# Safety Data Sheet



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|---|---|---|---|
| **Document group:** | 18-5798-6 | **Version number:** | 7.08 |
| **Revision date:** | 15/01/2024 | **Supersedes date:** | 10/03/2023 |

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

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

### 1.1. Product identifier
3M Scotch-Weld™ Epoxy Adhesive 2214 Regular

**Product Identification Numbers**
62-2214-2930-1 62-2214-6530-5

7000000811 7000046356

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

**Identified uses**
Adhesive

### 1.3. Details of the supplier of the safety data sheet
**Address:** 3M Ireland Limited, The Iveagh Building, The Park, Carrickmines, Dublin 18.
**Telephone:** +353 1 280 3555
**E Mail:** tox.uk@mmm.com
**Website:** www.3M.com

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

## SECTION 2: Hazard identification

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

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

**CLASSIFICATION:**
Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319

Skin Sensitization, Category 1 - Skin Sens. 1; H317
Carcinogenicity, Category 2 - Carc. 2; H351
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**
WARNING.

**Symbols**
GHS07 (Exclamation mark) |GHS08 (Health Hazard) |GHS09 (Environment) |

**Pictograms**

**Ingredients:**

| Ingredient | CAS Nbr | EC No. | % by Wt |
|---|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | 1675-54-3 | 216-823-5 | 30 - 60 |
| monuron (ISO) | 150-68-5 | 205-766-1 | < 2.5 |
| 2,2'-[Oxybis[(methyl-2,1-ethanediyl)oxymethylene]]bisoxirane | 41638-13-5 | | 1 - 5 |
| Rxn mass: 2-(\{[1-chloro-3-(\{4-[methoxy(oxiran-2-yl)methyl]cyclohexyl\}methoxy)propan-2-yl]oxy\}methyl)oxirane & 2,2'-[cis-cyclohexane-1,4-diylbis(methyleneoxymethylene)]bisoxirane & 2,2'-[trans-cyclohexane-1,4-diylbis(methyleneoxymethylene)]bisoxirane | | 946-427-4 | < 1 |

**HAZARD STATEMENTS:**

| | |
|---|---|
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H317 | May cause an allergic skin reaction. |
| H351 | Suspected of causing cancer. |
| H411 | Toxic to aquatic life with long lasting effects. |

**PRECAUTIONARY STATEMENTS**

**Prevention:**

| | |
|---|---|
| P273 | Avoid release to the environment. |
| P280K | Wear protective gloves and respiratory 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. |
| P333 + P313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P391 | Collect spillage. |

Contains 2% of components with unknown hazards to the aquatic environment.

**Notes on labelling**

Not classified as self-heating mixture per test data. The epoxy resin is resistant to reaction with water and the aluminum is embedded in the resin so Water-react. 2, H261 is not applicable.

**2.3. Other hazards**

None known.
This material does not contain any substances that are assessed to be a PBT or vPvB

## SECTION 3: Composition/information on ingredients

**3.1. Substances**
Not applicable

**3.2. Mixtures**

| Ingredient | Identifier(s) | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | (CAS-No.) 1675-54-3<br>(EC-No.) 216-823-5<br>(REACH-No.) 01-2119456619-26 | 30 - 60 | Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Skin Sens. 1, H317<br>Aquatic Chronic 2, H411 |
| Aluminium | (CAS-No.) 7429-90-5<br>(EC-No.) 231-072-3<br>(REACH-No.) 01-2119529243-45 | 15 - 40 | Flam. Sol. 1, H228<br>Water-react. 2, H261<br>Nota T |
| monuron (ISO) | (CAS-No.) 150-68-5<br>(EC-No.) 205-766-1<br>(REACH-No.) 01-2120768963-37 | < 2.5 | Acute Tox. 4, H302<br>Carc. 2, H351<br>Aquatic Acute 1, H400,M=10<br>Aquatic Chronic 1, H410,M=10 |
| 2,2'-[Oxybis[(methyl-2,1-ethanediyl)oxymethylene]]bisoxirane | (CAS-No.) 41638-13-5 | 1 - 5 | Eye Irrit. 2, H319<br>Skin Sens. 1B, H317<br>STOT SE 3, H335<br>Aquatic Chronic 3, H412 |
| Synthetic Elastomer | Trade Secret | 1 - 5 | Substance not classified as hazardous |
| Dicyandiamide | (CAS-No.) 461-58-5<br>(EC-No.) 207-312-8<br>(REACH-No.) 01-2119474914-28 | 1 - 5 | Substance not classified as hazardous |
| Siloxanes and Silicones, di-Me, reaction products with silica | (CAS-No.) 67762-90-7 | 1 - 5 | Substance with a national occupational exposure limit |
| Rxn mass: 2-(\{[1-chloro-3-(\{4-[methoxy(oxiran-2-yl)methyl]cyclohexyl\}methoxy)propan-2-yl]oxy\}methyl)oxirane & 2,2'-[cis-cyclohexane-1,4-diylbis(methyleneoxymethylene)]bisoxirane & 2,2'-[trans-cyclohexane-1,4-diylbis(methyleneoxymethylene)]bisoxirane | (EC-No.) 946-427-4 | < 1 | Acute Tox. 4, H302<br>Skin Irrit. 2, H315<br>Skin Sens. 1, H317<br>Muta. 2, H341<br>Aquatic Chronic 3, H412 |

Any entry in the Identifier(s) column that begins with the numbers 6, 7, 8, or 9 are a Provisional List Number provided by ECHA pending publication of the official EC Inventory Number for the substance.
Please see section 16 for the full text of any H statements referred to in this section

**Specific Concentration Limits**

| Ingredient | Identifier(s) | Specific Concentration Limits |
|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | (CAS-No.) 1675-54-3<br>(EC-No.) 216-823-5 | (C >= 5%) Skin Irrit. 2, H315<br>(C >= 5%) Eye Irrit. 2, H319 |

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**
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

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

**4.2. Most important symptoms and effects, both acute and delayed**
The most important symptoms and effects based on the CLP classification include:
Irritation to the skin (localized redness, swelling, itching, and dryness). Allergic skin reaction (redness, swelling, blistering, and itching). Serious irritation to the eyes (significant redness, swelling, pain, tearing, and impaired vision).

**4.3. Indication of any immediate medical attention and special treatment required**
Not applicable

## SECTION 5: Fire-fighting measures

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

**5.2. Special hazards arising from the substance or mixture**
Closed containers exposed to heat from fire may build pressure and explode.

**Hazardous Decomposition or By-Products**

| Substance | Condition |
|---|---|
| Aldehydes. | During combustion. |
| Chlorine | During combustion. |
| Carbon monoxide | During combustion. |
| Carbon dioxide. | During combustion. |

| | |
|---|---|
| Hydrogen Chloride | During combustion. |
| Hydrogen cyanide. | During combustion. |
| Ammonia | During combustion. |
| Oxides of nitrogen. | During combustion. |

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

## SECTION 6: Accidental release measures

**6.1. Personal precautions, protective equipment and emergency procedures**
Evacuate area. Ventilate the area with fresh air. 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.

**6.3. Methods and material for containment and cleaning up**
Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. 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 use in a confined area with minimal air exchange. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. 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**
Keep container tightly closed. Keep cool. Protect from sunlight. Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidising agents. Store in a dry place. Store away from amines.

**7.3. Specific end use(s)**
See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

## SECTION 8: Exposure controls/personal protection

**8.1 Control parameters**

**Occupational exposure limits**
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

| Ingredient | CAS Nbr | Agency | Limit type | Additional comments |
|---|---|---|---|---|
| monuron (ISO) | 150-68-5 | Manufacturer determined | TWA(Inhalable aerosol)(8 hours):1 mg/m3 | |
| Silicon dioxide | 67762-90-7 | Ireland OELs | TWA(Total inhalable dust)(8 hours):6 mg/m3;TWA(as respirable dust)(8 hours):2.4 | |

| | | | |
|---|---|---|---|
| Aluminium | 7429-90-5 | Ireland OELs | mg/m3<br>TWA(respirable fraction)(8 hours):1 mg/m3 |

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

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

**Derived no effect level (DNEL)**

| Ingredient | Degradation Product | Population | Human exposure pattern | DNEL |
|---|---|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | | Worker | Dermal, Long-term exposure (8 hours), Systemic effects | 8.3 mg/kg bw/d |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | | Worker | Dermal, Short-term exposure, Systemic effects | 8.3 mg/kg bw/d |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | | Worker | Inhalation, Long-term exposure (8 hours), Systemic effects | 12.3 mg/m³ |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | | Worker | Inhalation, Short-term exposure, Systemic effects | 12.3 mg/m³ |

**Predicted no effect concentrations (PNEC)**

| Ingredient | Degradation Product | Compartment | PNEC |
|---|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | | Freshwater | 0.003 mg/l |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | | Freshwater sediments | 0.5 mg/kg d.w. |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | | Intermittent releases to water | 0.013 mg/l |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | | Marine water | 0.0003 mg/l |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | | Marine water sediments | 0.5 mg/kg d.w. |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | | Sewage Treatment Plant | 10 mg/l |

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

**8.2. Exposure controls**

In addition, refer to the annex for more information.

**8.2.1. Engineering controls**
Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment. Provide appropriate local exhaust when product is heated.

**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:
Safety glasses with side shields.
Indirect vented goggles.

*Applicable Norms/Standards*
Use eye protection conforming to EN 166

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

| Material | Thickness (mm) | Breakthrough Time |
|---|---|---|
| Polymer laminate | No data available | No data available |

*Applicable Norms/Standards*
Use gloves tested to EN 374

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

**Respiratory protection**

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

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

*Applicable Norms/Standards*
Use a respirator conforming to EN 140 or EN 136: filter types A & P

**8.2.3. Environmental exposure controls**
Refer to Annex

## SECTION 9: Physical and chemical properties

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

| | |
|---|---|
| **Physical state** | Solid. |
| **Specific Physical Form:** | Paste |

| | |
|---|---|
| **Colour** | Grey |
| **Odor** | Epoxy |
| **Odour threshold** | *No data available.* |
| **Melting point/freezing point** | *Not applicable.* |
| **Boiling point/boiling range** | >=260 ºC |
| **Flammability (solid, gas)** | Not classified |
| **Flammable Limits(LEL)** | *No data available.* |
| **Flammable Limits(UEL)** | *No data available.* |
| **Flash point** | 248.9 ºC [*Test Method:*Closed Cup] |
| **Autoignition temperature** | *No data available.* |
| **Decomposition temperature** | *No data available.* |
| **pH** | *substance/mixture is non-soluble (in water)* |
| **Kinematic Viscosity** | 694,444 mm²/sec |
| **Water solubility** | Nil |
| **Solubility- non-water** | *No data available.* |
| **Partition coefficient: n-octanol/water** | *No data available.* |
| **Vapour pressure** | *No data available.* |
| **Density** | 1.44 g/ml [*Ref Std:*WATER=1] |
| **Relative density** | 1.44 [*Ref Std:*WATER=1] |
| **Relative Vapour Density** | *No data available.* |

**9.2. Other information**

**9.2.2 Other safety characteristics**

| | |
|---|---|
| **EU Volatile Organic Compounds** | *No data available.* |
| **Evaporation rate** | Negligible |
| **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 may occur.

**10.4 Conditions to avoid**
Heat.
Sparks and/or flames.
Avoid curing large quantities of material to prevent a premature reaction (exotherm) with production of intense heat and smoke.

**10.5 Incompatible materials**
Strong oxidising agents.

**10.6 Hazardous decomposition products**

| Substance | Condition |
|---|---|
| None known. | |

Refer to section 5.2 for hazardous decomposition products during combustion.

# SECTION 11: Toxicological information

**The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from 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**
Mild Skin Irritation: Signs/symptoms may include localised redness, swelling, itching, and dryness. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

**Eye contact**
Moderate eye irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

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

**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 >5,000 mg/kg |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | Dermal | Rat | LD50 > 1,600 mg/kg |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | Ingestion | Rat | LD50 > 1,000 mg/kg |
| Aluminium | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| Aluminium | Ingestion | | LD50 estimated to be > 5,000 mg/kg |
| Aluminium | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 0.888 mg/l |
| Dicyandiamide | Dermal | Rabbit | LD50 > 10,000 mg/kg |
| 2,2'-[Oxybis[(methyl-2,1-ethanediyl)oxymethylene]]bisoxirane | Dermal | Rabbit | LD50 > 2,000 mg/kg |
| Dicyandiamide | Ingestion | Rat | LD50 > 30,000 mg/kg |
| 2,2'-[Oxybis[(methyl-2,1-ethanediyl)oxymethylene]]bisoxirane | Ingestion | Rat | LD50 > 2,000 mg/kg |
| Synthetic Elastomer | Dermal | Rabbit | LD50 > 15,000 mg/kg |
| Synthetic Elastomer | Ingestion | Rat | LD50 > 30,000 mg/kg |
| monuron (ISO) | Dermal | Rabbit | LD50 > 2,500 mg/kg |
| monuron (ISO) | Ingestion | Rat | LD50 1,480 mg/kg |
| Siloxanes and Silicones, di-Me, reaction products with silica | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| Siloxanes and Silicones, di-Me, reaction products with silica | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 0.691 mg/l |
| Siloxanes and Silicones, di-Me, reaction products with silica | Ingestion | Rat | LD50 > 5,110 mg/kg |
| Rxn mass: 2-(\{[1-chloro-3-(\{4-[methoxy(oxiran-2-yl)methyl]cyclohexyl\}methoxy)propan-2- | Ingestion | Rat | LD50 1,000 mg/kg |

| | | | |
|---|---|---|---|
| yl]oxy\}methyl)oxirane & 2,2'-[cis-cyclohexane-1,4-diylbis(methyleneoxymethylene)]bisoxirane & 2,2'-[trans-cyclohexane-1,4-diylbis(methyleneoxymethylene)]bisoxirane | | | |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name | Species | Value |
|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | Rabbit | Mild irritant |
| Aluminium | Rabbit | No significant irritation |
| Dicyandiamide | Human and animal | Minimal irritation |
| 2,2'-[Oxybis[(methyl-2,1-ethanediyl)oxymethylene]]bisoxirane | Rabbit | No significant irritation |
| Synthetic Elastomer | Professional judgement | No significant irritation |
| monuron (ISO) | similar compounds | Mild irritant |
| Siloxanes and Silicones, di-Me, reaction products with silica | Rabbit | No significant irritation |
| Rxn mass: 2-(\{[1-chloro-3-(\{4-[methoxy(oxiran-2-yl)methyl]cyclohexyl\}methoxy)propan-2-yl]oxy\}methyl)oxirane & 2,2'-[cis-cyclohexane-1,4-diylbis(methyleneoxymethylene)]bisoxirane & 2,2'-[trans-cyclohexane-1,4-diylbis(methyleneoxymethylene)]bisoxirane | In vitro data | Irritant |

**Serious Eye Damage/Irritation**

| Name | Species | Value |
|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | Rabbit | Moderate irritant |
| Aluminium | Rabbit | No significant irritation |
| Dicyandiamide | Professional judgement | Mild irritant |
| 2,2'-[Oxybis[(methyl-2,1-ethanediyl)oxymethylene]]bisoxirane | Rabbit | Moderate irritant |
| Synthetic Elastomer | Professional judgement | No significant irritation |
| monuron (ISO) | similar compounds | Moderate irritant |
| Siloxanes and Silicones, di-Me, reaction products with silica | Rabbit | No significant irritation |
| Rxn mass: 2-(\{[1-chloro-3-(\{4-[methoxy(oxiran-2-yl)methyl]cyclohexyl\}methoxy)propan-2-yl]oxy\}methyl)oxirane & 2,2'-[cis-cyclohexane-1,4-diylbis(methyleneoxymethylene)]bisoxirane & 2,2'-[trans-cyclohexane-1,4-diylbis(methyleneoxymethylene)]bisoxirane | In vitro data | No significant irritation |

**Skin Sensitisation**

| Name | Species | Value |
|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | Human and animal | Sensitising |
| Aluminium | Guinea pig | Not classified |
| Dicyandiamide | Guinea pig | Not classified |
| 2,2'-[Oxybis[(methyl-2,1-ethanediyl)oxymethylene]]bisoxirane | Guinea pig | Sensitising |
| Siloxanes and Silicones, di-Me, reaction products with silica | Human and | Not classified |

| | | |
|---|---|---|
| | animal | |
| Rxn mass: 2-(\{[1-chloro-3-(\{4-[methoxy(oxiran-2-yl)methyl]cyclohexyl\}methoxy)propan-2-yl]oxy\}methyl)oxirane & 2,2'-[cis-cyclohexane-1,4-diylbis(methyleneoxymethylene)]bisoxirane & 2,2'-[trans-cyclohexane-1,4-diylbis(methyleneoxymethylene)]bisoxirane | similar compounds | Sensitising |

## Respiratory Sensitisation

| Name | Species | Value |
|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | Human | Not classified |
| Aluminium | Human | Not classified |

## Germ Cell Mutagenicity

| Name | Route | Value |
|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | In vivo | Not mutagenic |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Aluminium | In Vitro | Not mutagenic |
| Dicyandiamide | In Vitro | Not mutagenic |
| 2,2'-[Oxybis[(methyl-2,1-ethanediyl)oxymethylene]]bisoxirane | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| monuron (ISO) | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| monuron (ISO) | In vivo | Some positive data exist, but the data are not sufficient for classification |
| Siloxanes and Silicones, di-Me, reaction products with silica | In Vitro | Not mutagenic |
| Rxn mass: 2-(\{[1-chloro-3-(\{4-[methoxy(oxiran-2-yl)methyl]cyclohexyl\}methoxy)propan-2-yl]oxy\}methyl)oxirane & 2,2'-[cis-cyclohexane-1,4-diylbis(methyleneoxymethylene)]bisoxirane & 2,2'-[trans-cyclohexane-1,4-diylbis(methyleneoxymethylene)]bisoxirane | In Vitro | Mutagenic; structurally related to germ cell mutagens |

## Carcinogenicity

| Name | Route | Species | Value |
|---|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | Dermal | Mouse | Some positive data exist, but the data are not sufficient for classification |
| Dicyandiamide | Ingestion | Rat | Not carcinogenic |
| monuron (ISO) | Ingestion | Rat | Some positive data exist, but the data are not sufficient for classification |
| Siloxanes and Silicones, di-Me, reaction products with silica | Not specified. | Mouse | Some positive data exist, but the data are not sufficient for classification |

## Reproductive Toxicity

## Reproductive and/or Developmental Effects

| Name | Route | Value | Species | Test result | Exposure Duration |
|---|---|---|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | Ingestion | Not classified for female reproduction | Rat | NOAEL 750 mg/kg/day | 2 generation |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | Ingestion | Not classified for male reproduction | Rat | NOAEL 750 mg/kg/day | 2 generation |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | Dermal | Not classified for development | Rabbit | NOAEL 300 mg/kg/day | during organogenesis |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | Ingestion | Not classified for development | Rat | NOAEL 750 mg/kg/day | 2 generation |
| Dicyandiamide | Ingestion | Not classified for female reproduction | Rat | NOAEL 1,000 mg/kg/day | premating & during gestation |
| Dicyandiamide | Ingestion | Not classified for male reproduction | Rat | NOAEL 1,000 mg/kg/day | 44 days |
| Dicyandiamide | Ingestion | Not classified for development | Rat | NOAEL 1,000 | premating & during |

| | | | | | |
|---|---|---|---|---|---|
| | | | | mg/kg/day | gestation |
| monuron (ISO) | Ingestion | Not classified for development | Mouse | LOAEL 215 mg/kg/day | during gestation |
| Siloxanes and Silicones, di-Me, reaction products with silica | Ingestion | Not classified for female reproduction | Rat | NOAEL 509 mg/kg/day | 1 generation |
| Siloxanes and Silicones, di-Me, reaction products with silica | Ingestion | Not classified for male reproduction | Rat | NOAEL 497 mg/kg/day | 1 generation |
| Siloxanes and Silicones, di-Me, reaction products with silica | Ingestion | Not classified for development | Rat | NOAEL 1,350 mg/kg/day | during organogenesis |

## Target Organ(s)

### Specific Target Organ Toxicity - single exposure

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|---|---|---|---|---|---|---|
| 2,2'-[Oxybis[(methyl-2,1-ethanediyl)oxymethylene]] bisoxirane | Inhalation | respiratory irritation | May cause respiratory irritation | Rat | NOAEL not available | |
| monuron (ISO) | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | similar compounds | NOAEL Not available | |
| monuron (ISO) | Ingestion | methemoglobinemia | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL Not available | not applicable |
| Rxn mass: 2-(\{[1-chloro-3-(\{4-[methoxy(oxiran-2-yl)methyl]cyclohexyl\}methoxy)propan-2-yl]oxy\}methyl)oxirane & 2,2'-[cis-cyclohexane-1,4-diylbis(methyleneoxymethylene)]bisoxirane & 2,2'-[trans-cyclohexane-1,4-diylbis(methyleneoxymethylene)]bisoxirane | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | similar health hazards | NOAEL Not available | |

### Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|---|---|---|---|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | Dermal | liver | Not classified | Rat | NOAEL 1,000 mg/kg/day | 2 years |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | Dermal | nervous system | Not classified | Rat | NOAEL 1,000 mg/kg/day | 13 weeks |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | Ingestion | auditory system \| heart \| endocrine system \| hematopoietic system \| liver \| eyes \| kidney and/or bladder | Not classified | Rat | NOAEL 1,000 mg/kg/day | 28 days |
| Aluminium | Inhalation | nervous system \| respiratory system | Not classified | Human | NOAEL Not available | occupational exposure |
| Dicyandiamide | Ingestion | kidney and/or bladder | Not classified | Rat | NOAEL 6,822 mg/kg/day | 13 weeks |
| monuron (ISO) | Ingestion | liver | Some positive data exist, but the data are not sufficient for classification | Mouse | LOAEL 800 mg/kg/day | 103 weeks |
| monuron (ISO) | Ingestion | kidney and/or bladder | Not classified | Rat | LOAEL 65 mg/kg/day | 103 weeks |
| monuron (ISO) | Ingestion | immune system | Not classified | Rat | LOAEL 520 mg/kg/day | 13 weeks |
| Siloxanes and Silicones, | Inhalation | respiratory system \| | Not classified | Human | NOAEL Not | occupational |

| | | | | | | |
|---|---|---|---|---|---|---|
| di-Me, reaction products with silica | | silicosis | | | available | exposure |

**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 |
|---|---|---|---|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | 1675-54-3 | Activated sludge | Analogous Compound | 3 hours | IC50 | >100 mg/l |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | 1675-54-3 | Rainbow trout | Estimated | 96 hours | LC50 | 2 mg/l |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | 1675-54-3 | Water flea | Estimated | 48 hours | EC50 | 1.8 mg/l |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | 1675-54-3 | Green algae | Experimental | 72 hours | ErC50 | >11 mg/l |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | 1675-54-3 | Green algae | Experimental | 72 hours | NOEC | 4.2 mg/l |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | 1675-54-3 | Water flea | Experimental | 21 days | NOEC | 0.3 mg/l |
| Aluminium | 7429-90-5 | Fish | Experimental | 96 hours | No tox obs at lmt of water sol | >100 mg/l |
| Aluminium | 7429-90-5 | Green algae | Experimental | 72 hours | No tox obs at lmt of water sol | >100 mg/l |
| Aluminium | 7429-90-5 | Water flea | Experimental | 48 hours | No tox obs at lmt of water sol | >100 mg/l |
| Aluminium | 7429-90-5 | Green algae | Experimental | 72 hours | No tox obs at lmt of water sol | 100 mg/l |
| Aluminium | 7429-90-5 | Water flea | Experimental | 21 days | NOEC | 0.076 mg/l |
| monuron (ISO) | 150-68-5 | Algae or other aquatic plants | Experimental | 24 hours | EC50 | 0.079 mg/l |
| monuron (ISO) | 150-68-5 | Fish | Experimental | 96 hours | LC50 | 3.3 mg/l |
| monuron (ISO) | 150-68-5 | Water flea | Experimental | 26 hours | EC50 | 106 mg/l |
| monuron (ISO) | 150-68-5 | Green algae | Experimental | 96 hours | NOEC | 0.01 mg/l |

| | | | | | | |
|---|---|---|---|---|---|---|
| Dicyandiamide | 461-58-5 | Bluegill | Experimental | 96 hours | LC50 | >1,000 mg/l |
| Dicyandiamide | 461-58-5 | Green algae | Experimental | 72 hours | EC50 | >1,000 mg/l |
| Dicyandiamide | 461-58-5 | Water flea | Experimental | 48 hours | EC50 | 3,177 mg/l |
| Dicyandiamide | 461-58-5 | Green algae | Experimental | 72 hours | NOEC | 310 mg/l |
| Dicyandiamide | 461-58-5 | Water flea | Experimental | 21 days | NOEC | 25 mg/l |
| Dicyandiamide | 461-58-5 | Redworm | Experimental | 14 days | LC50 | >3,200 mg/kg (Dry Weight) |
| 2,2'-[Oxybis[(methyl-2,1-ethanediyl)oxymethylene]]bisoxirane | 41638-13-5 | Golden Orfe | Experimental | 96 hours | LC50 | 67 mg/l |
| 2,2'-[Oxybis[(methyl-2,1-ethanediyl)oxymethylene]]bisoxirane | 41638-13-5 | Water flea | Experimental | 48 hours | EC50 | 90 mg/l |
| Siloxanes and Silicones, di-Me, reaction products with silica | 67762-90-7 | N/A | Data not available or insufficient for classification | N/A | N/A | N/A |
| Synthetic Elastomer | Trade Secret | N/A | Data not available or insufficient for classification | N/A | N/A | N/A |
| Rxn mass: 2-(\{[1-chloro-3-(\{4-[methoxy(oxiran-2-yl)methyl]cyclohexyl\}methoxy)propan-2-yl]oxy\}methyl)oxirane & 2,2'-[cis-cyclohexane-1,4-diylbis(methyleneoxymethylene)]bisoxirane & 2,2'-[trans-cyclohexane-1,4-diylbis(methyleneoxymethylene)]bisoxirane | 946-427-4 | Green algae | Experimental | 72 hours | EC50 | 38 mg/l |
| Rxn mass: 2-(\{[1-chloro-3-(\{4-[methoxy(oxiran-2-yl)methyl]cyclohexyl\}methoxy)propan-2-yl]oxy\}methyl)oxirane & 2,2'-[cis-cyclohexane-1,4-diylbis(methyleneoxymethylene)]bisoxirane & 2,2'-[trans-cyclohexane-1,4-diylbis(methyleneoxymethylene)]bisoxirane | 946-427-4 | Water flea | Experimental | 72 hours | EC50 | 71 mg/l |
| Rxn mass: 2-(\{[1-chloro-3-(\{4-[methoxy(oxiran-2-yl)methyl]cyclohexyl\}methoxy)propan-2-yl]oxy\}methyl)oxirane & 2,2'-[cis-cyclohexane-1,4-diylbis(methyleneoxymethylene)]bisoxirane & 2,2'-[trans-cyclohexane-1,4-diylbis(methyleneoxymethylene)]bisoxirane | 946-427-4 | Green algae | Experimental | 72 hours | EC10 | 18 mg/l |

### 12.2. Persistence and degradability

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|---|---|---|---|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | 1675-54-3 | Experimental Biodegradation | 28 days | BOD | 5 %BOD/COD | OECD 301F - Manometric respirometry |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | 1675-54-3 | Experimental Hydrolysis | | Hydrolytic half-life (pH 7) | 117 hours (t 1/2) | OECD 111 Hydrolysis func of pH |
| Aluminium | 7429-90-5 | Data not availbl-insufficient | N/A | N/A | N/A | N/A |
| monuron (ISO) | 150-68-5 | Modeled Biodegradation | 28 days | BOD | 2.1 %BOD/ThOD | OECD 301C - MITI test (I) |
| Dicyandiamide | 461-58-5 | Experimental Biodegradation | 28 days | Dissolv. Organic Carbon Deplet | 0 %removal of DOC | OECD 301E - Modif. OECD Screen |
| Dicyandiamide | 461-58-5 | Experimental Aquatic Inherent Biodegrad. | 14 days | Dissolv. Organic Carbon Deplet | 0 %removal of DOC | OECD 302B Zahn-Wellens/EVPA |
| Dicyandiamide | 461-58-5 | Experimental Biodegradation | 61 days | CO2 evolution | 1.1 %CO2 evolution/THCO2 evolution | OECD 309 Aero Sim Biod Water |
| 2,2'-[Oxybis[(methyl-2,1-ethanediyl)oxymethylene]]bisoxirane | 41638-13-5 | Experimental Biodegradation | 28 days | CO2 evolution | 27 %CO2 evolution/THCO2 evolution | OECD 301B - Modified sturm or CO2 |
| Siloxanes and Silicones, di-Me, reaction products with silica | 67762-90-7 | Data not availbl-insufficient | N/A | N/A | N/A | N/A |
| Synthetic Elastomer | Trade Secret | Data not availbl-insufficient | N/A | N/A | N/A | N/A |
| Rxn mass: 2-(\{[1-chloro-3-(\{4-[methoxy(oxiran-2-yl)methyl]cyclohexyl\}methoxy)propan-2-yl]oxy\}methyl)oxirane & 2,2'-[cis-cyclohexane-1,4-diylbis(methyleneoxymethylene)]bisoxirane & 2,2'-[trans-cyclohexane-1,4-diylbis(methyleneoxymethylene)]bisoxirane | 946-427-4 | Experimental Biodegradation | 28 days | CO2 evolution | 1.3 %CO2 evolution/THCO2 evolution | OECD 301B - Modified sturm or CO2 |

### 12.3 : Bioaccumulative potential

| Material | Cas No. | Test type | Duration | Study Type | Test result | Protocol |
|---|---|---|---|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | 1675-54-3 | Experimental Bioconcentration | | Log Kow | 3.242 | OECD 117 log Kow HPLC method |
| Aluminium | 7429-90-5 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| monuron (ISO) | 150-68-5 | Experimental Bioconcentration | | Log Kow | 1.94 | Catalogic™ |
| Dicyandiamide | 461-58-5 | Experimental BCF - Fish | 42 days | Bioaccumulation factor | <=3.1 | OECD305-Bioconcentration |
| Dicyandiamide | 461-58-5 | Experimental Bioconcentration | | Log Kow | -0.52 | OECD 107 log Kow shke flsk mtd |
| 2,2'-[Oxybis[(methyl-2,1-ethanediyl)oxymethylene]]bisoxirane | 41638-13-5 | Estimated Bioconcentration | | Bioaccumulation factor | 2 | |
| Siloxanes and Silicones, di-Me, reaction products with silica | 67762-90-7 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Synthetic Elastomer | Trade Secret | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |

| | | | | | | |
|---|---|---|---|---|---|---|
| Rxn mass: 2-(\{[1-chloro-3-(\{4-[methoxy(oxiran-2-yl)methyl]cyclohexyl\}methoxy)propan-2-yl]oxy\}methyl)oxirane & 2,2'-[cis-cyclohexane-1,4-diylbis(methyleneoxymethylene)]bisoxirane & 2,2'-[trans-cyclohexane-1,4-diylbis(methyleneoxymethylene)]bisoxirane | 946-427-4 | Experimental Bioconcentration | | Log Kow | 2.05 | |

**12.4. Mobility in soil**

| Material | Cas No. | Test type | Study Type | Test result | Protocol |
|---|---|---|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | 1675-54-3 | Modeled Mobility in Soil | Koc | 450 l/kg | Episuite™ |
| monuron (ISO) | 150-68-5 | Modeled Mobility in Soil | Koc | 240 l/kg | ACD/Labs ChemSketch™ |
| Dicyandiamide | 461-58-5 | Modeled Mobility in Soil | Koc | 9 l/kg | Episuite™ |

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

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

**12.6. Endocrine disrupting properties**

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

**12.7. Other adverse effects**
No information available.

## SECTION 13: Disposal considerations

**13.1 Waste treatment methods**
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. 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

| | Ground Transport (ADR) | Air Transport (IATA) | Marine Transport (IMDG) |
|---|---|---|---|
| **14.1 UN number or ID number** | UN3077 | UN3077 | UN3077 |
| **14.2 UN proper shipping name** | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(EPOXY RESIN; PARA-CHLOROPHENYL-DIMETHYLUREA) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(EPOXY RESIN; PARA-CHLOROPHENYL-DIMETHYLUREA) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(EPOXY RESIN; PARA-CHLOROPHENYL-DIMETHYLUREA) |
| **14.3 Transport hazard class(es)** | 9 | 9 | 9 |
| **14.4 Packing group** | III | III | III |
| **14.5 Environmental hazards** | Environmentally Hazardous | Not applicable | Marine Pollutant |
| **14.6 Special precautions for user** | Please refer to the other sections of the SDS for further information. | Please refer to the other sections of the SDS for further information. | Please refer to the other sections of the SDS for further information. |
| **14.7 Marine Transport in bulk according to IMO instruments** | No data available. | No data available. | No data available. |
| **Control Temperature** | No data available. | No data available. | No data available. |
| **Emergency Temperature** | No data available. | No data available. | No data available. |
| **ADR Classification Code** | M7 | Not applicable. | Not applicable. |
| **IMDG Segregation Code** | Not applicable. | Not applicable. | NONE |

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

## SECTION 15: Regulatory information

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

**Carcinogenicity**

| Ingredient | CAS Nbr | Classification | Regulation |
|---|---|---|---|
| monuron (ISO) | 150-68-5 | Carc. 2 | Regulation (EC) No. 1272/2008, Table 3.1 |
| monuron (ISO) | 150-68-5 | Gr. 3: Not classifiable | International Agency for Research on Cancer |

| | | | |
|---|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | 1675-54-3 | 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.

| Ingredient | CAS Nbr |
|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | 1675-54-3 |

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. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

**DIRECTIVE 2012/18/EU**
Seveso hazard categories, Annex 1, Part 1

| Hazard Categories | Qualifying quantity (tonnes) for the application of | |
|---|---|---|
| | Lower-tier requirements | Upper-tier requirements |
| E2 Hazardous to the Aquatic environment | 200 | 500 |

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 |
| monuron (ISO) | 150-68-5 | 100 | 200 |
| Aluminium | 7429-90-5 | 50 | 200 |

**Regulation (EU) No 649/2012**

| Chemical | Identifier(s) | Annex I |
|---|---|---|
| monuron (ISO) | 150-68-5 | Part 1 |

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

## SECTION 16: Other information

**List of relevant H statements**

| | |
|---|---|
| H228 | Flammable solid. |

| | |
|---|---|
| H261 | In contact with water releases flammable gas. |
| H302 | Harmful if swallowed. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |
| H341 | Suspected of causing genetic defects. |
| H351 | Suspected of causing cancer. |
| 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:**
CLP: Ingredient table information was modified.
Section 3: Composition/ Information of ingredients table information was modified.
Section 8: Occupational exposure limit table information was modified.
Section 11: Acute Toxicity table information was modified.
Section 11: Carcinogenicity Table information was modified.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Respiratory Sensitization Table information was modified.
Section 11: Serious Eye Damage/Irritation Table information was modified.
Section 11: Skin Corrosion/Irritation Table information was modified.
Section 11: Skin Sensitization Table information was modified.
Section 11: Target Organs - Repeated Table information was modified.
Section 12: Component ecotoxicity information information was modified.
Section 12: Mobility in soil information information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 12:Bioccumulative potential information information was modified.
Section 14 Proper Shipping Name information was modified.
Section 15: Seveso Substance Text information was modified.

# Annex

| **1. Title** | |
|---|---|
| **Substance identification** | |
| **Exposure Scenario Name** | Formulation |
| **Lifecycle Stage** | Formulation or re-packing |
| **Contributing activities** | PROC 09 -Transfer of substance or mixture into small containers (dedicated filling line, including weighing)<br>ERC 02 -Formulation into mixture |
| **Processes, tasks and activities covered** | Batch manufacture of a chemical substance or formulation (including polymerisation reactions). |
| **2. Operational conditions and risk management measures** | |
| **Operating Conditions** | **Physical state:**Liquid.<br>**General operating conditions:**<br>Duration of use: 8 hours/day;<br>Emission days per year: <= 225 days per year; |
| **Risk management measures** | Under the operational conditions described above the following risk management measures apply:<br>**General risk management measures:**<br>**Human health:**<br>Protective Gloves - Chemical resistant. Refer to Section 8 of the SDS for specific glove material.; |

| | |
|---|---|
| | **Environmental:**<br>Waste Water treatment - Incineration; |
| **Waste management measures** | Do not apply industrial sludge to natural soils;<br>Prevent leaks and prevent soil / water pollution caused by leaks; |
| **3. Prediction of exposure** | |
| **Prediction of exposure** | Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted. |

| **1. Title** | |
|---|---|
| **Substance identification** | bis-[4-(2,3-epoxipropoxi)phenyl]propane;<br>EC No. 216-823-5;<br>CAS Nbr 1675-54-3; |
| **Exposure Scenario Name** | Industrial Use of Adhesives |
| **Lifecycle Stage** | Use at industrial sites |
| **Contributing activities** | PROC 08a -Transfer of substance or mixture (charging and discharging) at non-dedicated facilities<br>PROC 10 -Roller application or brushing<br>PROC 13 -Treatment of articles by dipping and pouring<br>ERC 05 -Use at industrial site leading to inclusion into/onto article |
| **Processes, tasks and activities covered** | Application of product with a roller or brush. Application of product with applicator gun. Transfers without dedicated controls, including loading, filling, dumping, bagging. |
| **2. Operational conditions and risk management measures** | |
| **Operating Conditions** | **Physical state:**Liquid.<br>**General operating conditions:**<br>Application Temperature:: <= 40 degree Celsius;<br>Indoors with good general ventilation;<br><br>**Task: PROC08a**;<br>Duration of use: 4 hours/day;<br><br>**Task: PROC10**;<br>Duration of use: 8 hours/day;<br><br>**Task: PROC13**;<br>Duration of use: 4 hours/day; |
| **Risk management measures** | Under the operational conditions described above the following risk management measures apply:<br>**General risk management measures:**<br>**Human health:**<br>Goggles - Chemical resistant;<br>Local exhaust ventilation;<br>Protective Gloves - Chemical resistant. Refer to Section 8 of the SDS for specific glove material.;<br>**Environmental:**<br>None needed; |
| **Waste management measures** | No use-specific waste management measures are required for this product. Refer to Section 13 of main SDS for disposal instructions: |
| **3. Prediction of exposure** | |
| **Prediction of exposure** | Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted. |

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the

product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into the European Union, you are responsible for all regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration.

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