mg/l                    |
| bis-[4-(2,3-epoxipropoxy)phenyl]propane | 1675-54-3 | Water flea                    | Estimated          | 48 hours  | EC50  | 1.8 mg/l                  |
| bis-[4-(2,3-epoxipropoxy)phenyl]propane | 1675-54-3 | Green algae                   | Experimental       | 72 hours  | ErC50 | >11 mg/l                  |
| bis-[4-(2,3-epoxipropoxy)phenyl]propane | 1675-54-3 | Green algae                   | Experimental       | 72 hours  | NOEC  | 4.2 mg/l                  |
| bis-[4-(2,3-epoxipropoxy)phenyl]propane | 1675-54-3 | Water flea                    | Experimental       | 21 days   | NOEC  | 0.3 mg/l                  |
| methanol                                | 67-56-1   | Algae or other aquatic plants | Experimental       | 96 hours  | EC50  | 16.9 mg/l                 |
| methanol                                | 67-56-1   | Bay mussel                    | Experimental       | 96 hours  | LC50  | 15,900 mg/l               |
| methanol                                | 67-56-1   | Bluegill                      | Experimental       | 96 hours  | LC50  | 15,400 mg/l               |
| methanol                                | 67-56-1   | Green algae                   | Experimental       | 96 hours  | ErC50 | 22,000 mg/l               |
| methanol                                | 67-56-1   | Sediment organism             | Experimental       | 96 hours  | LC50  | 54,890 mg/l               |
| methanol                                | 67-56-1   | Water flea                    | Experimental       | 48 hours  | LC50  | 3,289 mg/l                |
| methanol                                | 67-56-1   | Green algae                   | Experimental       | 96 hours  | NOEC  | 9.96 mg/l                 |
| methanol                                | 67-56-1   | Medaka                        | Experimental       | 8.33 days | NOEC  | 158,000 mg/l              |
| methanol                                | 67-56-1   | Water flea                    | Experimental       | 21 days   | NOEC  | 122 mg/l                  |
| methanol                                | 67-56-1   | Activated sludge              | Experimental       | 3 hours   | IC50  | >1,000 mg/l               |
| methanol                                | 67-56-1   | Barley                        | Experimental       | 14 days   | EC50  | 15,492 mg/kg (Dry Weight) |
| methanol                                | 67-56-1   | Redworm                       | Experimental       | 63 days   | EC50  | 26,646 mg/kg (Dry Weight) |
| methanol                                | 67-56-1   | Springtail                    | Experimental       | 28 days   | EC50  | 5,683 mg/kg (Dry Weight)  |
| toluene                                 | 108-88-3  | Coho Salmon                   | Experimental       | 96 hours  | LC50  | 5.5 mg/l                  |
| toluene                                 | 108-88-3  | Grass Shrimp                  | Experimental       | 96 hours  | LC50  | 9.5 mg/l                  |
| toluene                                 | 108-88-3  | Green algae                   | Experimental       | 72 hours  | EC50  | 12.5 mg/l                 |
| toluene                                 | 108-88-3  | Leopard frog                  | Experimental       | 9 days    | LC50  | 0.39 mg/l                 |
| toluene                                 | 108-88-3  | Pink Salmon                   | Experimental       | 96 hours  | LC50  | 6.41 mg/l                 |
| toluene                                 | 108-88-3  | Water flea                    | Experimental       | 48 hours  | EC50  | 3.78 mg/l                 |
| toluene                                 | 108-88-3  | Coho Salmon                   | Experimental       | 40 days   | NOEC  | 1.39 mg/l                 |
| toluene                                 | 108-88-3  | Diatom                        | Experimental       | 72 hours  | NOEC  | 10 mg/l                   |
| toluene                                 | 108-88-3  | Water flea                    | Experimental       | 7 days    | NOEC  | 0.74 mg/l                 |
| toluene                                 | 108-88-3  | Activated sludge              | Experimental       | 12 hours  | IC50  | 292 mg/l                  |
| toluene                                 | 108-88-3  | Bacteria                      | Experimental       | 16 hours  | NOEC  | 29 mg/l                   |

|                  |          |               |                    |          |       |                              |
|------------------|----------|---------------|--------------------|----------|-------|------------------------------|
| toluene          | 108-88-3 | Bacteria      | Experimental       | 24 hours | EC50  | 84 mg/l                      |
| toluene          | 108-88-3 | Redworm       | Experimental       | 28 days  | LC50  | >150 mg per kg of bodyweight |
| toluene          | 108-88-3 | Soil microbes | Experimental       | 28 days  | NOEC  | <26 mg/kg (Dry Weight)       |
| chlorobenzene    | 108-90-7 | Bluegill      | Experimental       | 96 hours | LC50  | 4.5 mg/l                     |
| chlorobenzene    | 108-90-7 | Green algae   | Experimental       | 72 hours | ErC50 | 11.4 mg/l                    |
| chlorobenzene    | 108-90-7 | Midge         | Experimental       | 96 hours | NOEC  | 0.7 mg/l                     |
| chlorobenzene    | 108-90-7 | Water flea    | Experimental       | 48 hours | EC50  | 0.59 mg/l                    |
| chlorobenzene    | 108-90-7 | Green algae   | Experimental       | 72 hours | ErC10 | 5.8 mg/l                     |
| chlorobenzene    | 108-90-7 | Medaka        | Experimental       | 43 days  | NOEC  | 0.247 mg/l                   |
| chlorobenzene    | 108-90-7 | Water flea    | Experimental       | 8 days   | NOEC  | 0.084 mg/l                   |
| chlorobenzene    | 108-90-7 | Bacteria      | Experimental       | 24 hours | IC50  | 0.71 mg/l                    |
| chlorobenzene    | 108-90-7 | Lettuce       | Experimental       | 14 days  | EC50  | >1,000 mg/kg (Dry Weight)    |
| maleic anhydride | 108-31-6 | Bacteria      | Experimental       | 18 hours | EC10  | 44.6 mg/l                    |
| maleic anhydride | 108-31-6 | Rainbow trout | Experimental       | 96 hours | LC50  | 75 mg/l                      |
| maleic anhydride | 108-31-6 | Green algae   | Hydrolysis Product | 72 hours | ErC50 | 74.4 mg/l                    |
| maleic anhydride | 108-31-6 | Water flea    | Hydrolysis Product | 48 hours | EC50  | 93.8 mg/l                    |
| maleic anhydride | 108-31-6 | Water flea    | Experimental       | 21 days  | NOEC  | 10 mg/l                      |
| maleic anhydride | 108-31-6 | Green algae   | Hydrolysis Product | 72 hours | ErC10 | 11.8 mg/l                    |

## 12.2. Persistence and degradability

| Material  | CAS Nbr      | Test type                         | Duration | Study Type                    | Test result       | Protocol                            |
|---|--------------|-----------------------------------|----------|-------------------------------|-------------------|-------------------------------------|
| cyclohexane   | 110-82-7     | Experimental Biodegradation       | 28 days  | BOD                           | 77 %BOD/ThOD      | OECD 301F - Manometric respirometry |
| cyclohexane   | 110-82-7     | Experimental Photolysis           |          | Photolytic half-life (in air) | 4.3 days (t 1/2)  |                                     |
| Reaction mass of ethylbenzene and xylene                          | 905-588-0    | Analogous Compound Biodegradation | 28 days  | BOD                           | 94 %BOD/ThOD      | OECD 301F - Manometric respirometry |
| ethanol   | 64-17-5      | Experimental Biodegradation       | 14 days  | BOD                           | 89 %BOD/ThOD      | OECD 301C - MITI test (I)           |
| 2,5-Furandione, reaction products with polypropylene, chlorinated | 68609-36-9   | Data not available - insufficient | N/A      | N/A                           | N/A               | N/A                                 |
| Acrylate Polymer  | Trade Secret | Data not available - insufficient | N/A      | N/A                           | N/A               | N/A                                 |
| ethyl acetate   | 141-78-6     | Experimental Biodegradation       | 14 days  | BOD                           | 94 %BOD/ThOD      | OECD 301C - MITI test (I)           |
| ethyl acetate   | 141-78-6     | Experimental Photolysis           |          | Photolytic half-life (in air) | 20.0 days (t 1/2) |                                     |
| xylene  | 1330-20-7    | Analogous Compound Biodegradation | 28 days  | BOD                           | 94 %BOD/ThOD      | OECD 301F - Manometric respirometry |
| xylene  | 1330-20-7    | Experimental Photolysis           |          | Photolytic half-life (in air) | 1.4 days (t 1/2)  |                                     |
| 2-(3,4-   | 3388-04-3    | Estimated                         | 28 days  | BOD                           | 28 %BOD/ThOD      | OECD 301D - Closed bottle           |

|   |           |                                      |         |                               |                                     |                                     |
|---|-----------|--------------------------------------|---------|-------------------------------|-------------------------------------|-------------------------------------|
| Epoxy(cyclohexyl)ethyltrimethoxysilane        |           | Biodegradation                       |         |                               |                                     | test                                |
| 2-(3,4-Epoxy(cyclohexyl)ethyltrimethoxysilane | 3388-04-3 | Estimated Hydrolysis                 |         | Hydrolytic half-life          | 6.5 hours (t 1/2)                   |                                     |
| bis-[4-(2,3-epoxypropoxy)phenyl]propane       | 1675-54-3 | Experimental Biodegradation          | 28 days | BOD                           | 5 %BOD/COD                          | OECD 301F - Manometric respirometry |
| bis-[4-(2,3-epoxypropoxy)phenyl]propane       | 1675-54-3 | Experimental Hydrolysis              |         | Hydrolytic half-life (pH 7)   | 117 hours (t 1/2)                   | OECD 111 Hydrolysis func of pH      |
| methanol                                      | 67-56-1   | Experimental Biodegradation          | 3 days  | Percent degraded              | 91 %degraded                        |                                     |
| methanol                                      | 67-56-1   | Experimental Biodegradation          | 14 days | BOD                           | 92 %BOD/ThOD                        | OECD 301C - MITI test (I)           |
| methanol                                      | 67-56-1   | Experimental Photolysis              |         | Photolytic half-life (in air) | 35 days (t 1/2)                     |                                     |
| methanol                                      | 67-56-1   | Experimental Soil Metabolism Aerobic | 5 days  | CO2 evolution                 | 53.4 %CO2 evolution/THCO2 evolution |                                     |
| toluene                                       | 108-88-3  | Experimental Biodegradation          | 20 days | BOD                           | 80 %BOD/ThOD                        | APHA Std Meth Water/Wastewater      |
| toluene                                       | 108-88-3  | Experimental Photolysis              |         | Photolytic half-life (in air) | 5.2 days (t 1/2)                    |                                     |
| chlorobenzene                                 | 108-90-7  | Experimental Biodegradation          | 28 days | BOD                           | 15 %BOD/ThOD                        | OECD 301F - Manometric respirometry |
| chlorobenzene                                 | 108-90-7  | Experimental Photolysis              |         | Photolytic half-life (in air) | 42 days (t 1/2)                     |                                     |
| chlorobenzene                                 | 108-90-7  | Experimental Biodegradation          |         | Half-life (t 1/2)             | 46.2 days (t 1/2)                   |                                     |
| maleic anhydride                              | 108-31-6  | Hydrolysis product Biodegradation    | 25 days | CO2 evolution                 | >90 %CO2 evolution/THCO2 evolution  | OECD 301B - Modified sturm or CO2   |
| maleic anhydride                              | 108-31-6  | Experimental Hydrolysis              |         | Hydrolytic half-life          | 0.37 minutes (t 1/2)                |                                     |

### 12.3 : Bioaccumulative potential

| Material  | Cas No.      | Test type   | Duration | Study Type             | Test result | Protocol                 |
|---|--------------|---|----------|------------------------|-------------|--------------------------|
| cyclohexane   | 110-82-7     | Experimental BCF - Fish                               | 56 days  | Bioaccumulation factor | 129         | OECD305-Bioconcentration |
| cyclohexane   | 110-82-7     | Experimental Bioconcentration                         |          | Log Kow                | 3.44        |                          |
| Reaction mass of ethylbenzene and xylene                          | 905-588-0    | Analogous Compound BCF - Fish                         | 56 days  | Bioaccumulation factor | <=25.9      |                          |
| Reaction mass of ethylbenzene and xylene                          | 905-588-0    | Analogous Compound Bioconcentration                   |          | Log Kow                | 3.2         |                          |
| ethanol   | 64-17-5      | Experimental Bioconcentration                         |          | Log Kow                | -0.35       |                          |
| 2,5-Furandione, reaction products with polypropylene, chlorinated | 68609-36-9   | Data not available or insufficient for classification | N/A      | N/A                    | N/A         | N/A                      |
| Acrylate Polymer  | Trade Secret | Data not available or insufficient for classification | N/A      | N/A                    | N/A         | N/A                      |
| ethyl acetate   | 141-78-6     | Experimental Bioconcentration                         |          | Log Kow                | 0.68        |                          |
| xylene  | 1330-20-7    | Experimental BCF - Fish                               | 56 days  | Bioaccumulation factor | <=25.9      |                          |
| xylene  | 1330-20-7    | Analogous Compound                                    |          | Log Kow                | 3.2         |                          |

|  |           |                               |          |                        |       |                                |
|--|-----------|-------------------------------|----------|------------------------|-------|--------------------------------|
|  |           | Bioconcentration              |          |                        |       |                                |
| 2-(3,4-Epoxy)cyclohexylethyltrimethoxysilane | 3388-04-3 | Estimated Bioconcentration    |          | Bioaccumulation factor | 2.3   |                                |
| bis-[4-(2,3-epoxypropoxy)phenyl]propane      | 1675-54-3 | Experimental Bioconcentration |          | Log Kow                | 3.242 | OECD 117 log Kow HPLC method   |
| methanol                                     | 67-56-1   | Experimental BCF - Fish       | 3 days   | Bioaccumulation factor | <4.5  |                                |
| methanol                                     | 67-56-1   | Experimental Bioconcentration |          | Log Kow                | -0.77 |                                |
| toluene                                      | 108-88-3  | Experimental BCF - Other      | 72 hours | Bioaccumulation factor | 90    |                                |
| toluene                                      | 108-88-3  | Experimental Bioconcentration |          | Log Kow                | 2.73  |                                |
| chlorobenzene                                | 108-90-7  | Experimental BCF - Fish       | 56 days  | Bioaccumulation factor | 39.6  | OECD305-Bioconcentration       |
| chlorobenzene                                | 108-90-7  | Experimental Bioconcentration |          | Log Kow                | 2.84  |                                |
| maleic anhydride                             | 108-31-6  | Experimental Bioconcentration |          | Log Kow                | -2.61 | OECD 107 log Kow shke flsk mtd |

**12.4. Mobility in soil**

| Material                                     | Cas No.   | Test type                           | Study Type | Test result | Protocol  |
|--|-----------|-------------------------------------|------------|-------------|-----------|
| cyclohexane                                  | 110-82-7  | Modeled Mobility in Soil            | Koc        | 970 l/kg    | Episuite™ |
| Reaction mass of ethylbenzene and xylene     | 905-588-0 | Analogous Compound Mobility in Soil | Koc        | 537 l/kg    |           |
| xylene                                       | 1330-20-7 | Analogous Compound Mobility in Soil | Koc        | 537 l/kg    |           |
| 2-(3,4-Epoxy)cyclohexylethyltrimethoxysilane | 3388-04-3 | Estimated Mobility in Soil          | Koc        | 20 l/kg     | Episuite™ |
| bis-[4-(2,3-epoxypropoxy)phenyl]propane      | 1675-54-3 | Modeled Mobility in Soil            | Koc        | 450 l/kg    | Episuite™ |
| methanol                                     | 67-56-1   | Experimental Mobility in Soil       | Koc        | 0.13 l/kg   |           |
| toluene                                      | 108-88-3  | Experimental Mobility in Soil       | Koc        | 37-160 l/kg |           |
| chlorobenzene                                | 108-90-7  | Experimental Mobility in Soil       | Koc        | 140 l/kg    |           |

**12.5. Results of the PBT and vPvB assessment**

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

**12.6. Other adverse effects**

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

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

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

Incinerate in a permitted waste incineration facility. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. As a disposal alternative, utilize an acceptable permitted waste disposal

facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

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

**EU waste code (product as sold)**

15 02 02\* Absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances

## SECTION 14: Transportation information

|   | <b>Ground Transport (ADR)</b>  | <b>Air Transport (IATA)</b>  | <b>Marine Transport (IMDG)</b>   |
|---|--|--|--|
| <b>14.1 - UN Number or ID number</b>                              | UN3175   | UN3175   | UN3175   |
| <b>14.2 UN proper shipping name</b>                               | SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S.(CYCLOHEXANE)                | SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S.(CYCLOHEXANE)                | SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S.(CYCLOHEXANE)                |
| <b>14.3 Transport hazard class(es)</b>                            | 4.1  | 4.1  | 4.1  |
| <b>14.4 Packing group</b>   | II   | II   | II   |
| <b>14.5 Environmental hazards</b>                                 | Not Environmentally Hazardous  | Not applicable.  | Not a Marine Pollutant   |
| <b>14.6 Special precautions for user</b>                          | 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. |
| <b>14.7 Marine Transport in bulk according to IMO instruments</b> | No data available.   | No data available.   | No data available.   |
| <b>Control Temperature</b>  | No data available.   | No data available.   | No data available.   |
| <b>Emergency Temperature</b>                                      | No data available.   | No data available.   | No data available.   |
| <b>ADR Classification Code</b>                                    | F1   | Not applicable.  | Not applicable.  |
| <b>IMDG Segregation Code</b>                                      | Not applicable.  | Not applicable.  | NONE   |

Please contact the address or phone number listed on the first page of the SDS for additional information on the

transport/shipment of the material by rail (RID) or inland waterways (ADN).

## SECTION 15: Regulatory information

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

#### Carcinogenicity

| <u>Ingredient</u>                       | <u>CAS Nbr</u> | <u>Classification</u>   | <u>Regulation</u>                           |
|---|----------------|-------------------------|---|
| bis-[4-(2,3-epoxipropoxy)phenyl]propane | 1675-54-3      | Gr. 3: Not classifiable | International Agency for Research on Cancer |
| toluene                                 | 108-88-3       | Gr. 3: Not classifiable | International Agency for Research on Cancer |
| xylene                                  | 1330-20-7      | Gr. 3: Not classifiable | International Agency for Research on Cancer |

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

The following substance(s) contained in this product is/are subject to Annex XVII of regulation (EC) 1907/2006, as amended for GB, with regard to restrictions on the manufacture, placing on the market and use when present in certain dangerous conditions. 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> |
|---|----------------|
| bis-[4-(2,3-epoxipropoxy)phenyl]propane | 1675-54-3      |
| cyclohexane                             | 110-82-7       |
| methanol                                | 67-56-1        |
| toluene                                 | 108-88-3       |
| xylene                                  | 1330-20-7      |

Restriction status: listed in UK REACH Annex XVII

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

### Global inventory status

Contact 3M for more 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. 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.

### COMAH Regulation, SI 2015/483

Seveso hazard categories, Annex 1, Part 1

| Hazard Categories                       | Qualifying quantity (tonnes) for the application of |                         |
|---|---|-------------------------|
|   | Lower-tier requirements                             | Upper-tier requirements |
| E1 Hazardous to the Aquatic environment | 100   | 200                     |
| P5c FLAMMABLE LIQUIDS*                  | 5000  | 50000                   |

\*If maintained at a temperature above its boiling point or if particular processing conditions, such as high pressure or high temperature, may create major-accident hazards, P5a or P5b FLAMMABLE LIQUIDS may apply  
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 |
| methanol             | 67-56-1       | 500   | 5000                    |

### Regulation (EU) No 649/2012, as amended for GB

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 for GB.

## SECTION 16: Other information

### List of relevant H statements

|        |   |
|--------|---|
| EUH066 | Repeated exposure may cause skin dryness or cracking. |
| EUH071 | Corrosive to the respiratory tract.                   |
| H225   | Highly flammable liquid and vapour.                   |
| H226   | Flammable liquid and vapour.                          |
| H301   | Toxic if swallowed.                                   |
| H302   | Harmful if swallowed.                                 |
| H304   | May be fatal if swallowed and enters airways.         |
| H311   | Toxic in contact with skin.                           |
| H312   | Harmful 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.  |
| H331  | Toxic if inhaled.   |
| H332  | Harmful if inhaled.   |
| H334  | May cause allergy or asthma symptoms or breathing difficulties if inhaled.                          |
| H335  | May cause respiratory irritation.   |
| H336  | May cause drowsiness or dizziness.  |
| H361d | Suspected of damaging the unborn child.   |
| H370  | Causes damage to organs.  |
| H372  | Causes damage to organs through prolonged or repeated exposure.                                     |
| H373  | May cause damage to organs through prolonged or repeated exposure.                                  |
| H373  | May cause damage to organs through prolonged or repeated exposure: nervous system   sensory organs. |
| H400  | Very toxic to aquatic life.   |
| H410  | Very toxic to aquatic life with long lasting effects.   |
| H411  | Toxic to aquatic life with long lasting effects.  |
| H412  | Harmful to aquatic life with long lasting effects.  |

#### List of Relevant Notas

|        |  |
|--------|--|
| Nota C | Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers. |
|--------|--|

#### Revision information:

EU Section 14 - Table Data information was added.  
 EU Section 14 - Table Headers information was added.  
 GB Section 02: CLP Ingredient table information was modified.  
 GBSDS Section 14 Transport in bulk - Main Heading information was deleted.  
 GBSDS Section 14 UN Number information was deleted.  
 Label: Graphic information was modified.  
 Section 3: Composition/ Information of ingredients table information was modified.  
 Section 9: Vapour pressure value information was modified.  
 Section 11: Acute Toxicity table information was modified.  
 Section 11: Aspiration Hazard Table information was modified.  
 Section 11: Carcinogenicity Table information was modified.  
 Section 11: Germ Cell Mutagenicity Table information was modified.  
 Lactation Table information was modified.  
 Section 11: Reproductive Toxicity 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: Target Organs - Repeated Table information was modified.  
 Section 11: Target Organs - Single Table information was modified.  
 Section 12: Component ecotoxicity information information was modified.  
 Section 12: Mobility in soil information information was modified.  
 Section 12: Persistence and Degradability information information was modified.  
 Section 12: Biocumulative potential information information was modified.  
 Section 14 Classification Code – Main Heading information was deleted.  
 Section 14 Classification Code – Regulation Data information was deleted.  
 Section 14 Control Temperature – Main Heading information was deleted.  
 Section 14 Control Temperature – Regulation Data information was deleted.  
 Section 14 Emergency Temperature – Main Heading information was deleted.  
 Section 14 Emergency Temperature – Regulation Data information was deleted.  
 Section 14 Hazard Class + Sub Risk – Main Heading information was deleted.  
 Section 14 Hazard Class + Sub Risk – Regulation Data information was deleted.

Section 14 Other Dangerous Goods – Main Heading information was deleted.  
Section 14 Other Dangerous Goods – Regulation Data information was deleted.  
Section 14 Packing Group – Main Heading information was deleted.  
Section 14 Packing Group – Regulation Data information was deleted.  
Section 14 Proper Shipping Name information was deleted.  
Section 14 Regulations – Main Headings information was deleted.  
Section 14 Segregation – Regulation Data information was deleted.  
Section 14 Segregation Code – Main Heading information was deleted.  
Section 14 Special Precautions – Main Heading information was deleted.  
Section 14 Special Precautions – Regulation Data information was deleted.  
Section 14 Transport in bulk – Regulation Data information was deleted.  
Section 14 UN Number Column data information was deleted.  
Section 16: Two-column table displaying the unique list of Notas for all components of the given material. information was added.

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

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For Northern Ireland documents, please contact your 3M representative to obtain a copy.