



## Safety Data Sheet

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|                                       |                    |                         |            |
|---------------------------------------|--------------------|-------------------------|------------|
| <b>Document group:</b>                | 18-0732-0          | <b>Version number:</b>  | 5.02       |
| <b>Revision date:</b>                 | 28/01/2022         | <b>Supersedes date:</b> | 14/04/2021 |
| <b>Transportation version number:</b> | 10.00 (18/06/2019) |                         |            |

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

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

#### 1.1. Product identifier

3M™ Scotch-Weld™ Urethane Adhesive DP604NS Black

#### Product Identification Numbers

62-2648-5031-4

7100148738

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

##### Identified uses

Structural adhesive.

#### 1.3. Details of the supplier of the safety data sheet

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

**Website:** [www.3M.com/uk](http://www.3M.com/uk)

#### 1.4. Emergency telephone number

+44 (0)1344 858 000

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

18-0723-9, 18-0718-9

### TRANSPORTATION INFORMATION

62-2648-5031-4

### Component 1

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

**IMDG-CODE:** UN3082, NOT RESTRICTED AS PER IMDG CODE 2.10.2.7, MARINE POLLUTANT EXCEPTION, (DIETHYLTOLUENEDIAMINE), III, IMDG-Code segregation code: NONE, EMS: --.

**ICAO/IATA:** UN3082, NOT RESTRICTED AS PER SPECIAL PROVISION A197, ENVIRONMENTALLY HAZARDOUS SUBSTANCE EXCEPTION, (DIETHYLTOLUENEDIAMINE), III.

### Component 2

**ADR/RID:** UN3082, NOT RESTRICTED AS PER SPECIAL PROVISION 375, ENVIRONMENTALLY HAZARDOUS SUBSTANCE EXEMPTION, (DICYCLOHEXYLMETHANE 4,4-DIISOCYANATE), III, --.

**IMDG-CODE:** UN3082, NOT RESTRICTED AS PER IMDG CODE 2.10.2.7, MARINE POLLUTANT EXCEPTION, (DICYCLOHEXYLMETHANE 4,4-DIISOCYANATE), III, IMDG-Code segregation code: NONE, EMS: --.

**ICAO/IATA:** UN3082, NOT RESTRICTED AS PER SPECIAL PROVISION A197, ENVIRONMENTALLY HAZARDOUS SUBSTANCE EXCEPTION, (DICYCLOHEXYLMETHANE 4,4-DIISOCYANATE), III.

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

## KIT LABEL

### 2.1. Classification of the substance or mixture

#### CLP REGULATION (EC) No 1272/2008

#### CLASSIFICATION:

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

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

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

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

Carcinogenicity, Category 2 - Carc. 2; H351

Specific Target Organ Toxicity-Repeated Exposure, Category 2 - STOT RE 2; H373

Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H335

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

For full text of H phrases, see Section 16.

### 2.2. Label elements

#### CLP REGULATION (EC) No 1272/2008

#### SIGNAL WORD

DANGER.

#### Symbols

GHS05 (Corrosion) | GHS07 (Exclamation mark) | GHS08 (Health Hazard) | GHS09 (Environment) |

#### Pictograms



#### Contains:

m-Xylene-.alpha.alpha'.-diamine; 4,4'-Diisocyanatodiphenylmethane Polymer; 4,4'-methylenedi(cyclohexyl isocyanate); diethylmethylbenzenediamine

**HAZARD STATEMENTS:**

- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H317 May cause an allergic skin reaction.
- H351 Suspected of causing cancer.
- H335 May cause respiratory irritation.
  
- H373 May cause damage to organs through prolonged or repeated exposure:  
endocrine system |  
liver |
  
- H411 Toxic to aquatic life with long lasting effects.

**PRECAUTIONARY STATEMENTS**

**Prevention:**

- P260A Do not breathe vapours.
- P280I Wear protective gloves, eye/face protection, and respiratory protection.

**Response:**

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

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

**<=125 ml Hazard statements**

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

**<=125 ml Precautionary statements**

**Prevention:**

- P260A Do not breathe vapours.
- P280I Wear protective gloves, eye/face protection, and respiratory protection.

**Response:**

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

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

**Revision information:**

- Label: CLP Ingredients - kit components information was modified.
- Section 1: Product identification numbers information was modified.
- Section 01: SAP Material Numbers information was modified.
- Section 2: <125ml Precautionary - Prevention information was modified.

Label: CLP Precautionary - Prevention information was modified.



## Safety Data Sheet

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|                        |            |                         |            |
|------------------------|------------|-------------------------|------------|
| <b>Document group:</b> | 18-0723-9  | <b>Version number:</b>  | 9.01       |
| <b>Revision date:</b>  | 28/01/2022 | <b>Supersedes date:</b> | 10/12/2021 |

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

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

#### 1.1. Product identifier

3M(TM) Scotch-Weld(TM) Urethane Adhesive DP604NS Black and Urethane Adhesive 604NS Black, Part A

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

##### Identified uses

Structural adhesive.

#### 1.3. Details of the supplier of the safety data sheet

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

#### 1.4. Emergency telephone number

+44 (0)1344 858 000

### SECTION 2: Hazard identification

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

CLP REGULATION (EC) No 1272/2008

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

##### CLASSIFICATION:

Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315  
Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319  
Respiratory Sensitization, Category 1 - Resp. Sens. 1; H334  
Skin Sensitization, Category 1 - Skin Sens. 1; H317  
Carcinogenicity, Category 2 - Carc. 2; H351  
Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H335

For full text of H phrases, see Section 16.

**2.2. Label elements**

**CLP REGULATION (EC) No 1272/2008**

**SIGNAL WORD**

DANGER.

**Symbols**

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

**Pictograms**



**Ingredients:**

| Ingredient                               | CAS Nbr    | EC No.    | % by Wt |
|--|------------|-----------|---------|
| 4,4'-methylenedi(cyclohexyl isocyanate)  | 5124-30-1  | 225-863-2 | 15 - 40 |
| 4,4'-Diisocyanatodiphenylmethane Polymer | 25686-28-6 | 500-040-3 | 1 - 10  |

**HAZARD STATEMENTS:**

|      |  |
|------|--|
| H315 | Causes skin irritation.  |
| H319 | Causes serious eye irritation.   |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H317 | May cause an allergic skin reaction.                                       |
| H351 | Suspected of causing cancer.   |
| H335 | May cause respiratory irritation.  |

**PRECAUTIONARY STATEMENTS**

**Prevention:**

|       |  |
|-------|--|
| P261A | Avoid breathing vapours.                           |
| P280K | Wear protective gloves and respiratory protection. |

**Response:**

|                    |  |
|--------------------|--|
| P304 + P340        | IF INHALED: Remove person to fresh air and keep comfortable for breathing.   |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P333 + P313        | If skin irritation or rash occurs: Get medical advice/attention.   |
| P342 + P311        | If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.  |

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

**<=125 ml Hazard statements**

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

**<=125 ml Precautionary statements**

**Prevention:**

P261A Avoid breathing vapours.  
 P280K Wear protective gloves and respiratory protection.

**Response:**

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.  
 P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.

34% of the mixture consists of components of unknown acute inhalation toxicity.  
 Contains 59% of components with unknown hazards to the aquatic environment.

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

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

**2.3. Other hazards**

Persons previously sensitised to isocyanates may develop a cross-sensitisation reaction to other isocyanates.  
 This material does not contain any substances that are assessed to be a PBT or vPvB

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

**3.1. Substances**

Not applicable

**3.2. Mixtures**

| Ingredient  | Identifier(s)   | %          | Classification according to Regulation (EC) No. 1272/2008 [CLP]   |
|---|---|------------|---|
| Methyloxirane, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,1'-methylenebis[4-isocyanatocyclohexane] | (CAS-No.) 67837-35-8  | 40 - 70    | Substance not classified as hazardous   |
| 4,4'-methylenedi(cyclohexyl isocyanate)   | (CAS-No.) 5124-30-1<br>(EC-No.) 225-863-2<br>(REACH-No.) 01-2119457437-31 | 15 - 40    | Acute Tox. 2, H330<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Resp. Sens. 1, H334<br>Skin Sens. 1, H317<br>STOT SE 3, H335<br>Nota 2                           |
| 4,4'-Diisocyanatodiphenylmethane Polymer  | (CAS-No.) 25686-28-6<br>(EC-No.) 500-040-3                                | 1 - 10     | Acute Tox. 4, H332<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Resp. Sens. 1, H334<br>Skin Sens. 1, H317<br>Carc. 2, H351<br>STOT SE 3, H335<br>STOT RE 2, H373 |
| Carbon black  | (CAS-No.) 1333-86-4<br>(EC-No.) 215-609-9                                 | 0.05 - 0.5 | Substance with a national occupational exposure limit   |
| toluene   | (CAS-No.) 108-88-3<br>(EC-No.) 203-625-9                                  | < 1        | Flam. Liq. 2, H225<br>Asp. Tox. 1, H304<br>Skin Irrit. 2, H315  |

|  |  |  |   |
|--|--|--|---|
|  |  |  | Repr. 2, H361d<br>STOT SE 3, H336<br>STOT RE 2, H373<br>Aquatic Chronic 3, H412 |
|--|--|--|---|

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   |
|--|---|---|
| 4,4'-Diisocyanatodiphenylmethane Polymer | (CAS-No.) 25686-28-6<br>(EC-No.) 500-040-3                                | (C >= 5%) Skin Irrit. 2, H315<br>(C >= 5%) Eye Irrit. 2, H319<br>(C >= 0.1%) Resp. Sens. 1, H334<br>(C >= 5%) STOT SE 3, H335 |
| 4,4'-methylenedi(cyclohexyl isocyanate)  | (CAS-No.) 5124-30-1<br>(EC-No.) 225-863-2<br>(REACH-No.) 01-2119457437-31 | (C >= 0.5%) Resp. Sens. 1, H334<br>(C >= 0.5%) Skin Sens. 1, H317   |

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

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### Inhalation

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

#### Skin contact

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

#### Eye contact

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

#### If swallowed

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

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

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

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

Allergic respiratory reaction (difficulty breathing, wheezing, cough, and tightness of chest). Irritation to the skin (localized redness, swelling, itching, and dryness). Allergic skin reaction (redness, swelling, blistering, and itching). Serious irritation to the eyes (significant redness, swelling, pain, tearing, and impaired vision).

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

Not applicable

## SECTION 5: Fire-fighting measures

### 5.1. Extinguishing media

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



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

None inherent in this product.

## Hazardous Decomposition or By-Products

### Substance

Aldehydes.  
Isocyanates  
Carbon monoxide  
Carbon dioxide.  
Hydrogen cyanide.  
Oxides of nitrogen.  
Toxic vapour, gas, particulate.

### Condition

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

## 5.3. Advice for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

### 6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

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

Contain spill. Pour isocyanate decontaminant solution (90% water, 8% concentrated ammonia, 2% detergent) on spill and allow to react for 10 minutes. Or pour water on spill and allow to react for more than 30 minutes. Cover with absorbent material. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a container approved for transportation by appropriate authorities, but do not seal the container for 48 hours to avoid pressure build-up. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Dispose of collected material as soon as possible.

### 6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

For industrial/occupational use only. Not for consumer sale or use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Use personal protective equipment (eg. gloves, respirators...) as required.

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

Store in a well-ventilated place. Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from acids. Store away from strong bases.

### 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    |
|------------------|-----------|--------|---|------------------------|
| toluene          | 108-88-3  | UK HSC | TWA: 191 mg/m <sup>3</sup> (50 ppm);<br>STEL: 384 mg/m <sup>3</sup> (100 ppm) | SKIN                   |
| Carbon black     | 1333-86-4 | UK HSC | TWA: 3.5 mg/m <sup>3</sup> ; STEL: 7 mg/m <sup>3</sup>                        |                        |
| Free isocyanates | 5124-30-1 | UK HSC | TWA(as NCO):0.02 mg/m <sup>3</sup> ;STEL(as NCO):0.07 mg/m <sup>3</sup>       | Respiratory Sensitizer |

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

#### Biological limit values

| Ingredient       | CAS Nbr   | Agency        | Determinant                | Biological Specimen | Sampling Time | Value      | Additional comments |
|------------------|-----------|---------------|----------------------------|---------------------|---------------|------------|---------------------|
| Free isocyanates | 5124-30-1 | UK EH40 BMGVs | Isocyanate-derived diamine | Creatinine in urine | EPE           | 1 umol/mol |                     |

UK EH40 BMGVs : UK. EH40 Biological Monitoring Guidance Values (BMGVs)  
EPE: At the end of the period of exposure.

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

### 8.2. Exposure controls

#### 8.2.1. Engineering controls

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

#### 8.2.2. Personal protective equipment (PPE)

##### Eye/face protection

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

##### Applicable Norms/Standards

Use eye protection conforming to EN 166

##### Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the

results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.

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

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

#### *Applicable Norms/Standards*

Use gloves tested to EN 374

#### **Respiratory protection**

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

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

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

#### *Applicable Norms/Standards*

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

## **SECTION 9: Physical and chemical properties**

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

|   |   |
|---|---|
| <b>Physical state</b>                         | Liquid.   |
| <b>Specific Physical Form:</b>                | Viscous liquid  |
| <b>Colour</b>                                 | Black   |
| <b>Odor</b>                                   | Low Odor  |
| <b>Odour threshold</b>                        | <i>No data available.</i>                                   |
| <b>Melting point/freezing point</b>           | <i>No data available.</i>                                   |
| <b>Boiling point/boiling range</b>            | $\geq 204.4$ °C   |
| <b>Flammability (solid, gas)</b>              | Not applicable.   |
| <b>Flammable Limits(LEL)</b>                  | <i>No data available.</i>                                   |
| <b>Flammable Limits(UEL)</b>                  | <i>No data available.</i>                                   |
| <b>Flash point</b>                            | $\geq 143.3$ °C [ <i>Test Method:</i> Tagliabue closed cup] |
| <b>Autoignition temperature</b>               | <i>No data available.</i>                                   |
| <b>Decomposition temperature</b>              | <i>No data available.</i>                                   |
| <b>pH</b>                                     | <i>substance/mixture is non-soluble (in water)</i>          |
| <b>Kinematic Viscosity</b>                    | 1,893.93939393939 mm <sup>2</sup> /sec                      |
| <b>Water solubility</b>                       | Negligible  |
| <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>                        | $\leq 0$ Pa [ <i>@ 20 °C</i> ]                              |
| <b>Density</b>                                | 1.056 g/ml [ <i>Ref Std:</i> WATER=1]                       |
| <b>Relative density</b>                       | 1.056 [ <i>Ref Std:</i> WATER=1]                            |
| <b>Relative Vapor Density</b>                 | $\geq 1$ [ <i>Ref Std:</i> AIR=1]                           |

### **9.2. Other information**

#### **9.2.2 Other safety characteristics**

**EU Volatile Organic Compounds**  
**Evaporation rate**  
**Molecular weight**

*No data available.*  
<=1 [Details:Gels with exposure to humidity.]  
*No data available.*

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

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

### 10.2 Chemical stability

Stable.

### 10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

### 10.4 Conditions to avoid

Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature exothermic reaction with production of intense heat and smoke.

### 10.5 Incompatible materials

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

### 10.6 Hazardous decomposition products

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

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

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

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

#### Signs and Symptoms of Exposure

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

#### **Inhalation**

Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Allergic respiratory reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest. May cause additional health effects (see below).

#### **Skin contact**

Skin Irritation: Signs/symptoms may include localised redness, swelling, itching, dryness, cracking, blistering, and pain. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

**Eye contact**

Severe eye irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

**Ingestion**

Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

**Additional Health Effects:****Prolonged or repeated exposure may cause target organ effects:**

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

**Reproductive/Developmental Toxicity:**

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

**Additional information:**

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

**Toxicological Data**

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

**Acute Toxicity**

| Name                                     | Route                          | Species | Value  |
|--|--------------------------------|---------|--|
| Overall product                          | Inhalation-Vapour(4 hr)        |         | No data available; calculated ATE >50 mg/l     |
| Overall product                          | Ingestion                      |         | No data available; calculated ATE >5,000 mg/kg |
| 4,4'-methylenedi(cyclohexyl isocyanate)  | Dermal                         | Rat     | LD50 > 7,000 mg/kg                             |
| 4,4'-methylenedi(cyclohexyl isocyanate)  | Inhalation-Dust/Mist (4 hours) | Rat     | LC50 0.33 mg/l                                 |
| 4,4'-methylenedi(cyclohexyl isocyanate)  | Ingestion                      | Rat     | LD50 18,200 mg/kg                              |
| 4,4'-Diisocyanatodiphenylmethane Polymer | Dermal                         | Rabbit  | LD50 > 5,000 mg/kg                             |
| 4,4'-Diisocyanatodiphenylmethane Polymer | Inhalation-Dust/Mist (4 hours) | Rat     | LC50 0.368 mg/l                                |
| 4,4'-Diisocyanatodiphenylmethane Polymer | Ingestion                      | Rat     | LD50 31,600 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                               |
| Carbon black                             | Dermal                         | Rabbit  | LD50 > 3,000 mg/kg                             |
| Carbon black                             | Ingestion                      | Rat     | LD50 > 8,000 mg/kg                             |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name                                     | Species                 | Value                     |
|--|-------------------------|---------------------------|
| 4,4'-methylenedi(cyclohexyl isocyanate)  | Rabbit                  | Irritant                  |
| 4,4'-Diisocyanatodiphenylmethane Polymer | official classification | Irritant                  |
| toluene                                  | Rabbit                  | Irritant                  |
| Carbon black                             | Rabbit                  | No significant irritation |

**Serious Eye Damage/Irritation**

**3M(TM) Scotch-Weld(TM) Urethane Adhesive DP604NS Black and Urethane Adhesive 604NS Black, Part A**

| Name                                     | Species                 | Value                     |
|--|-------------------------|---------------------------|
| 4,4'-methylenedi(cyclohexyl isocyanate)  | Rabbit                  | Mild irritant             |
| 4,4'-Diisocyanatodiphenylmethane Polymer | official classification | Severe irritant           |
| toluene                                  | Rabbit                  | Moderate irritant         |
| Carbon black                             | Rabbit                  | No significant irritation |

**Skin Sensitisation**

| Name                                     | Species                 | Value          |
|--|-------------------------|----------------|
| 4,4'-methylenedi(cyclohexyl isocyanate)  | Human and animal        | Sensitising    |
| 4,4'-Diisocyanatodiphenylmethane Polymer | official classification | Sensitising    |
| toluene                                  | Guinea pig              | Not classified |

**Respiratory Sensitisation**

| Name                                     | Species                | Value       |
|--|------------------------|-------------|
| 4,4'-methylenedi(cyclohexyl isocyanate)  | Professional judgement | Sensitising |
| 4,4'-Diisocyanatodiphenylmethane Polymer | Human                  | Sensitising |

**Germ Cell Mutagenicity**

| Name                                     | Route    | Value  |
|--|----------|--|
| 4,4'-methylenedi(cyclohexyl isocyanate)  | In Vitro | Not mutagenic  |
| 4,4'-Diisocyanatodiphenylmethane Polymer | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| toluene                                  | In Vitro | Not mutagenic  |
| toluene                                  | In vivo  | Not mutagenic  |
| Carbon black                             | In Vitro | Not mutagenic  |
| Carbon black                             | In vivo  | Some positive data exist, but the data are not sufficient for classification |

**Carcinogenicity**

| Name                                     | Route      | Species | Value  |
|--|------------|---------|--|
| 4,4'-Diisocyanatodiphenylmethane Polymer | Inhalation | Rat     | 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 |
| Carbon black                             | Dermal     | Mouse   | Not carcinogenic   |
| Carbon black                             | Ingestion  | Mouse   | Not carcinogenic   |
| Carbon black                             | Inhalation | Rat     | Carcinogenic.  |

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**

| Name                                    | Route      | Value                                  | Species | Test result | Exposure Duration |
|---|------------|--|---------|-------------|-------------------|
| 4,4'-methylenedi(cyclohexyl isocyanate) | Inhalation | Not classified for female reproduction | Rat     | NOAEL 6     | prematuring       |

**3M(TM) Scotch-Weld(TM) Urethane Adhesive DP604NS Black and Urethane Adhesive 604NS Black, Part A**

|  |            |  |       |                     |                        |
|--|------------|--|-------|---------------------|------------------------|
|  |            |  |       | mg/m3               | into lactation         |
| 4,4'-methylenedi(cyclohexyl isocyanate)  | Inhalation | Not classified for male reproduction   | Rat   | NOAEL 6 mg/m3       | 28 days                |
| 4,4'-methylenedi(cyclohexyl isocyanate)  | Inhalation | Not classified for development         | Rat   | NOAEL 6 mg/m3       | during gestation       |
| 4,4'-Diisocyanatodiphenylmethane Polymer | Inhalation | Not classified for development         | Rat   | NOAEL 0.004 mg/l    | during organogenesis   |
| 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 |

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

| Name                                     | Route      | Target Organ(s)                   | Value  | Species                 | Test result         | Exposure Duration      |
|--|------------|-----------------------------------|--|-------------------------|---------------------|------------------------|
| 4,4'-methylenedi(cyclohexyl isocyanate)  | Inhalation | respiratory irritation            | May cause respiratory irritation   | Rat                     | NOAEL not available |                        |
| 4,4'-Diisocyanatodiphenylmethane Polymer | Inhalation | respiratory irritation            | May cause respiratory irritation   | official classification | 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 |

**Specific Target Organ Toxicity - repeated exposure**

| Name                                     | Route      | Target Organ(s)   | Value  | Species | Test result         | Exposure Duration      |
|--|------------|---|--|---------|---------------------|------------------------|
| 4,4'-methylenedi(cyclohexyl isocyanate)  | Inhalation | respiratory system  | Not classified   | Rat     | NOAEL 3 mg/m3       | 90 days                |
| 4,4'-methylenedi(cyclohexyl isocyanate)  | Inhalation | heart   skin   endocrine system   gastrointestinal tract   bone, teeth, nails, and/or hair   hematopoietic system   liver   immune system   muscles   nervous system   eyes   kidney and/or bladder   vascular system | Not classified   | Rat     | NOAEL 18 mg/m3      | 90 days                |
| 4,4'-Diisocyanatodiphenylmethane Polymer | Inhalation | respiratory system  | Causes damage to organs through prolonged or repeated exposure   | Rat     | LOAEL 0.004 mg/l    | 13 weeks               |
| toluene                                  | Inhalation | auditory system   eyes   olfactory system   | Causes damage to organs through prolonged or repeated exposure   | Human   | NOAEL Not available | poisoning and/or abuse |
| toluene                                  | Inhalation | nervous system  | May cause damage to organs though prolonged or repeated exposure | Human   | NOAEL Not available | poisoning and/or abuse |
| toluene                                  | Inhalation | respiratory system  | Some positive data exist, but the                                | Rat     | LOAEL 2.3           | 15 months              |

**3M(TM) Scotch-Weld(TM) Urethane Adhesive DP604NS Black and Urethane Adhesive 604NS Black, Part A**

|              |            |  |  |                         |                       |                       |
|--------------|------------|--|--|-------------------------|-----------------------|-----------------------|
|              |            |  | data are not sufficient for classification                                   |                         | mg/l                  |                       |
| 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               |
| Carbon black | Inhalation | pneumoconiosis                         | Not classified   | Human                   | NOAEL Not available   | occupational exposure |

**Aspiration Hazard**

| Name    | Value             |
|---------|-------------------|
| 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 EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

**12.1. Toxicity**

No product test data available.

| Material   | CAS #      | Organism | Type  | Exposure | Test endpoint | Test result |
|--|------------|----------|---|----------|---------------|-------------|
| Methyloxirane, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,1'- | 67837-35-8 |          | Data not available or insufficient for classification |          |               | N/A         |



**3M(TM) Scotch-Weld(TM) Urethane Adhesive DP604NS Black and Urethane Adhesive 604NS Black, Part A**

|  |            |                  |   |          |      |                              |
|--|------------|------------------|---|----------|------|------------------------------|
| methylenebis[4-isocyanatocyclohexane]    |            |                  |   |          |      |                              |
| 4,4'-methylenebis(cyclohexyl isocyanate) | 5124-30-1  | Water flea       | Estimated   | 48 hours | EC50 | 7.07 mg/l                    |
| 4,4'-methylenebis(cyclohexyl isocyanate) | 5124-30-1  | Activated sludge | Experimental  | 3 hours  | EC50 | 19 mg/l                      |
| 4,4'-methylenebis(cyclohexyl isocyanate) | 5124-30-1  | Green algae      | Experimental  | 72 hours | EC50 | >5 mg/l                      |
| 4,4'-methylenebis(cyclohexyl isocyanate) | 5124-30-1  | Zebra Fish       | Experimental  | 96 hours | LC50 | 1.2 mg/l                     |
| 4,4'-methylenebis(cyclohexyl isocyanate) | 5124-30-1  | Green algae      | Experimental  | 72 hours | EC10 | 1.2 mg/l                     |
| 4,4'-Diisocyanatodiphenylmethane Polymer | 25686-28-6 | Green algae      | Estimated   | 72 hours | EC50 | >1,640 mg/l                  |
| 4,4'-Diisocyanatodiphenylmethane Polymer | 25686-28-6 | Medaka           | Estimated   | 96 hours | LC50 | >3,000 mg/l                  |
| 4,4'-Diisocyanatodiphenylmethane Polymer | 25686-28-6 | Water flea       | Estimated   | 24 hours | EC50 | >1,000 mg/l                  |
| 4,4'-Diisocyanatodiphenylmethane Polymer | 25686-28-6 | Green algae      | Estimated   | 72 hours | NOEC | 1,640 mg/l                   |
| 4,4'-Diisocyanatodiphenylmethane Polymer | 25686-28-6 | Water flea       | Estimated   | 21 days  | NOEC | >=10 mg/l                    |
| Carbon black                             | 1333-86-4  | Activated sludge | Experimental  | 3 hours  | EC50 | >=100 mg/l                   |
| Carbon black                             | 1333-86-4  |                  | Data not available or insufficient for classification |          |      | N/A                          |
| 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)       |

**12.2. Persistence and degradability**

| Material  | CAS Nbr    | Test type                         | Duration | Study Type                    | Test result        | Protocol                            |
|---|------------|-----------------------------------|----------|-------------------------------|--------------------|-------------------------------------|
| Methyloxirane, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,1'-methylenebis[4-isocyanatocyclohexane] | 67837-35-8 | Data not available - insufficient |          |                               | N/A                |                                     |
| 4,4'-methylenedi(cyclohexyl isocyanate)   | 5124-30-1  | Experimental Hydrolysis           |          | Hydrolytic half-life          | 1.97 hours (t 1/2) | Non-standard method                 |
| 4,4'-methylenedi(cyclohexyl isocyanate)   | 5124-30-1  | Experimental Biodegradation       | 28 days  | BOD                           | 0 % BOD/ThBOD      | OECD 301F - Manometric respirometry |
| 4,4'-Diisocyanatodiphenylmethane Polymer  | 25686-28-6 | Estimated Hydrolysis              |          | Hydrolytic half-life          | 20 hours (t 1/2)   | Non-standard method                 |
| Carbon black  | 1333-86-4  | Data not available - insufficient |          |                               | N/A                |                                     |
| toluene   | 108-88-3   | Experimental Photolysis           |          | Photolytic half-life (in air) | 5.2 days (t 1/2)   |                                     |
| toluene   | 108-88-3   | Experimental Biodegradation       | 20 days  | BOD                           | 80 % BOD/ThBOD     | APHA Std Meth Water/Wastewater      |

### 12.3 : Bioaccumulative potential

| Material  | Cas No.    | Test type   | Duration | Study Type             | Test result | Protocol   |
|---|------------|---|----------|------------------------|-------------|--|
| Methyloxirane, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,1'-methylenebis[4-isocyanatocyclohexane] | 67837-35-8 | Data not available or insufficient for classification | N/A      | N/A                    | N/A         | N/A  |
| 4,4'-methylenedi(cyclohexyl isocyanate)   | 5124-30-1  | Estimated Bioconcentration                            |          | Log Kow                | 2.03        | Non-standard method                                |
| 4,4'-Diisocyanatodiphenylmethane Polymer  | 25686-28-6 | Estimated BCF-Carp                                    | 28 days  | Bioaccumulation factor | 200         | OECD 305E - Bioaccumulation flow-through fish test |
| Carbon black  | 1333-86-4  | Data not available or insufficient for classification | N/A      | N/A                    | N/A         | N/A  |
| toluene   | 108-88-3   | Experimental BCF - Other                              | 72 hours | Bioaccumulation factor | 90          |  |
| toluene   | 108-88-3   | Experimental Bioconcentration                         |          | Log Kow                | 2.73        |  |

### 12.4. Mobility in soil

| Material | Cas No.  | Test type                     | Study Type | Test result | Protocol |
|----------|----------|-------------------------------|------------|-------------|----------|
| toluene  | 108-88-3 | Experimental Mobility in Soil | Koc        | 37-160 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. Endocrine disrupting properties

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

### 12.7. Other adverse effects

No information available.

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

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

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

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

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

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

**SECTION 14: Transportation information**

Not hazardous for transportation.

ADR: UN3082; Environmentally Hazardous Substance, Liquid, N.O.S. (Dicyclohexylmethane 4, 4-Diisocyanate); 9; III; (E); M6.

IMDG: UN3082; Environmentally Hazardous Substance, Liquid, N.O.S. (Dicyclohexylmethane 4, 4-Diisocyanate); 9; III; Marine Pollutant: Dicyclohexylmethane 4, 4-Diisocyanate; FA, SF.

IATA: UN3082; Environmentally Hazardous Substance, Liquid, N.O.S. (Dicyclohexylmethane 4, 4-Diisocyanate); 9; III. Exemption: For vessels containing a net quantity of 5 l or a net mass of 5 kg or less per single or inner packaging, special provision 375 (ADR), exemption per 2.10.2.7 (IMDG) or special provision A197 (IATA) may be applied, if applicable

|  | <b>Ground Transport (ADR)</b>  | <b>Air Transport (IATA)</b>  | <b>Marine Transport (IMDG)</b>   |
|--|--|--|--|
| <b>14.1 UN number</b>                    | No data available.   | No data available.   | No data available.   |
| <b>14.2 UN proper shipping name</b>      | No data available.   | No data available.   | No data available.   |
| <b>14.3 Transport hazard class(es)</b>   | No data available.   | No data available.   | No data available.   |
| <b>14.4 Packing group</b>                | No data available.   | No data available.   | No data available.   |
| <b>14.5 Environmental hazards</b>        | No data available.   | No data available.   | No data available.   |
| <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 Transport in bulk according to Annex II of Marpol 73/78 and IBC Code</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>   | No data available. | No data available. | No data available. |
| <b>IMDG Segregation Code</b>   | No data available. | No data available. | No data available. |

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

## SECTION 15: Regulatory information

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

#### Carcinogenicity

| <u>Ingredient</u>                        | <u>CAS Nbr</u> | <u>Classification</u>         | <u>Regulation</u>                                       |
|--|----------------|-------------------------------|---|
| 4,4'-Diisocyanatodiphenylmethane Polymer | 25686-28-6     | Carc. 2                       | 3M classified according to Regulation (EC) No 1272/2008 |
| Carbon black                             | 1333-86-4      | Grp. 2B: Possible human carc. | International Agency for Research on Cancer             |
| toluene                                  | 108-88-3       | Gr. 3: Not classifiable       | International Agency for Research on Cancer             |

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

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

| <u>Ingredient</u>                       | <u>CAS Nbr</u> |
|---|----------------|
| 4,4'-methylenedi(cyclohexyl isocyanate) | 5124-30-1      |
| toluene                                 | 108-88-3       |

Restriction status: listed in REACH Annex XVII

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

#### Global inventory status

Contact 3M for more information. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

#### DIRECTIVE 2012/18/EU

Seveso hazard categories, Annex 1, Part 1

None

Seveso named dangerous substances, Annex 1, Part 2

| Dangerous Substances                    | Identifier(s) | Qualifying quantity (tonnes) for the application of |                         |
|---|---------------|---|-------------------------|
|   |               | Lower-tier requirements                             | Upper-tier requirements |
| 4,4'-methylenedi(cyclohexyl isocyanate) | 5124-30-1     | 50  | 200                     |
| toluene                                 | 108-88-3      | 10  | 50                      |

**15.2. Chemical Safety Assessment**

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

**SECTION 16: Other information**

**List of relevant H statements**

- H225 Highly flammable liquid and vapour.
- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H330 Fatal 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.
- H351 Suspected of causing cancer.
- H361d Suspected of damaging the unborn child.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H412 Harmful to aquatic life with long lasting effects.

**Revision information:**

- Section 11: Target Organs - Repeated Table information was added.
- Section 11: Target Organs - Repeated Table information was deleted.
- Section 2: No PBT/vPvB information available warning information was added.

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

**3M United Kingdom MSDSs are available at [www.3M.com/uk](http://www.3M.com/uk)**



## Safety Data Sheet

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

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

#### 1.1. Product identifier

3M(TM) Scotch-Weld(TM) Urethane Adhesive DP604NS Black and Urethane Adhesive 604NS Black, Part B

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

##### Identified uses

Structural adhesive.

#### 1.3. Details of the supplier of the safety data sheet

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

#### 1.4. Emergency telephone number

+44 (0)1344 858 000

### SECTION 2: Hazard identification

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

CLP REGULATION (EC) No 1272/2008

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

##### CLASSIFICATION:

Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315  
Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318  
Skin Sensitization, Category 1 - Skin Sens. 1; H317  
Specific Target Organ Toxicity-Repeated Exposure, Category 2 - STOT RE 2; H373  
Hazardous to the Aquatic Environment (Chronic), Category 2 - Aquatic Chronic 2; H411

For full text of H phrases, see Section 16.

**2.2. Label elements**

**CLP REGULATION (EC) No 1272/2008**

**SIGNAL WORD**

DANGER.

**Symbols**

GHS05 (Corrosion) |GHS07 (Exclamation mark) |GHS08 (Health Hazard) |GHS09 (Environment) |

**Pictograms**



**Ingredients:**

| Ingredient                    | CAS Nbr    | EC No.    | % by Wt |
|-------------------------------|------------|-----------|---------|
| diethylmethylenediamine       | 68479-98-1 | 270-877-4 | 5 - 20  |
| m-xylene-alpha,alpha'-diamine | 1477-55-0  | 216-032-5 | < 5     |

**HAZARD STATEMENTS:**

|      |  |
|------|--|
| H315 | Causes skin irritation.  |
| H318 | Causes serious eye damage.   |
| H317 | May cause an allergic skin reaction.   |
| H373 | May cause damage to organs through prolonged or repeated exposure: endocrine system   liver. |
| H411 | Toxic to aquatic life with long lasting effects.   |

**PRECAUTIONARY STATEMENTS**

**Prevention:**

|       |   |
|-------|---|
| P260A | Do not breathe vapours.                         |
| P273  | Avoid release to the environment.               |
| P280B | Wear protective gloves and eye/face protection. |

**Response:**

|                    |  |
|--------------------|--|
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310               | Immediately call a POISON CENTRE or doctor/physician.  |
| P333 + P313        | If skin irritation or rash occurs: Get medical advice/attention.   |

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

**<=125 ml Hazard statements**

|      |                                      |
|------|--------------------------------------|
| H318 | Causes serious eye damage.           |
| H317 | May cause an allergic skin reaction. |

**<=125 ml Precautionary statements**

**Prevention:**

P280B

Wear protective gloves and eye/face protection.

**Response:**

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310

Immediately call a POISON CENTRE or doctor/physician.

P333 + P313

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

Contains 73% of components with unknown hazards to the aquatic environment.

**2.3. Other hazards**

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

**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]   |
|--|--|---------|---|
| Glycerol poly(oxyethylene, oxypropylene) ether | (CAS-No.) 9082-00-2                        | 60 - 90 | Substance not classified as hazardous   |
| diethylmethylbenzenediamine                    | (CAS-No.) 68479-98-1<br>(EC-No.) 270-877-4 | 5 - 20  | Acute Tox. 4, H312<br>Acute Tox. 4, H302<br>Eye Irrit. 2, H319<br>STOT RE 2, H373<br>Aquatic Acute 1, H400,M=1<br>Aquatic Chronic 1, H410,M=1<br>Nota C |
| Propylidynetrimethanol, propoxylated           | (CAS-No.) 25723-16-4<br>(EC-No.) 500-041-9 | 1 - 10  | Substance not classified as hazardous   |
| m-xylene-alpha,alpha'-diamine                  | (CAS-No.) 1477-55-0<br>(EC-No.) 216-032-5  | < 5     | Acute Tox. 4, H332<br>Acute Tox. 4, H302<br>Skin Corr. 1B, H314<br>Skin Sens. 1, H317<br>Aquatic Chronic 3, H412  |

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

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

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

**Inhalation**

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

**Skin contact**

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms



develop, get medical attention.

#### Eye contact

Immediately flush with large amounts of water 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 CLP classification include: Irritation to the skin (localized redness, swelling, itching, and dryness). Allergic skin reaction (redness, swelling, blistering, and itching). Serious damage to the eyes (corneal cloudiness, severe pain, tearing, ulcerations, and significantly impaired or loss of vision). Target organ effects. See Section 11 for additional details.

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

Not applicable

## SECTION 5: Fire-fighting measures

#### 5.1. Extinguishing media

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

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

None inherent in this product.

#### Hazardous Decomposition or By-Products

| <u>Substance</u>                | <u>Condition</u>   |
|---------------------------------|--------------------|
| Aldehydes.                      | During combustion. |
| Carbon monoxide                 | During combustion. |
| Carbon dioxide.                 | During combustion. |
| Oxides of nitrogen.             | During combustion. |
| Toxic vapour, gas, particulate. | During combustion. |

#### 5.3. Advice for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

## SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

#### 6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

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

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on

the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible.

#### 6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

For industrial/occupational use only. Not for consumer sale or use. 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.)

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

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

No occupational exposure limit values exist for any of the components listed in Section 3 of this Safety Data Sheet.

#### Biological limit values

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

### 8.2. Exposure controls

#### 8.2.1. Engineering controls

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

#### 8.2.2. Personal protective equipment (PPE)

##### Eye/face protection

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

Full face shield.

Indirect vented goggles.

##### *Applicable Norms/Standards*

Use eye/face protection conforming to EN 166

##### Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.

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

| Material        | Thickness (mm) | Breakthrough Time |
|-----------------|----------------|-------------------|
| Butyl rubber.   | 0.5            | =>8 hours         |
| Fluoroelastomer | 0.4            | =>8 hours         |
| Neoprene.       | 0.5            | =>8 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

#### Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

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

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

#### Applicable Norms/Standards

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

## SECTION 9: Physical and chemical properties

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

|  |  |
|--|--|
| Physical state                         | Liquid.  |
| Specific Physical Form:                | Viscous.                                       |
| Colour                                 | Dark Amber, Green, Light Amber                 |
| Odor                                   | Slight Ammoniacal                              |
| Odour threshold                        | No data available.                             |
| Melting point/freezing point           | No data available.                             |
| Boiling point/boiling range            | >=210 °C                                       |
| Flammability (solid, gas)              | Not applicable.                                |
| Flammable Limits(LEL)                  | Not applicable.                                |
| Flammable Limits(UEL)                  | Not applicable.                                |
| Flash point                            | >=143.3 °C [Test Method: Tagliabue closed cup] |
| Autoignition temperature               | Not applicable.                                |
| Decomposition temperature              | No data available.                             |
| pH                                     | substance/mixture is non-soluble (in water)    |
| Kinematic Viscosity                    | 1,545.89371980676 mm <sup>2</sup> /sec         |
| Water solubility                       | Negligible                                     |
| Solubility- non-water                  | No data available.                             |
| Partition coefficient: n-octanol/water | No data available.                             |
| Vapour pressure                        | Not applicable.                                |
| Density                                | 1.035 g/ml                                     |
| Relative density                       | 1.035 [Ref Std: WATER=1]                       |
| Relative Vapor Density                 | >=1 [Ref Std: AIR=1]                           |

### 9.2. Other information

#### 9.2.2 Other safety characteristics

|                               |                        |
|-------------------------------|------------------------|
| EU Volatile Organic Compounds | No data available.     |
| Evaporation rate              | <=1 [Ref Std: WATER=1] |

**Molecular weight**

*No data available.*

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

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

### 10.2 Chemical stability

Stable.

### 10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

### 10.4 Conditions to avoid

Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature exothermic reaction with production of intense heat and smoke.

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

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

#### Signs and Symptoms of Exposure

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

#### Inhalation

Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

#### Skin contact

Skin Irritation: Signs/symptoms may include localised redness, swelling, itching, dryness, cracking, blistering, and pain.  
Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

#### Eye contact

Corrosive (eye burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

#### Ingestion

May be harmful if swallowed.

Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

**Additional Health Effects:**

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

Liver effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice. Endocrine effects: Signs/symptoms may include disruption of gonadal, thyroid, adrenal, or pancreatic function, changes in hormone production, alterations in circulating hormone levels, and/or changes in tissue response to hormones.

**Additional information:**

Persons previously sensitised to amines may develop a cross-sensitisation reaction to certain other amines. Increased numbers of tumors in the liver, thyroid, and possibly the mammary glands were observed in rats given DETDA (CAS No. 68479-98-1) in their diet for two years.

**Toxicological Data**

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

**Acute Toxicity**

| Name   | Route                          | Species | Value   |
|--|--------------------------------|---------|---|
| Overall product                                | Dermal                         |         | No data available; calculated ATE >5,000 mg/kg        |
| Overall product                                | Ingestion                      |         | No data available; calculated ATE 2,000 - 5,000 mg/kg |
| Glycerol poly(oxyethylene, oxypropylene) ether | Dermal                         | Rabbit  | LD50 > 5,000 mg/kg                                    |
| Glycerol poly(oxyethylene, oxypropylene) ether | Ingestion                      | Rat     | LD50 > 10,000 mg/kg                                   |
| diethylmethylbenzenediamine                    | Dermal                         | Rat     | LD50 > 2,000 mg/kg                                    |
| diethylmethylbenzenediamine                    | Inhalation-Dust/Mist (4 hours) | Rat     | LC50 > 0.61 mg/l                                      |
| diethylmethylbenzenediamine                    | Ingestion                      | Rat     | LD50 472 mg/kg  |
| Propylidynetrimethanol, propoxylated           | Dermal                         | Rat     | LD50 > 2,000 mg/kg                                    |
| Propylidynetrimethanol, propoxylated           | Ingestion                      | Rat     | LD50 > 2,500 mg/kg                                    |
| m-xylene-alpha,alpha'-diamine                  | Dermal                         | Rabbit  | LD50 > 2,000 mg/kg                                    |
| m-xylene-alpha,alpha'-diamine                  | Inhalation-Dust/Mist (4 hours) | Rat     | LC50 1.2 mg/l   |
| m-xylene-alpha,alpha'-diamine                  | Ingestion                      | Rat     | LD50 980 mg/kg  |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name                                 | Species | Value                     |
|--------------------------------------|---------|---------------------------|
| diethylmethylbenzenediamine          | Rabbit  | No significant irritation |
| Propylidynetrimethanol, propoxylated | Rabbit  | No significant irritation |
| m-xylene-alpha,alpha'-diamine        | Rat     | Corrosive                 |

**Serious Eye Damage/Irritation**

| Name                                 | Species | Value           |
|--------------------------------------|---------|-----------------|
| diethylmethylbenzenediamine          | Rabbit  | Severe irritant |
| Propylidynetrimethanol, propoxylated | Rabbit  | Mild irritant   |
| m-xylene-alpha,alpha'-diamine        | Rabbit  | Corrosive       |

**Skin Sensitisation**

| Name                          | Species | Value          |
|-------------------------------|---------|----------------|
| diethylmethylbenzenediamine   | Human   | Not classified |
| m-xylene-alpha,alpha'-diamine | Guinea  | Sensitising    |

|  |     |  |
|--|-----|--|
|  | pig |  |
|--|-----|--|

### Respiratory Sensitisation

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

### Germ Cell Mutagenicity

| Name                          | Route    | Value  |
|-------------------------------|----------|--|
| diethylmethylbenzenediamine   | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| diethylmethylbenzenediamine   | In vivo  | Some positive data exist, but the data are not sufficient for classification |
| m-xylene-alpha,alpha'-diamine | In Vitro | Not mutagenic  |
| m-xylene-alpha,alpha'-diamine | In vivo  | Not mutagenic  |

### Carcinogenicity

| Name                        | Route     | Species | Value  |
|-----------------------------|-----------|---------|--|
| diethylmethylbenzenediamine | Ingestion | Rat     | Some positive data exist, but the data are not sufficient for classification |

### Reproductive Toxicity

#### Reproductive and/or Developmental Effects

| Name                          | Route     | Value                                  | Species | Test result         | Exposure Duration |
|-------------------------------|-----------|--|---------|---------------------|-------------------|
| m-xylene-alpha,alpha'-diamine | Ingestion | Not classified for female reproduction | Rat     | NOAEL 450 mg/kg/day | 1 generation      |
| m-xylene-alpha,alpha'-diamine | Ingestion | Not classified for male reproduction   | Rat     | NOAEL 450 mg/kg     | 1 generation      |
| m-xylene-alpha,alpha'-diamine | Ingestion | Not classified for development         | Rat     | NOAEL 450 mg/kg/day | 1 generation      |

### Target Organ(s)

#### Specific Target Organ Toxicity - single exposure

| Name                          | Route      | Target Organ(s)        | Value  | Species       | Test result         | Exposure Duration |
|-------------------------------|------------|------------------------|--|---------------|---------------------|-------------------|
| m-xylene-alpha,alpha'-diamine | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Not available | NOAEL Not available |                   |

#### Specific Target Organ Toxicity - repeated exposure

| Name                          | Route     | Target Organ(s)   | Value  | Species | Test result         | Exposure Duration |
|-------------------------------|-----------|---|--|---------|---------------------|-------------------|
| diethylmethylbenzenediamine   | Ingestion | liver   | Causes damage to organs through prolonged or repeated exposure   | Rat     | LOAEL 0.4 mg/kg/day | 24 months         |
| diethylmethylbenzenediamine   | Ingestion | endocrine system  | May cause damage to organs though prolonged or repeated exposure | Rat     | NOAEL 1.4 mg/kg/day | 24 months         |
| diethylmethylbenzenediamine   | Ingestion | kidney and/or bladder   | Not classified   | Rat     | NOAEL 2.8 mg/kg/day | 24 months         |
| diethylmethylbenzenediamine   | Ingestion | eyes  | Not classified   | Rat     | NOAEL 1.4 mg/kg/day | 24 months         |
| diethylmethylbenzenediamine   | Ingestion | heart   skin   bone, teeth, nails, and/or hair   hematopoietic system   immune system   muscles   nervous system   respiratory system | Not classified   | Rat     | NOAEL 3.5 mg/kg/day | 24 months         |
| m-xylene-alpha,alpha'-diamine | Ingestion | endocrine system   blood   bone marrow  | Not classified   | Rat     | NOAEL 600 mg/kg/day | 28 days           |

**Aspiration Hazard**

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

**Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.**

**11.2. Information on other hazards**

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

**SECTION 12: Ecological information**

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

**12.1. Toxicity**

No product test data available.

| Material                                       | CAS #      | Organism         | Type  | Exposure   | Test endpoint | Test result  |
|--|------------|------------------|---|------------|---------------|--------------|
| Glycerol poly(oxyethylene, oxypropylene) ether | 9082-00-2  |                  | Data not available or insufficient for classification |            |               | N/A          |
| diethylmethylbenzenedi amine                   | 68479-98-1 | Bacteria         | Experimental  | 16 hours   | EC10          | 170 mg/l     |
| diethylmethylbenzenedi amine                   | 68479-98-1 | Green algae      | Experimental  | 72 hours   | EC50          | 104 mg/l     |
| diethylmethylbenzenedi amine                   | 68479-98-1 | Water flea       | Experimental  | 48 hours   | EC50          | 0.5 mg/l     |
| diethylmethylbenzenedi amine                   | 68479-98-1 | Green algae      | Experimental  | 72 hours   | NOEC          | 32 mg/l      |
| Propylidynetrimethanol , propoxylated          | 25723-16-4 | Activated sludge | Experimental  | 3 hours    | EC10          | >10,000 mg/l |
| Propylidynetrimethanol , propoxylated          | 25723-16-4 | Green algae      | Experimental  | 72 hours   | EC50          | >100 mg/l    |
| Propylidynetrimethanol , propoxylated          | 25723-16-4 | Water flea       | Experimental  | 48 hours   | EC50          | >100 mg/l    |
| Propylidynetrimethanol , propoxylated          | 25723-16-4 | Zebra Fish       | Experimental  | 96 hours   | LC50          | >100 mg/l    |
| Propylidynetrimethanol , propoxylated          | 25723-16-4 | Green algae      | Experimental  | 72 hours   | NOEC          | 100 mg/l     |
| Propylidynetrimethanol , propoxylated          | 25723-16-4 | Water flea       | Experimental  | 21 days    | NOEC          | 8.5 mg/l     |
| m-xylene-alpha,alpha'-diamine                  | 1477-55-0  | Activated sludge | Experimental  | 30 minutes | EC50          | >1,000 mg/l  |
| m-xylene-alpha,alpha'-diamine                  | 1477-55-0  | Bacteria         | Experimental  | 16 hours   | EC10          | 24 mg/l      |
| m-xylene-alpha,alpha'-diamine                  | 1477-55-0  | Green Algae      | Experimental  | 72 hours   | EC50          | 28 mg/l      |
| m-xylene-alpha,alpha'-diamine                  | 1477-55-0  | Medaka           | Experimental  | 96 hours   | LC50          | 87.6 mg/l    |
| m-xylene-alpha,alpha'-diamine                  | 1477-55-0  | Water flea       | Experimental  | 48 hours   | EC50          | 15.2 mg/l    |
| m-xylene-alpha,alpha'-diamine                  | 1477-55-0  | Green Algae      | Experimental  | 72 hours   | NOEC          | 9.8 mg/l     |
| m-xylene-alpha,alpha'-diamine                  | 1477-55-0  | Water flea       | Experimental  | 21 days    | NOEC          | 4.7 mg/l     |

**12.2. Persistence and degradability**

| Material                                       | CAS Nbr    | Test type                   | Duration | Study Type    | Test result                           | Protocol                          |
|--|------------|-----------------------------|----------|---------------|---------------------------------------|-----------------------------------|
| Glycerol poly(oxyethylene, oxypropylene) ether | 9082-00-2  | Modeled Biodegradation      | 28 days  | BOD           | 20 %<br>BOD/ThBOD                     | Catalogic™                        |
| diethylmethylbenzenediamine                    | 68479-98-1 | Experimental Biodegradation | 28 days  | BOD           | <1 %<br>BOD/ThBOD                     | OECD 301D - Closed bottle test    |
| Propylidynetrimethanol, propoxylated           | 25723-16-4 | Experimental Biodegradation | 28 days  | BOD           | 84 %<br>BOD/ThBOD                     | Non-standard method               |
| m-xylene-alpha,alpha'-diamine                  | 1477-55-0  | Experimental Biodegradation | 28 days  | CO2 evolution | 49 %CO2 evolution/THC<br>O2 evolution | OECD 301B - Modified sturm or CO2 |

**12.3 : Bioaccumulative potential**

| Material                                       | Cas No.    | Test type                     | Duration | Study Type             | Test result | Protocol   |
|--|------------|-------------------------------|----------|------------------------|-------------|--|
| Glycerol poly(oxyethylene, oxypropylene) ether | 9082-00-2  | Modeled Bioconcentration      |          | Bioaccumulation factor | 2           | Catalogic™   |
| Glycerol poly(oxyethylene, oxypropylene) ether | 9082-00-2  | Modeled Bioconcentration      |          | Log Kow                | -2.6        | Episuite™  |
| diethylmethylbenzenediamine                    | 68479-98-1 | Experimental Bioconcentration |          | Log Kow                | 1.4         | Non-standard method                                |
| Propylidynetrimethanol, propoxylated           | 25723-16-4 | Experimental Bioconcentration |          | Log Kow                | 1.8         | Non-standard method                                |
| m-xylene-alpha,alpha'-diamine                  | 1477-55-0  | Experimental BCF-Carp         | 42 days  | Bioaccumulation factor | <2.7        | OECD 305E - Bioaccumulation flow-through fish test |

**12.4. Mobility in soil**

| Material                                       | Cas No.    | Test type                     | Study Type | Test result | Protocol                       |
|--|------------|-------------------------------|------------|-------------|--------------------------------|
| Glycerol poly(oxyethylene, oxypropylene) ether | 9082-00-2  | Modeled Mobility in Soil      | Koc        | 13 l/kg     | Episuite™                      |
| Propylidynetrimethanol, propoxylated           | 25723-16-4 | Experimental Mobility in Soil | Koc        | <1 l/kg     | OECD 121 Estim. of Koc by HPLC |

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

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

**12.6. Endocrine disrupting properties**

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

**12.7. Other adverse effects**

No information available.

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

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

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of



3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor.

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

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

**SECTION 14: Transportation information**

Exemption: For vessels containing a net quantity of 5 l or a net mass of 5 kg or less per single or inner packaging, special provision 375 (ADR), exemption per 2.10.2.7 (IMDG) or special provision A197 (IATA) may be applied, if applicable  
ADR: UN3082; Environmentally Hazardous Substance, Liquid, N.O.S. (Diethyltoluenediamine); 9; III; (E); M6.  
IMDG: UN3082; Environmentally Hazardous Substance, Liquid, N.O.S. (Diethyltoluenediamine); 9; III; Marine Pollutant: Diethyltoluenediamine; EMS: FA, SF.  
IATA: UN3082; Environmentally Hazardous Substance, Liquid, N.O.S. (Diethyltoluenediamine); 9; III.

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**

**15.2. Chemical Safety Assessment**

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

**SECTION 16: Other information**

**List of relevant H statements**

|      |  |
|------|--|
| H302 | Harmful if swallowed.  |
| 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.   |
| H332 | Harmful if inhaled.  |
| H373 | May cause damage to organs through prolonged or repeated exposure.                           |
| H373 | May cause damage to organs through prolonged or repeated exposure: endocrine system   liver. |
| 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.   |

**Revision information:**

EU Section 09: pH information information was added.  
CLP: Ingredient table information was modified.  
Label: CLP Classification information was modified.

Label: CLP Percent Unknown information was added.  
Label: CLP Precautionary - Disposal information was deleted.  
Label: CLP Precautionary - Prevention information was modified.  
Label: CLP Target Organ Hazard Statement information was modified.  
Label: Graphic information was modified.  
Section 03: Composition table % Column heading information was added.  
Section 3: Composition/ Information of ingredients table information was modified.  
Section 03: Substance not applicable information was added.  
Section 04: First Aid - Symptoms and Effects (CLP) information was added.  
Section 04: Information on toxicological effects information was modified.  
Section 5: Hazardous combustion products table information was modified.  
Section 8: glove data value information was added.  
Section 8: glove data value information was modified.  
Section 09: Color information was added.  
Section 9: Evaporation Rate information information was deleted.  
Section 9: Explosive properties information information was deleted.  
Section 09: Kinematic Viscosity information information was added.  
Section 9: Melting point information information was modified.  
Section 09: Odor information was added.  
Sections 3 and 9: Odour, colour, grade information information was deleted.  
Section 9: Oxidising properties information information was deleted.  
Section 9: pH information information was deleted.  
Section 9: Property description for optional properties information was modified.  
Section 9: Vapour density value information was added.  
Section 9: Vapour density value information was deleted.  
Section 9: Viscosity information information was deleted.  
Section 11: Acute Toxicity table information was modified.  
Section 11: Carcinogenicity Table information was modified.  
Section 11: Classification disclaimer information was modified.  
Section 11: Germ Cell Mutagenicity Table information was modified.  
Section 11: No endocrine disruptor information available warning information was added.  
Section 11: Reproductive 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: Skin Sensitization Table information was modified.  
Section 11: Target Organs - Repeated Table information was modified.  
Section 11: Target Organs - Single Table information was modified.  
Section 12: 12.6. Endocrine Disrupting Properties information was added.  
Section 12: 12.7. Other adverse effects information was modified.  
Section 12: Component ecotoxicity information information was modified.  
Section 12: Contact manufacturer for more detail. information was deleted.  
Section 12: Mobility in soil information information was added.  
Section 12: No endocrine disruptor information available warning information was added.  
Section 12: Persistence and Degradability information information was modified.  
Section 12: Biocumulative potential information information was modified.  
Section 14 Classification Code – Main Heading information was added.  
Section 14 Classification Code – Regulation Data information was added.  
Section 14 Control Temperature – Main Heading information was added.  
Section 14 Control Temperature – Regulation Data information was added.  
Section 14 Disclaimer Information information was added.  
Section 14 Emergency Temperature – Main Heading information was added.  
Section 14 Emergency Temperature – Regulation Data information was added.  
Section 14 Hazard Class + Sub Risk – Main Heading information was added.  
Section 14 Hazard Class + Sub Risk – Regulation Data information was added.  
Section 14 Hazardous/Not Hazardous for Transportation information was added.  
Section 14 Multiplier – Main Heading information was added.

Section 14 Multiplier – Regulation Data information was added.  
Section 14 Other Dangerous Goods – Main Heading information was added.  
Section 14 Other Dangerous Goods – Regulation Data information was added.  
Section 14 Packing Group – Main Heading information was added.  
Section 14 Packing Group – Regulation Data information was added.  
Section 14 Proper Shipping Name information was added.  
Section 14 Regulations – Main Headings information was added.  
Section 14 Segregation – Regulation Data information was added.  
Section 14 Segregation Code – Main Heading information was added.  
Section 14 Special Precautions – Main Heading information was added.  
Section 14 Special Precautions – Regulation Data information was added.  
Section 14 Transport Category – Main Heading information was added.  
Section 14 Transport Category – Regulation Data information was added.  
Section 14 Transport in bulk – Regulation Data information was added.  
Section 14 Transport in bulk according to Annex II of Marpol and the IBC Code – Main Heading information was added.  
Section 14 Transport Not Permitted – Main Heading information was added.  
Section 14 Transport Not Permitted – Regulation Data information was added.  
Section 14 Tunnel Code – Main Heading information was added.  
Section 14 Tunnel Code – Regulation Data information was added.  
Section 14 UN Number Column data information was added.  
Section 14 UN Number information was added.  
Section 14: Transportation classification information was modified.  
Section 15: Regulations - Inventories information was deleted.  
Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material.  
information was modified.  
Section 16: UK disclaimer information was deleted.

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