

This safety data sheet was created pursuant to the requirements of:  
UK REACH Regulations (SI 2019/758 as amended)

**Supersedes date** 07-May-2025

**Revision date** 05-Aug-2025

**Revision Number** 3.01

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

### 1.1. Product identifier

|                                 |                                          |
|---------------------------------|------------------------------------------|
| <b>Product Code(s)</b>          | 56840                                    |
| <b>Safety data sheet number</b> | 56840                                    |
| <b>Product Name</b>             | BIS-[4-(2,3-EPOXI PROPOXI)PHENYL]PROPANE |
| <b>Index No</b>                 | 603-073-00-2                             |
| <b>EC Number</b>                | 216-823-5                                |
| <b>CAS No</b>                   | 1675-54-3                                |
| <b>Synonyms</b>                 | D.E.R. 331 EPOXY RESIN                   |
| <b>Pure substance/mixture</b>   | Substance                                |

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

|                        |                                                                                                                                                                                                                                       |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Recommended use</b> | Industrial application<br>Manufacture of substance<br>Formulation & (re)packing of substances and mixtures.<br>Coatings<br>Tooling<br>Casting<br>Adhesives<br>Consumer use<br>For further information, see attached Exposure Scenario |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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

#### **Supplier**

Univar Solutions UK Ltd  
Aquarius House  
6 Mid Point Business Park  
Bradford  
GBR

For further information, please contact

|                                       |                                   |
|---------------------------------------|-----------------------------------|
| <b>E-mail address</b>                 | SDS.EMEA@univarsolutions.com      |
| <b>Non-Emergency Telephone Number</b> | +44 1274 267300 / +44 1274 267306 |

### 1.4. Emergency telephone number

|                            |                                |
|----------------------------|--------------------------------|
| <b>Emergency Telephone</b> | SGS - +32 (0)3 575 55 55 (24h) |
|----------------------------|--------------------------------|

## SECTION 2: Hazards identification

## 2.1. Classification of the substance or mixture

|                                   |                      |
|-----------------------------------|----------------------|
| Skin corrosion/irritation         | Category 2 - (H315)  |
| Serious eye damage/eye irritation | Category 2 - (H319)  |
| Skin sensitisation                | Category 1B - (H317) |
| Chronic aquatic toxicity          | Category 2 - (H411)  |

## 2.2. Label elements



### Signal word

Warning

### Hazard statements

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H319 - Causes serious eye irritation

H411 - Toxic to aquatic life with long lasting effects

### Precautionary statements

P261 - Avoid breathing dust/fume/gas/mist/vapours/spray

P273 - Avoid release to the environment

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P501 - Dispose of contents/ container to an approved waste disposal plant

## 2.3. Other hazards

No information available.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

| Chemical name                                 | Weight-% | EC No (EU Index No) | UK REACH registration number | Classification according to GB CLP (SI 2020/1567 as amended)                                    | Specific concentration limit (SCL)              | M-Factor | M-Factor (long-term) |
|-----------------------------------------------|----------|---------------------|------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------|----------|----------------------|
| BIS-[4-(2,3-EPOXI)PHENYL]PROPANE<br>1675-54-3 | <= 100%  | 216-823-5           | -                            | Skin Irrit. 2 (H315)<br>Eye Irrit. 2 (H319)<br>Skin Sens. 1B (H317)<br>Aquatic Chronic 2 (H411) | Skin Irrit. 2 :: C>=5%<br>Eye Irrit. 2 :: C>=5% | -        | -                    |

### Full text of H- and EUH-phrases: see section 16

This product does not contain candidate substances of very high concern at a concentration >= 0.1% (UK REACH Article 59)

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

|                                    |                                                                                                                                                                                                                                                                                     |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General advice                     | Show this safety data sheet to the doctor in attendance.                                                                                                                                                                                                                            |
| Inhalation                         | Remove to fresh air. Get medical attention immediately if symptoms occur.                                                                                                                                                                                                           |
| Eye contact                        | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists. |
| Skin contact                       | May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a doctor. Wash off immediately with soap and plenty of water for at least 15 minutes. Take off contaminated clothing and wash it before reuse.                                        |
| Ingestion                          | Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a doctor.                                                                                                                                                                          |
| Self-protection of the first aider | Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).                                                                                                                                                                                       |

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

|            |                                                                                             |
|------------|---------------------------------------------------------------------------------------------|
| Symptoms   | Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. |
| Inhalation | No information available.                                                                   |
| Eyes       | Causes serious eye irritation.                                                              |
| Dermal     | Causes skin irritation. May cause an allergic skin reaction.                                |
| Ingestion  | No information available                                                                    |

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

|                 |                                                                        |
|-----------------|------------------------------------------------------------------------|
| Note to doctors | May cause sensitisation in susceptible persons. Treat symptomatically. |
|-----------------|------------------------------------------------------------------------|

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

|                                |                                                                                 |
|--------------------------------|---------------------------------------------------------------------------------|
| Suitable Extinguishing Media   | Water spray or fog. Dry chemical. Carbon dioxide (CO2). Alcohol resistant foam. |
| Large Fire                     | CAUTION: Use of water spray when fighting fire may be inefficient.              |
| Unsuitable extinguishing media | Do not scatter spilled material with high pressure water streams.               |

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

|                                            |                                                                                                                                                                                                                                                                                                                   |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Specific hazards arising from the chemical | Product is or contains a sensitiser. May cause sensitisation by skin contact. Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is emitted when burned without sufficient oxygen. |
| Hazardous combustion products              | During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Phenolic compounds. Carbon monoxide. Carbon dioxide (CO2).                                         |

### 5.3. Advice for firefighters

|                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Special protective equipment and precautions for fire-fighters</b> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. Evacuate personnel to safe areas. Cool containers with flooding quantities of water until well after fire is out. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. Do not use a solid water stream as it may scatter and spread fire. Move containers from fire area if you can do it without risk. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Water fog, applied gently may be used as a blanket for fire extinguishment. Do not allow runoff to sewer, waterway or ground. |
|-----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## SECTION 6: Accidental release measures

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

|                                 |                                                                                                                                                                                                                                                                                      |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Personal precautions</b>     | Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Isolate the area. Keep unnecessary and unprotected personnel from entering. |
| <b>Other information</b>        | Refer to protective measures listed in Sections 7 and 8.                                                                                                                                                                                                                             |
| <b>For emergency responders</b> | Use personal protection recommended in Section 8.                                                                                                                                                                                                                                    |

### 6.2. Environmental precautions

|                                  |                                                                                                                                                                |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Environmental precautions</b> | Prevent further leakage or spillage if safe to do so. Keep out of drains, sewers, ditches and waterways. See Section 12 for additional Ecological Information. |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|

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

|                                        |                                                                                                                                                                                                                                                                                              |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Methods for containment</b>         | Dyke far ahead of liquid spill for later disposal. Prevent further leakage or spillage if safe to do so.                                                                                                                                                                                     |
| <b>Methods for cleaning up</b>         | Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Remove residual with soap and hot water. Collect spillage in containers, seal securely and deliver for disposal according to local regulations. For waste disposal, see section 13. |
| <b>Prevention of secondary hazards</b> | Clean contaminated objects and areas thoroughly observing environmental regulations.                                                                                                                                                                                                         |

### 6.4. Reference to other sections

|                                    |                                                                          |
|------------------------------------|--------------------------------------------------------------------------|
| <b>Reference to other sections</b> | See section 8 for more information. See section 13 for more information. |
|------------------------------------|--------------------------------------------------------------------------|

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

|                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Advice on safe handling</b>        | Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse. Wash thoroughly after handling. Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion. Use personal protection recommended in Section 8. |
| <b>General hygiene considerations</b> | Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes or clothing. Handle in accordance with good industrial hygiene and safety practice. Remove contaminated clothing and protective equipment before entering eating areas. Ensure that eyewash stations and safety showers are close to the workstation location.                                                                                                                                                                                           |

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

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep at temperatures between 2 and 43 °C. Storage period: 24 months.

## 7.3. Specific end use(s)

### Specific use(s)

See section 1 for more information.

**Risk Management Methods (RMM)** The information required is contained in this Safety Data Sheet.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

**Exposure Limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Biological occupational exposure limits** This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

### Derived No Effect Level (DNEL) - Workers

| Chemical name                                             | Oral | Dermal                 | Inhalation              |
|-----------------------------------------------------------|------|------------------------|-------------------------|
| BIS-[4-(2,3-EPOXIPROPOXI)PHENYL]<br>]PROPANE<br>1675-54-3 |      | 8.33 mg/kg/day [4] [6] | 12.25 mg/kg/day [4] [6] |

[4] Systemic health effects.  
[6] Long term.

### Derived No Effect Level (DNEL) - General Public

| Chemical name                                             | Oral                   | Dermal                  | Inhalation                     |
|-----------------------------------------------------------|------------------------|-------------------------|--------------------------------|
| BIS-[4-(2,3-EPOXIPROPOXI)PHENYL]<br>]PROPANE<br>1675-54-3 | 0.75 mg/kg/day [4] [6] | 3.571 mg/kg/day [4] [6] | 0.87 mg/m <sup>3</sup> [4] [6] |

[4] Systemic health effects.  
[6] Long term.

### Predicted No Effect Concentration (PNEC)

| Chemical name                                        | Freshwater | Freshwater<br>(intermittent release) | Marine water | Marine water<br>(intermittent release) | Air |
|------------------------------------------------------|------------|--------------------------------------|--------------|----------------------------------------|-----|
| BIS-[4-(2,3-EPOXIPROPOXI)PHENYL]PROPANE<br>1675-54-3 | 0.006 mg/l | 0.018 mg/L                           | 0.0006 mg/l  | 0.0018 mg/L                            |     |

| Chemical name                           | Freshwater<br>sediment | Marine sediment | Sewage treatment | Soil            | Food chain |
|-----------------------------------------|------------------------|-----------------|------------------|-----------------|------------|
| BIS-[4-(2,3-EPOXIPROPOXI)PHENYL]PROPANE | 0.996 mg/kg            | 0.0996 mg/kg    | 10 mg/L          | 0.196 mg/kg/day | 10 mg/l    |

| Chemical name | Freshwater sediment | Marine sediment | Sewage treatment | Soil | Food chain |
|---------------|---------------------|-----------------|------------------|------|------------|
| 1675-54-3     |                     |                 |                  |      |            |

## 8.2. Exposure controls

### Engineering controls

Use with local exhaust ventilation. Apply technical measures to comply with the occupational exposure limits. Ensure adequate ventilation. Ensure that eyewash stations and safety showers are close to the workstation location.

### Personal protective equipment

#### Eye/face protection

Wear safety glasses with side shields (or goggles). Use eye protection according to EN 166.

#### Hand protection

Wear suitable gloves. Impervious gloves. Butyl rubber. Ethyl vinyl alcohol laminate ("EVAL"). Nitrile rubber. Neoprene gloves. Polyvinyl chloride (PVC). Gloves must conform to standard EN 374. NOTE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

#### Skin and body protection

Wear suitable protective clothing. Long sleeved clothing.

#### Respiratory protection

In case of inadequate ventilation wear respiratory protection. Use the following CE approved air-purifying respirator: Organic vapour cartridge with a particulate pre-filter, type AP2.

#### General hygiene considerations

Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes or clothing. Handle in accordance with good industrial hygiene and safety practice. Remove contaminated clothing and protective equipment before entering eating areas. Ensure that eyewash stations and safety showers are close to the workstation location.

#### Environmental exposure controls

Local authorities should be advised if significant spillages cannot be contained. Ensure all waste water is collected and treated via a waste water treatment plant.

## SECTION 9: Physical and chemical properties

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

|                 |                          |
|-----------------|--------------------------|
| Physical state  | Liquid                   |
| Appearance      | Viscous liquid           |
| Colour          | Colourless., to, Yellow  |
| Odour           | Odourless. / Mild.       |
| Odour threshold | No information available |

#### Property

#### Values

#### Remarks • Method

Melting point / freezing point

No information available.

Initial boiling point and boiling range 320 °C

Differential Scanning Calorimetry (DSC).

Flammability

No information available.

Flammability Limit in Air

No information available.

Upper flammability or explosive limits

Lower flammability or explosive limits

Flash point 264 - 268 °C

Closed cup.

Autoignition temperature

No information available.

Decomposition temperature > 320 °C

No information available.

pH

No information available.

pH (as aqueous solution)

No information available.

|                            |                                                            |                           |
|----------------------------|------------------------------------------------------------|---------------------------|
| Kinematic viscosity        |                                                            | No information available. |
| Dynamic viscosity          | 11000 - 14000 mPa s                                        | @ 25 °C. ASTM D 445.      |
| Water solubility           | 5.4 - 8.4 mg/L                                             | @ 20 °C. EU Method A.6.   |
| Solubility(ies)            |                                                            | No information available. |
| Partition coefficient      | 3.242                                                      | Estimated.                |
| Vapour pressure            | < 0.0000001 Pa                                             | @ 20 °C. EC Method A4.    |
| Relative density           |                                                            | No information available. |
| Bulk density               |                                                            | No information available  |
| Liquid Density             | 1.16 g/mL                                                  | @ 25 °C ASTM D4052        |
| Relative vapour density    |                                                            | No information available. |
| Particle characteristics   |                                                            | No information available. |
| Particle Size              | No information available                                   |                           |
| Particle Size Distribution | No information available                                   |                           |
| Explosive properties       | Not considered to be explosive.                            |                           |
| Oxidising properties       | Does not meet the criteria for classification as oxidising |                           |

## 9.2. Other information

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reactivity No information available.

### 10.2. Chemical stability

Stability Stable under normal conditions.

### Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

### 10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Will not occur by itself.

Hazardous polymerisation Masses of more than one pound (0.5 kg) of product plus an aliphatic amine will cause irreversible polymerization with considerable heat build-up.

### 10.4. Conditions to avoid

Conditions to avoid Avoid exposure to temperatures above 250 °C. Potentially violent decomposition can occur above 350 °C. Generation of gas during decomposition can cause pressure in closed systems. Pressure build-up can be rapid.

### 10.5. Incompatible materials

Incompatible materials Acids. Bases. Amines. Oxidising agents.

### 10.6. Hazardous decomposition products

Hazardous decomposition products Decomposition products depend upon temperature, air supply and the presence of other materials. Gases are released during decomposition. Uncontrolled exothermic reaction of epoxy resins release phenolics, carbon monoxide, and water.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Information on likely routes of exposure

## Product Information

|                     |                                                                                                                                                                                                                                                                                          |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>   | Specific test data for the substance or mixture is not available.                                                                                                                                                                                                                        |
| <b>Eye contact</b>  | Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.                                                                                                                            |
| <b>Skin contact</b> | May cause sensitisation by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). Causes skin irritation. May cause an allergic skin reaction. |
| <b>Ingestion</b>    | Specific test data for the substance or mixture is not available.                                                                                                                                                                                                                        |

## Symptoms related to the physical, chemical and toxicological characteristics

**Symptoms** Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation.

## Acute toxicity

## Numerical measures of toxicity

| Chemical name                           | Oral LD50           | Dermal LD50          | Inhalation LC50 |
|-----------------------------------------|---------------------|----------------------|-----------------|
| BIS-[4-(2,3-EPOXIPROPOXI)PHENYL]PROPANE | > 15000 mg/kg (Rat) | 23000 mg/kg (Rabbit) | -               |

## Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Skin corrosion/irritation** Classification based on data available for ingredients. Causes skin irritation.

BIS-[4-(2,3-EPOXIPROPOXI)PHENYL]PROPANE (1675-54-3)

| Method | Species | Exposure route | Effective dose | Exposure time | Results                |
|--------|---------|----------------|----------------|---------------|------------------------|
|        |         | Dermal         |                |               | Causes skin irritation |

**Serious eye damage/eye irritation** Classification based on data available for ingredients. Causes serious eye irritation.

BIS-[4-(2,3-EPOXIPROPOXI)PHENYL]PROPANE (1675-54-3)

| Method | Species | Exposure route | Effective dose | Exposure time | Results                       |
|--------|---------|----------------|----------------|---------------|-------------------------------|
|        |         | eye            |                |               | Causes serious eye irritation |

**Respiratory or skin sensitisation** May cause an allergic skin reaction.

BIS-[4-(2,3-EPOXIPROPOXI)PHENYL]PROPANE (1675-54-3)

| Method | Species        | Exposure route | Results                             |
|--------|----------------|----------------|-------------------------------------|
|        | Mouse          | Dermal         | May cause an allergic skin reaction |
|        | Human evidence | Dermal         | May cause an allergic skin reaction |

**Germ cell mutagenicity** No information available.

## Component Information

BIS-[4-(2,3-EPOXIPROPOXI)PHENYL]PROPANE (1675-54-3)

| Method | Species  | Results  |
|--------|----------|----------|
|        | in vitro | Positive |
|        | in vitro | Negative |
|        | in vivo  | Negative |



**Carcinogenicity** Many studies have been conducted to assess the potential carcinogenicity of diglycidyl ether of bisphenol A (DGEBA). Indeed, the most recent review of the available data by the International Agency for Research on Cancer (IARC) has concluded that DGEBA is not classified as a carcinogen. Although some weak evidence of carcinogenicity has been reported in animals, when all of the data are considered, the weight of evidence does not show that DGEBA is carcinogenic.

**Reproductive toxicity** No information available.

BIS-[4-(2,3-EPOXIPROPOXI)PHENYL]PROPANE (1675-54-3)

| Method | Species       | Results                                                |
|--------|---------------|--------------------------------------------------------|
|        |               | In animal studies, did not interfere with reproduction |
|        | Rabbit Dermal | Not classified                                         |
|        | Rabbit Oral   | Not classified                                         |
|        | Rat Oral      | Not classified                                         |

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Aspiration hazard** No information available.

**Other adverse effects** No information available.

## SECTION 12: Ecological information

### 12.1. Toxicity

**Ecotoxicity** Toxic to aquatic life with long lasting effects.

BIS-[4-(2,3-EPOXIPROPOXI)PHENYL]PROPANE (1675-54-3)

| Method | Species   | Endpoint type | Effective dose | Exposure time | Results                                         |
|--------|-----------|---------------|----------------|---------------|-------------------------------------------------|
|        | Fish      | LC50          | 2 mg/L         | 96 hours      | Toxic to aquatic life                           |
|        | Crustacea | EC50          | 1.8 mg/L       | 48 hours      | Toxic to aquatic life                           |
|        | Algae     | ErC50         | 11 mg/L        | 72 hours      | Harmful to aquatic life                         |
|        | Crustacea | NOEC          | 0.3 mg/L       | 21 days       | Toxic to aquatic life with long lasting effects |

### 12.2. Persistence and degradability

**Persistence and degradability** Not rapidly degradable.

BIS-[4-(2,3-EPOXIPROPOXI)PHENYL]PROPANE (1675-54-3)

| Method                                                                 | Exposure time | Value              | Results                 |
|------------------------------------------------------------------------|---------------|--------------------|-------------------------|
| OECD Test No. 302B: Inherent Biodegradability: Zahn-Wellens/ EVPA Test | 28 days       | 12% Biodegradation | Not rapidly degradable. |

### 12.3. Bioaccumulative potential

Bioaccumulation Moderate.

Bioconcentration factor (BCF) 100 - 3000

#### Component Information

| Chemical name                           | Partition coefficient |
|-----------------------------------------|-----------------------|
| BIS-[4-(2,3-EPOXIPROPOXI)PHENYL]PROPANE | 3.242                 |

### 12.4. Mobility in soil

Mobility in soil Low soil mobility.

### 12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB.

| Chemical name                           | PBT and vPvB assessment         |
|-----------------------------------------|---------------------------------|
| BIS-[4-(2,3-EPOXIPROPOXI)PHENYL]PROPANE | The substance is not PBT / vPvB |

### 12.6. Other adverse effects

No information available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste from residues/unused products Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.

Contaminated packaging Do not reuse empty containers.

## SECTION 14: Transport information

#### IATA

- 14.1 UN number or ID number UN3082
- 14.2 UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S.  
(BIS-[4-(2,3-EPOXIPROPOXI)PHENYL]PROPANE)
- 14.3 Transport hazard class(es) 9
- 14.4 Packing group III
- 14.5 Environmental hazards Yes
- 14.6 Special precautions for user
- Special Provisions A97, A158, A197
- ERG Code 9L

#### IMDG

- 14.1 UN number or ID number UN3082
- 14.2 UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S.  
(BIS-[4-(2,3-EPOXIPROPOXI)PHENYL]PROPANE)
- 14.3 Transport hazard class(es) 9
- 14.4 Packing group III
- 14.5 Environmental hazards Yes
- 14.6 Special precautions for user
- Special Provisions 274, 335, 969
- EmS-No F-A, S-F
- 14.7 Maritime transport in bulk according to IMO instruments No information available

#### RID

|                                   |                                                                                                   |
|-----------------------------------|---------------------------------------------------------------------------------------------------|
| 14.1 UN number or ID number       | UN3082                                                                                            |
| 14.2 UN proper shipping name      | ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S.<br>(BIS-[4-(2,3-EPOXIPROPOXI)PHENYL]PROPANE) |
| 14.3 Transport hazard class(es)   | 9                                                                                                 |
| 14.4 Packing group                | III                                                                                               |
| 14.5 Environmental hazards        | Yes                                                                                               |
| 14.6 Special precautions for user |                                                                                                   |
| Special Provisions                | 274, 335, 375, 601                                                                                |
| Classification code               | M6                                                                                                |

#### ADR

|                                   |                                                                                                   |
|-----------------------------------|---------------------------------------------------------------------------------------------------|
| 14.1 UN number or ID number       | UN3082                                                                                            |
| 14.2 UN proper shipping name      | ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S.<br>(BIS-[4-(2,3-EPOXIPROPOXI)PHENYL]PROPANE) |
| 14.3 Transport hazard class(es)   | 9                                                                                                 |
| 14.4 Packing group                | III                                                                                               |
| 14.5 Environmental hazards        | Yes                                                                                               |
| 14.6 Special precautions for user |                                                                                                   |
| Special Provisions                | 274, 335, 601, 375                                                                                |
| Classification code               | M6                                                                                                |
| Tunnel restriction code           | (-)                                                                                               |

## SECTION 15: Regulatory information

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

#### National regulations

##### **Authorisations and/or restrictions on use:**

This product contains one or more substances subject to restriction (UK REACH - Annex XVII).

This product does not contain substances subject to authorisation (UK REACH - Annex XIV).

**Product restricted per REACH Annex XVII:** 3

##### **Persistent Organic Pollutants**

Not applicable

##### **Export Notification requirements**

Not applicable

##### **Dangerous substance category per COMAH Regulations 2015 (as amended)**

E2 - Hazardous to the Aquatic Environment in Category Chronic 2

##### **Named dangerous substances per COMAH Regulations 2015 (as amended)**

Not applicable

##### **The Ozone-Depleting Substances Regulations 2015**

Not applicable

##### **The Biocidal Products Regulations 2001 (as amended)**

Not applicable

##### **The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)**

Not applicable

##### **Poisons Act 1972 (Explosive Precursors) Regulations (as Amended)**

Not applicable

#### International Inventories

TSCA

Contact supplier for inventory compliance status

DSL/NDL

Contact supplier for inventory compliance status

EINECS/ELINCS

Contact supplier for inventory compliance status

ENCS

Contact supplier for inventory compliance status

|       |                                                  |
|-------|--------------------------------------------------|
| IECSC | Contact supplier for inventory compliance status |
| KECI  | Contact supplier for inventory compliance status |
| PICCS | Contact supplier for inventory compliance status |
| AIIC  | Contact supplier for inventory compliance status |
| NZIoC | Contact supplier for inventory compliance status |

**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AIIC** - Australian Inventory of Industrial Chemicals  
**NZIoC** - New Zealand Inventory of Chemicals

**15.2. Chemical safety assessment**

**Chemical Safety Report** A Chemical Safety Assessment has been carried out for this substance

**SECTION 16: Other information**

**Key or legend to abbreviations and acronyms used in the safety data sheet**

**Full text of H-Statements referred to under section 3**

H315 - Causes skin irritation  
H317 - May cause an allergic skin reaction  
H319 - Causes serious eye irritation  
H411 - Toxic to aquatic life with long lasting effects

**Legend**

SVHC: Substances of Very High Concern for Authorisation:

**Legend Section 8: Exposure controls/personal protection**

|                                         |                             |      |                                  |
|-----------------------------------------|-----------------------------|------|----------------------------------|
| TWA                                     | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling                                 | Maximum limit value         | *    | Skin designation                 |
| +                                       | Sensitisers                 |      |                                  |
| Revision Note SDS sections updated 1 16 |                             |      |                                  |

**Classification procedure**

|                                                                 |                    |
|-----------------------------------------------------------------|--------------------|
| Classification according to Regulation (EC) No. 1272/2008 [CLP] | Method Used        |
| Acute oral toxicity                                             | Calculation method |
| Acute dermal toxicity                                           | Calculation method |
| Acute inhalation toxicity - gas                                 | Calculation method |
| Acute inhalation toxicity - vapour                              | Calculation method |
| Acute inhalation toxicity - dust/mist                           | Calculation method |
| Skin corrosion/irritation                                       | Calculation method |
| Serious eye damage/eye irritation                               | Calculation method |
| Respiratory sensitisation                                       | Calculation method |
| Skin sensitisation                                              | Calculation method |
| Mutagenicity                                                    | Calculation method |
| Carcinogenicity                                                 | Calculation method |
| Reproductive toxicity                                           | Calculation method |
| STOT - single exposure                                          | Calculation method |
| STOT - repeated exposure                                        | Calculation method |
| Acute aquatic toxicity                                          | Calculation method |
| Chronic aquatic toxicity                                        | Calculation method |
| Aspiration hazard                                               | Calculation method |
| Ozone                                                           | Calculation method |

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA\_RAC)  
European Chemicals Agency (ECHA) (ECHA\_API)  
Environmental Protection Agency  
Acute Exposure Guideline Level(s) (AEGL(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
National Institute of Technology and Evaluation (NITE)  
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
U.S. National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme  
Organisation for Economic Co-operation and Development Screening Information Data Set  
World Health Organization

|                        |             |
|------------------------|-------------|
| <b>Prepared By</b>     | N Bajaj     |
| <b>Supersedes date</b> | 07-May-2025 |
| <b>Revision date</b>   | 05-Aug-2025 |

**This material safety data sheet complies with the requirements of UK REACH Regulations (SI 2019/758 as amended)**  
**Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work**

#### **Disclaimer**

**The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.**

**End of Safety Data Sheet**

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** BIS-[4-(2,3-EPOXI)PROPOXI]PHENYL]PROPANE  
**Pure substance/mixture** Substance  
**REACH registration number** 01-2119456619-26-XXXX  
**CAS No** 1675-54-3  
**EC No (EU Index No)** 216-823-5  
**Supplier** Univar Solutions UK Ltd  
 Aquarius House  
 6 Mid Point Business Park  
 Bradford  
 GBR  
  
**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306  
  
**E-mail address** SDS.EMEA@univarsolutions.com

### Section 1 - Title

**Title** Formulation & (re)packing of substances and mixtures  
**Type** Worker  
**Main user group** Industrial uses: Uses of substances as such or in preparations at industrial sites  
**Environmental release category(ies)** ERC2 - Formulation of preparations (mixtures) ERC3 - Formulation in materials  
**Process category(ies)** PROC3 - Use in closed batch process (synthesis or formulation)  
 PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises  
 PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities  
 PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)  
**Sector(s) of use** SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC2 - Formulation of preparations (mixtures)  
 - ERC3 - Formulation in materials

**Covers concentrations up to** 100%  
**Amounts used**

|       |                       |
|-------|-----------------------|
| Type  | Daily amount per site |
| Value | 80 000                |
| Units | kg/d                  |

|       |                        |
|-------|------------------------|
| Type  | Annual amount per site |
| Value | 25 000                 |
| Units | t(ons)/year            |

#### Product characteristics

|                          |        |
|--------------------------|--------|
| Physical form of product | Liquid |
|--------------------------|--------|

#### Other operational conditions of use affecting environmental exposure

|                                                                            |          |
|----------------------------------------------------------------------------|----------|
| Release fraction to air from process (initial release prior to RMM)        | 0%       |
| Release fraction to wastewater from process (initial release prior to RMM) | 0.00007% |
| Release fraction to soil from process (initial release prior to RMM)       | 0%       |

**Conditions and measures related to municipal sewage treatment plant**

|                                              |                                             |
|----------------------------------------------|---------------------------------------------|
| Assumed domestic sewage treatment plant flow | 2000 m3/d                                   |
| Removal efficiency (total)                   | 5.253%                                      |
| Sludge treatment                             | Controlled application to agricultural soil |

**Environmental factors not influenced by risk management**

|                                            |            |
|--------------------------------------------|------------|
| Receiving water dilution (fresh or marine) | 18000 m3/d |
|--------------------------------------------|------------|

|                                                                                        |                                                                               |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| <b>Control of worker exposure</b>                                                      |                                                                               |
| Process category(ies)                                                                  | PROC3 - Use in closed batch process (synthesis or formulation)                |
| Covers concentrations up to                                                            | 100%                                                                          |
| Physical form of product                                                               | Liquid                                                                        |
| Vapour pressure                                                                        | 0.00741 Pa                                                                    |
| Temperature associated to vapour pressure                                              | 70 C                                                                          |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).             |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a basic standard of general ventilation (1 to 3 air changes per hour) |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection and gloves                                        |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented          |
| Indoor/Outdoor use                                                                     | Indoor                                                                        |
| Assumes process temperature up to                                                      | 70 C                                                                          |

|                                                                                        |                                                                                                                                |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                       |
| Covers concentrations up to                                                            | 100%                                                                                                                           |
| Physical form of product                                                               | Liquid                                                                                                                         |
| Vapour pressure                                                                        | 0.00741 Pa                                                                                                                     |
| Temperature associated to vapour pressure                                              | 70 C                                                                                                                           |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                              |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a basic standard of general ventilation (1 to 3 air changes per hour)                                                  |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented                                                           |
| Indoor/Outdoor use                                                                     | Indoor                                                                                                                         |
| Assumes process temperature up to                                                      | 70 C                                                                                                                           |

|                                                                             |                                                                                                                               |
|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                       | PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities |
| Covers concentrations up to                                                 | 100%                                                                                                                          |
| Physical form of product                                                    | Liquid                                                                                                                        |
| Vapour pressure                                                             | 0.00741 Pa                                                                                                                    |
| Temperature associated to vapour pressure                                   | 70 C                                                                                                                          |
| Use frequency                                                               | Covers daily exposures up to 8 hours (unless stated differently).                                                             |
| Technical conditions and measures to control dispersion from source towards | Local exhaust ventilation - efficiency of at least 95%                                                                        |

|                                                                                       |                                                                                                                                |
|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| the worker                                                                            |                                                                                                                                |
| Conditions and measures related to personal protection, hygiene and health evaluation | Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training |
| Organisational measures to prevent /limit releases, dispersion and exposure           | Assumes a good basic standard of occupational hygiene is implemented                                                           |
| Indoor/Outdoor use                                                                    | Indoor                                                                                                                         |
| Assumes process temperature up to                                                     | 70 C                                                                                                                           |

|                                                                                        |                                                                                                                 |
|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) |
| Covers concentrations up to                                                            | 100%                                                                                                            |
| Physical form of product                                                               | Liquid                                                                                                          |
| Vapour pressure                                                                        | 0.000586 Pa                                                                                                     |
| Temperature associated to vapour pressure                                              | 50 C                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                               |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                      |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection and gloves                                                                          |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented                                            |
| Indoor/Outdoor use                                                                     | Indoor                                                                                                          |
| Assumes process temperature up to                                                      | 50 C                                                                                                            |

### Section 3 - Exposure estimation

**Environmental release category(ies) - ERC2 - Formulation of preparations (mixtures)**  
**- ERC3 - Formulation in materials**

**Predicted No Effect Concentration (PNEC)**

|                                   |             |
|-----------------------------------|-------------|
| <b>Freshwater</b>                 | 0.006 mg/l  |
| <b>Freshwater sediment</b>        | 0.341 mg/kg |
| <b>Marine water</b>               | 0.001 mg/l  |
| <b>Marine sediment</b>            | 0.034 mg/kg |
| <b>Soil</b>                       | 0.065 mg/kg |
| <b>Impact on Sewage Treatment</b> | 10 mg/l     |

**Calculation method** Used EUSES model

| Environment                 | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------|--------------------------|-----------------------------------|
| Freshwater                  | 0.00303 mg/l             | 0.505                             |
| Freshwater sediment         | 0.146 mg/kg              | 0.427                             |
| Marine water                | 0.000295 mg/l            | 0.491                             |
| Marine sediment             | 0.014 mg/kg              | 0.416                             |
| STP: Sewage Treatment Plant | 0.027 mg/l               | <0.01                             |
| Soil                        | 0.047 mg/kg              | 0.727                             |

**Derived No Effect Level (DNEL):**

|                                                  |                        |
|--------------------------------------------------|------------------------|
| <b>Worker - dermal, long-term - systemic</b>     | 0.75 mg/kg             |
| <b>Worker - inhalative, long-term - systemic</b> | 4.93 mg/m <sup>3</sup> |



| <b>Calculation method</b>                                                                                                     |                                           | <b>Used ECETOC TRA model</b> |                                   |
|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|------------------------------|-----------------------------------|
| Process category(ies)                                                                                                         | Exposure route                            | predicted exposure level     | Risk characterisation ratio (RCR) |
| PROC3 - Use in closed batch process (synthesis or formulation)                                                                | Worker - inhalative, long-term - systemic | 1.418 mg/m <sup>3</sup>      | 0.288                             |
| PROC3 - Use in closed batch process (synthesis or formulation)                                                                | Worker - dermal, long-term - systemic     | 0.138 mg/kg/day              | 0.184                             |
| PROC3 - Use in closed batch process (synthesis or formulation)                                                                | Worker - combined, long-term - systemic   |                              | 0.472                             |
| PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                      | Worker - inhalative, long-term - systemic | 0.993 mg/m <sup>3</sup>      | 0.201                             |
| PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                      | Worker - dermal, long-term - systemic     | 0.343 mg/kg/day              | 0.457                             |
| PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                      | Worker - combined, long-term - systemic   |                              | 0.659                             |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities | Worker - inhalative, long-term - systemic | 0.071 mg/m <sup>3</sup>      | 0.014                             |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities | Worker - dermal, long-term - systemic     | 0.686 mg/kg/day              | 0.914                             |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities | Worker - combined, long-term - systemic   |                              | 0.928                             |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)               | Worker - inhalative, long-term - systemic | 0.993 mg/m <sup>3</sup>      |                                   |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)               | Worker - dermal, long-term - systemic     | 0.343 mg/kg/day              | 0.457                             |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)               | Worker - combined, long-term - systemic   |                              | 0.659                             |

## **Section 4 - Guidance to check compliance with the exposure scenario**

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** BIS-[4-(2,3-EPOXIPROPOXI)PHENYL]PROPANE  
**Pure substance/mixture** Substance  
**REACH registration number** 01-2119456619-26-XXXX  
**CAS No** 1675-54-3  
**EC No (EU Index No)** 216-823-5  
**Supplier** Univar Solutions UK Ltd  
 Aquarius House  
 6 Mid Point Business Park  
 Bradford  
 GBR  
  
**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306  
  
**E-mail address** SDS.EMEA@univarsolutions.com

### Section 1 - Title

**Title** Polymer production  
**Type** Worker  
**Main user group** Industrial uses: Uses of substances as such or in preparations at industrial sites  
**Environmental release category(ies)** ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles  
 ERC6c - Industrial use of monomers for manufacture of thermoplastics  
**Process category(ies)** PROC1 - Use in closed process, no likelihood of exposure  
 PROC2 - Use in closed, continuous process with occasional controlled exposure  
 PROC3 - Use in closed batch process (synthesis or formulation)  
 PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities  
**Sector(s) of use** SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles  
 - ERC6c - Industrial use of monomers for manufacture of thermoplastics

**Covers concentrations up to** 100%  
**Amounts used**

|       |                       |
|-------|-----------------------|
| Type  | Daily amount per site |
| Value | 200 000               |
| Units | kg/d                  |

|       |                        |
|-------|------------------------|
| Type  | Annual amount per site |
| Value | 35 000                 |
| Units | t(ons)/year            |

#### Product characteristics

|                          |        |
|--------------------------|--------|
| Physical form of product | Liquid |
|--------------------------|--------|

#### Other operational conditions of use affecting environmental exposure

|                                                                            |          |
|----------------------------------------------------------------------------|----------|
| Release fraction to air from process (initial release prior to RMM)        | 0%       |
| Release fraction to wastewater from process (initial release prior to RMM) | 0.00003% |
| Release fraction to soil from process (initial release prior to RMM)       | 0%       |

**Conditions and measures related to municipal sewage treatment plant**

|                                              |                                             |
|----------------------------------------------|---------------------------------------------|
| Assumed domestic sewage treatment plant flow | 2000 m3/d                                   |
| Removal efficiency (total)                   | 5.253%                                      |
| Sludge treatment                             | Controlled application to agricultural soil |

**Environmental factors not influenced by risk management**

|                                            |            |
|--------------------------------------------|------------|
| Receiving water dilution (fresh or marine) | 18000 m3/d |
|--------------------------------------------|------------|

**Control of worker exposure**

|                                                                                        |                                                                               |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC1 - Use in closed process, no likelihood of exposure                      |
| Covers concentrations up to                                                            | 100%                                                                          |
| Physical form of product                                                               | Liquid                                                                        |
| Vapour pressure                                                                        | 0.00741 Pa                                                                    |
| Temperature associated to vapour pressure                                              | 70 C                                                                          |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).             |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a basic standard of general ventilation (1 to 3 air changes per hour) |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection and gloves                                        |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented          |
| Indoor/Outdoor use                                                                     | Indoor                                                                        |
| Assumes process temperature up to                                                      | 70 C                                                                          |

|                                                                                        |                                                                                            |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC2 - Use in closed, continuous process with occasional controlled exposure              |
| Covers concentrations up to                                                            | 100%                                                                                       |
| Physical form of product                                                               | Liquid                                                                                     |
| Vapour pressure                                                                        | 0.00741 Pa                                                                                 |
| Temperature associated to vapour pressure                                              | 70 C                                                                                       |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                          |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection and gloves                                                     |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented                       |
| Indoor/Outdoor use                                                                     | Indoor                                                                                     |
| Assumes process temperature up to                                                      | 70 C                                                                                       |

|                                                                             |                                                                                            |
|-----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Process category(ies)                                                       | PROC3 - Use in closed batch process (synthesis or formulation)                             |
| Covers concentrations up to                                                 | 100%                                                                                       |
| Physical form of product                                                    | Liquid                                                                                     |
| Vapour pressure                                                             | 0.00741 Pa                                                                                 |
| Temperature associated to vapour pressure                                   | 70 C                                                                                       |
| Use frequency                                                               | Covers daily exposures up to 8 hours (unless stated differently).                          |
| Technical conditions and measures to control dispersion from source towards | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) |

|                                                                                       |                                                                      |
|---------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| the worker                                                                            |                                                                      |
| Conditions and measures related to personal protection, hygiene and health evaluation | Use suitable eye protection and gloves                               |
| Organisational measures to prevent /limit releases, dispersion and exposure           | Assumes a good basic standard of occupational hygiene is implemented |
| Indoor/Outdoor use                                                                    | Indoor                                                               |
| Assumes process temperature up to                                                     | 70 C                                                                 |

|                                                                                        |                                                                                                                                      |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities        |
| Covers concentrations up to                                                            | 100%                                                                                                                                 |
| Physical form of product                                                               | Liquid                                                                                                                               |
| Vapour pressure                                                                        | 0.00741 Pa                                                                                                                           |
| Temperature associated to vapour pressure                                              | 70 C                                                                                                                                 |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                    |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a basic standard of general ventilation (1 to 3 air changes per hour) Local exhaust ventilation - efficiency of at least 95% |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training       |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented                                                                 |
| Indoor/Outdoor use                                                                     | Indoor                                                                                                                               |
| Assumes process temperature up to                                                      | 70 C                                                                                                                                 |

### Section 3 - Exposure estimation

**Environmental release category(ies) - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles**  
**- ERC6c - Industrial use of monomers for manufacture of thermoplastics**

#### Predicted No Effect Concentration (PNEC)

|                                   |             |
|-----------------------------------|-------------|
| <b>Freshwater</b>                 | 0.006 mg/l  |
| <b>Freshwater sediment</b>        | 0.341 mg/kg |
| <b>Marine water</b>               | 0.001 mg/l  |
| <b>Marine sediment</b>            | 0.034 mg/kg |
| <b>Soil</b>                       | 0.065 mg/kg |
| <b>Impact on Sewage Treatment</b> | 10 mg/l     |

#### Calculation method Used EUSES model

| Environment                 | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------|--------------------------|-----------------------------------|
| Freshwater                  | 0.00322 mg/l             | 0.536                             |
| Freshwater sediment         | 0.155 mg/kg              | 0.454                             |
| Marine water                | 0.000314 mg/l            | 0.523                             |
| Marine sediment             | 0.015 mg/kg              | 0.442                             |
| STP: Sewage Treatment Plant | 0.028 mg/l               | <0.01                             |
| Soil                        | 0.05 mg/kg               | 0.779                             |

#### Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic  
 Worker - inhalative, long-term - systemic

0.75 mg/kg  
 4.93 mg/m<sup>3</sup>

| Calculation method                                                                                                            | Used ECETOC TRA model                     |                          |                                   |
|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------|-----------------------------------|
| Process category(ies)                                                                                                         | Exposure route                            | predicted exposure level | Risk characterisation ratio (RCR) |
| PROC1 - Use in closed process, no likelihood of exposure                                                                      | Worker - inhalative, long-term - systemic | 0.142 mg/m <sup>3</sup>  | 0.029                             |
| PROC1 - Use in closed process, no likelihood of exposure                                                                      | Worker - dermal, long-term - systemic     | 0.0068 mg/kg/day         | <0.01                             |
| PROC1 - Use in closed process, no likelihood of exposure                                                                      | Worker - combined, long-term - systemic   |                          | 0.038                             |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                 | Worker - inhalative, long-term - systemic | 0.993 mg/m <sup>3</sup>  | 0.201                             |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                 | Worker - dermal, long-term - systemic     | 0.274 mg/kg/day          | 0.365                             |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                 | Worker - combined, long-term - systemic   |                          | 0.567                             |
| PROC3 - Use in closed batch process (synthesis or formulation)                                                                | Worker - inhalative, long-term - systemic | 0.993 mg/m <sup>3</sup>  | 0.201                             |
| PROC3 - Use in closed batch process (synthesis or formulation)                                                                | Worker - dermal, long-term - systemic     | 0.138 mg/kg/day          | 0.184                             |
| PROC3 - Use in closed batch process (synthesis or formulation)                                                                | Worker - combined, long-term - systemic   |                          | 0.385                             |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities | Worker - inhalative, long-term - systemic | 0.071 mg/m <sup>3</sup>  | 0.014                             |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities | Worker - dermal, long-term - systemic     | 0.686 mg/kg/day          | 0.914                             |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities | Worker - combined, long-term - systemic   |                          | 0.928                             |

#### Section 4 - Guidance to check compliance with the exposure scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** BIS-[4-(2,3-EPOXI PROPOXI)PHENYL]PROPANE  
**Pure substance/mixture** Substance  
**REACH registration number** 01-2119456619-26-XXXX  
**CAS No** 1675-54-3  
**EC No (EU Index No)** 216-823-5  
**Supplier** Univar Solutions UK Ltd  
 Aquarius House  
 6 Mid Point Business Park  
 Bradford  
 GBR  
  
**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306  
  
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### Section 1 - Title

**Title** Use as an intermediate  
**Type** Worker  
**Main user group** Industrial uses: Uses of substances as such or in preparations at industrial sites  
**Environmental release category(ies)** ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)  
**Process category(ies)** PROC1 - Use in closed process, no likelihood of exposure  
 PROC2 - Use in closed, continuous process with occasional controlled exposure  
 PROC3 - Use in closed batch process (synthesis or formulation)  
 PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities  
  
**Sector(s) of use** SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)

**Covers concentrations up to** 100%  
**Amounts used**

|       |                       |
|-------|-----------------------|
| Type  | Daily amount per site |
| Value | 40 000                |
| Units | kg/d                  |

|       |                        |
|-------|------------------------|
| Type  | Annual amount per site |
| Value | 12 000                 |
| Units | t(ons)/year            |

#### Product characteristics

|                          |        |
|--------------------------|--------|
| Physical form of product | Liquid |
|--------------------------|--------|

#### Other operational conditions of use affecting environmental exposure

|                                                                            |          |
|----------------------------------------------------------------------------|----------|
| Release fraction to air from process (initial release prior to RMM)        | 0%       |
| Release fraction to wastewater from process (initial release prior to RMM) | 0.00015% |
| Release fraction to soil from process (initial release prior to RMM)       | 0.1%     |

#### Conditions and measures related to municipal sewage treatment plant

|                                   |           |
|-----------------------------------|-----------|
| Assumed domestic sewage treatment | 2000 m3/d |
|-----------------------------------|-----------|

|                            |                                             |
|----------------------------|---------------------------------------------|
| plant flow                 |                                             |
| Removal efficiency (total) | 5.253%                                      |
| Sludge treatment           | Controlled application to agricultural soil |

**Environmental factors not influenced by risk management**

|                                            |            |
|--------------------------------------------|------------|
| Receiving water dilution (fresh or marine) | 18000 m3/d |
|--------------------------------------------|------------|

**Control of worker exposure**

|                                                                                        |                                                                               |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC1 - Use in closed process, no likelihood of exposure                      |
| Covers concentrations up to                                                            | 100%                                                                          |
| Physical form of product                                                               | Liquid                                                                        |
| Vapour pressure                                                                        | 0.00741 Pa                                                                    |
| Temperature associated to vapour pressure                                              | 70 C                                                                          |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).             |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a basic standard of general ventilation (1 to 3 air changes per hour) |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection and gloves                                        |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented          |
| Indoor/Outdoor use                                                                     | Indoor                                                                        |
| Assumes process temperature up to                                                      | 70 C                                                                          |

|                                                                                        |                                                                                            |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC2 - Use in closed, continuous process with occasional controlled exposure              |
| Covers concentrations up to                                                            | 100%                                                                                       |
| Physical form of product                                                               | Liquid                                                                                     |
| Vapour pressure                                                                        | 0.00741 Pa                                                                                 |
| Temperature associated to vapour pressure                                              | 70 C                                                                                       |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                          |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection and gloves                                                     |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented                       |
| Indoor/Outdoor use                                                                     | Indoor                                                                                     |
| Assumes process temperature up to                                                      | 70 C                                                                                       |

|                                                                                        |                                                                                            |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC3 - Use in closed batch process (synthesis or formulation)                             |
| Covers concentrations up to                                                            | 100%                                                                                       |
| Physical form of product                                                               | Liquid                                                                                     |
| Vapour pressure                                                                        | 0.00741 Pa                                                                                 |
| Temperature associated to vapour pressure                                              | 70 C                                                                                       |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                          |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) |
| Conditions and measures related to                                                     | Use suitable eye protection and gloves                                                     |

|                                                                             |                                                                      |
|-----------------------------------------------------------------------------|----------------------------------------------------------------------|
| personal protection, hygiene and health evaluation                          |                                                                      |
| Organisational measures to prevent /limit releases, dispersion and exposure | Assumes a good basic standard of occupational hygiene is implemented |
| Indoor/Outdoor use                                                          | Indoor                                                               |
| Assumes process temperature up to                                           | 70 C                                                                 |

|                                                                                        |                                                                                                                                      |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities        |
| Covers concentrations up to                                                            | 100%                                                                                                                                 |
| Physical form of product                                                               | Liquid                                                                                                                               |
| Vapour pressure                                                                        | 0.00741 Pa                                                                                                                           |
| Temperature associated to vapour pressure                                              | 70 C                                                                                                                                 |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                    |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a basic standard of general ventilation (1 to 3 air changes per hour) Local exhaust ventilation - efficiency of at least 95% |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training       |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented                                                                 |
| Indoor/Outdoor use                                                                     | Indoor                                                                                                                               |
| Assumes process temperature up to                                                      | 70 C                                                                                                                                 |

### Section 3 - Exposure estimation

**Environmental release category(ies) - ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)**

#### Predicted No Effect Concentration (PNEC)

|                            |             |
|----------------------------|-------------|
| Freshwater                 | 0.006 mg/l  |
| Freshwater sediment        | 0.341 mg/kg |
| Marine water               | 0.001 mg/l  |
| Marine sediment            | 0.034 mg/kg |
| Soil                       | 0.065 mg/kg |
| Impact on Sewage Treatment | 10 mg/l     |

**Calculation method** Used EUSES model

| Environment                 | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------|--------------------------|-----------------------------------|
| Freshwater                  | 0.00322 mg/l             | 0.536                             |
| Freshwater sediment         | 0.155 mg/kg              | 0.454                             |
| Marine water                | 0.000314 mg/l            | 0.523                             |
| Marine sediment             | 0.015 mg/kg              | 0.442                             |
| STP: Sewage Treatment Plant | 0.028 mg/l               | <0.01                             |
| Soil                        | 0.05 mg/kg               | 0.779                             |

#### Derived No Effect Level (DNEL):

|                                           |                        |
|-------------------------------------------|------------------------|
| Worker - dermal, long-term - systemic     | 0.75 mg/kg             |
| Worker - inhalative, long-term - systemic | 4.93 mg/m <sup>3</sup> |



| Calculation method                                                                                                            |                                           | Used ECETOC TRA model    |                                   |
|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------|-----------------------------------|
| Process category(ies)                                                                                                         | Exposure route                            | predicted exposure level | Risk characterisation ratio (RCR) |
| PROC1 - Use in closed process, no likelihood of exposure                                                                      | Worker - inhalative, long-term - systemic | 0.142 mg/m <sup>3</sup>  | 0.029                             |
| PROC1 - Use in closed process, no likelihood of exposure                                                                      | Worker - dermal, long-term - systemic     | 0.0068 mg/kg/day         | <0.01                             |
| PROC1 - Use in closed process, no likelihood of exposure                                                                      | Worker - combined, long-term - systemic   |                          | 0.038                             |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                 | Worker - inhalative, long-term - systemic | 0.993 mg/m <sup>3</sup>  | 0.201                             |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                 | Worker - dermal, long-term - systemic     | 0.274 mg/kg/day          | 0.365                             |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                 | Worker - combined, long-term - systemic   |                          | 0.567                             |
| PROC3 - Use in closed batch process (synthesis or formulation)                                                                | Worker - inhalative, long-term - systemic | 0.993 mg/m <sup>3</sup>  | 0.201                             |
| PROC3 - Use in closed batch process (synthesis or formulation)                                                                | Worker - dermal, long-term - systemic     | 0.138 mg/kg/day          | 0.184                             |
| PROC3 - Use in closed batch process (synthesis or formulation)                                                                | Worker - combined, long-term - systemic   |                          | 0.385                             |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities | Worker - inhalative, long-term - systemic | 0.071 mg/m <sup>3</sup>  | 0.014                             |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities | Worker - dermal, long-term - systemic     | 0.686 mg/kg/day          | 0.914                             |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities | Worker - combined, long-term - systemic   |                          | 0.928                             |

## Section 4 - Guidance to check compliance with the exposure scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** BIS-[4-(2,3-EPOXI PROPOXI)PHENYL]PROPANE  
**Pure substance/mixture** Substance  
**REACH registration number** 01-2119456619-26-XXXX  
**CAS No** 1675-54-3  
**EC No (EU Index No)** 216-823-5  
**Supplier** Univar Solutions UK Ltd  
 Aquarius House  
 6 Mid Point Business Park  
 Bradford  
 GBR  
  
**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306  
  
**E-mail address** SDS.EMEA@univarsolutions.com

### Section 1 - Title

**Title** Use in coatings (Industrial)  
**Type** Worker  
**Main user group** Industrial uses: Uses of substances as such or in preparations at industrial sites  
**Environmental release category(ies)** ERC6c - Industrial use of monomers for manufacture of thermoplastics  
**Process category(ies)** PROC7 - Industrial spraying  
 PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities  
 PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities  
 PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)  
 PROC10 - Roller application or brushing  
 PROC13 - Treatment of articles by dipping and pouring  
 PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising  
 PROC15 - Use as laboratory reagent  
  
**Sector(s) of use** SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC6c - Industrial use of monomers for manufacture of thermoplastics

**Covers concentrations up to** 100%  
**Amounts used**

|       |                       |
|-------|-----------------------|
| Type  | Daily amount per site |
| Value | 100 000               |
| Units | kg/d                  |

|       |                        |
|-------|------------------------|
| Type  | Annual amount per site |
| Value | 30 000                 |
| Units | t(ons)/year            |

#### Product characteristics

|                          |        |
|--------------------------|--------|
| Physical form of product | Liquid |
|--------------------------|--------|

#### Other operational conditions of use affecting environmental exposure

|                                                                     |          |
|---------------------------------------------------------------------|----------|
| Release fraction to air from process (initial release prior to RMM) | 0%       |
| Release fraction to wastewater from                                 | 0.00006% |

|                                                                      |    |
|----------------------------------------------------------------------|----|
| process (initial release prior to RMM)                               |    |
| Release fraction to soil from process (initial release prior to RMM) | 0% |

**Conditions and measures related to municipal sewage treatment plant**

|                                              |                                             |
|----------------------------------------------|---------------------------------------------|
| Assumed domestic sewage treatment plant flow | 2000 m3/d                                   |
| Removal efficiency (total)                   | 5.253%                                      |
| Sludge treatment                             | Controlled application to agricultural soil |

**Environmental factors not influenced by risk management**

|                                            |            |
|--------------------------------------------|------------|
| Receiving water dilution (fresh or marine) | 18000 m3/d |
|--------------------------------------------|------------|

**Control of worker exposure**

|                                                                                        |                                                                                                                                                                                              |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC7 - Industrial spraying                                                                                                                                                                  |
| Covers concentrations up to                                                            | 25%                                                                                                                                                                                          |
| Physical form of product                                                               | Liquid                                                                                                                                                                                       |
| Vapour pressure                                                                        | 0.00741 Pa                                                                                                                                                                                   |
| Temperature associated to vapour pressure                                              | 70 C                                                                                                                                                                                         |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                            |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                   |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection<br>Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training<br>Wear a respirator providing a minimum efficiency of 90% |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented                                                                                                                         |
| Indoor/Outdoor use                                                                     | Indoor                                                                                                                                                                                       |
| Assumes process temperature up to                                                      | 70 C                                                                                                                                                                                         |

|                                                                                        |                                                                                                                                   |
|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities |
| Covers concentrations up to                                                            | 25%                                                                                                                               |
| Physical form of product                                                               | Liquid                                                                                                                            |
| Vapour pressure                                                                        | 0.00741 Pa                                                                                                                        |
| Temperature associated to vapour pressure                                              | 70 C                                                                                                                              |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a basic standard of general ventilation (1 to 3 air changes per hour)                                                     |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection<br>Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented                                                              |
| Indoor/Outdoor use                                                                     | Indoor                                                                                                                            |
| Assumes process temperature up to                                                      | 70 C                                                                                                                              |

|                             |                                                                                                                               |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)       | PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities |
| Covers concentrations up to | 25%                                                                                                                           |
| Physical form of product    | Liquid                                                                                                                        |

|                                                                                        |                                                                                                                                |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Vapour pressure                                                                        | 0.00741 Pa                                                                                                                     |
| Temperature associated to vapour pressure                                              | 70 C                                                                                                                           |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                              |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a basic standard of general ventilation (1 to 3 air changes per hour)                                                  |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented                                                           |
| Indoor/Outdoor use                                                                     | Indoor                                                                                                                         |
| Assumes process temperature up to                                                      | 70 C                                                                                                                           |

|                                                                                        |                                                                                                                                |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                |
| Covers concentrations up to                                                            | 100%                                                                                                                           |
| Physical form of product                                                               | Liquid                                                                                                                         |
| Vapour pressure                                                                        | 0.00741 Pa                                                                                                                     |
| Temperature associated to vapour pressure                                              | 70 C                                                                                                                           |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                              |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                     |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented                                                           |
| Indoor/Outdoor use                                                                     | Indoor                                                                                                                         |
| Assumes process temperature up to                                                      | 50 C                                                                                                                           |

|                                                                                        |                                                                                                                                           |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC10 - Roller application or brushing                                                                                                   |
| Covers concentrations up to                                                            | 25%                                                                                                                                       |
| Physical form of product                                                               | Liquid                                                                                                                                    |
| Vapour pressure                                                                        | 0.00741 Pa                                                                                                                                |
| Temperature associated to vapour pressure                                              | 70 C                                                                                                                                      |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                         |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a basic standard of general ventilation (1 to 3 air changes per hour) Provide extract ventilation to points where emissions occur |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training            |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented                                                                      |
| Indoor/Outdoor use                                                                     | Indoor                                                                                                                                    |
| Assumes process temperature up to                                                      | 70 C                                                                                                                                      |

|                             |                                                       |
|-----------------------------|-------------------------------------------------------|
| Process category(ies)       | PROC13 - Treatment of articles by dipping and pouring |
| Covers concentrations up to | 25%                                                   |
| Physical form of product    | Liquid                                                |
| Vapour pressure             | 0.00741 Pa                                            |

|                                                                                        |                                                                                                                                |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Temperature associated to vapour pressure                                              | 70 C                                                                                                                           |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                              |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a basic standard of general ventilation (1 to 3 air changes per hour)                                                  |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented                                                           |
| Indoor/Outdoor use                                                                     | Indoor                                                                                                                         |
| Assumes process temperature up to                                                      | 70 C                                                                                                                           |

|                                                                                        |                                                                                                                                |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising                              |
| Covers concentrations up to                                                            | 100%                                                                                                                           |
| Physical form of product                                                               | Liquid                                                                                                                         |
| Vapour pressure                                                                        | 0.00741 Pa                                                                                                                     |
| Temperature associated to vapour pressure                                              | 70 C                                                                                                                           |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                              |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                     |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented                                                           |
| Indoor/Outdoor use                                                                     | Indoor                                                                                                                         |
| Assumes process temperature up to                                                      | 40 C                                                                                                                           |

|                                                                                        |                                                                                                                                |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC15 - Use as laboratory reagent                                                                                             |
| Covers concentrations up to                                                            | 100%                                                                                                                           |
| Physical form of product                                                               | Liquid                                                                                                                         |
| Vapour pressure                                                                        | 0.00741 Pa                                                                                                                     |
| Temperature associated to vapour pressure                                              | 70 C                                                                                                                           |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                              |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                     |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented                                                           |
| Indoor/Outdoor use                                                                     | Indoor                                                                                                                         |
| Assumes process temperature up to                                                      | 40 C                                                                                                                           |

### Section 3 - Exposure estimation

**Environmental release category(ies) - ERC6c - Industrial use of monomers for manufacture of thermoplastics**

**Predicted No Effect Concentration (PNEC)**

|                            |             |
|----------------------------|-------------|
| Freshwater                 | 0.006 mg/l  |
| Freshwater sediment        | 0.341 mg/kg |
| Marine water               | 0.001 mg/l  |
| Marine sediment            | 0.034 mg/kg |
| Soil                       | 0.065 mg/kg |
| Impact on Sewage Treatment | 10 mg/l     |

**Calculation method** Used EUSES model

| Environment                 | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------|--------------------------|-----------------------------------|
| Freshwater                  | 0.00322 mg/l             | 0.536                             |
| Freshwater sediment         | 0.155 mg/kg              | 0.454                             |
| Marine water                | 0.000314 mg/l            | 0.523                             |
| Marine sediment             | 0.015 mg/kg              | 0.442                             |
| STP: Sewage Treatment Plant | 0.028 mg/l               | <0.01                             |
| Soil                        | 0.05 mg/kg               | 0.779                             |

**Derived No Effect Level (DNEL):**

|                                           |                        |
|-------------------------------------------|------------------------|
| Worker - dermal, long-term - systemic     | 0.75 mg/kg             |
| Worker - inhalative, long-term - systemic | 4.93 mg/m <sup>3</sup> |

**Calculation method** Used ECETOC TRA model

| Process category(ies)                                                                                                             | Exposure route                            | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------|-----------------------------------|
| PROC7 - Industrial spraying                                                                                                       | Worker - inhalative, long-term - systemic | 0.34 mg/m <sup>3</sup>   | 0.069                             |
| PROC7 - Industrial spraying                                                                                                       | Worker - dermal, long-term - systemic     | 0.257 mg/kg/day          | 0.343                             |
| PROC7 - Industrial spraying                                                                                                       | Worker - combined, long-term - systemic   |                          | 0.412                             |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities | Worker - inhalative, long-term - systemic | 0.851 mg/m <sup>3</sup>  | 0.173                             |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities | Worker - dermal, long-term - systemic     | 0.411 mg/kg/day          | 0.548                             |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities | Worker - combined, long-term - systemic   |                          | 0.721                             |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - inhalative, long-term - systemic | 0.851 mg/m <sup>3</sup>  | 0.173                             |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - dermal, long-term - systemic     | 0.411 mg/kg/day          | 0.548                             |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - combined, long-term - systemic   |                          | 0.721                             |
| PROC9 - Transfer of substance or                                                                                                  | Worker - inhalative, long-term            | 0.993 mg/m <sup>3</sup>  | 0.201                             |

|                                                                                                                 |                                           |                         |       |
|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------|-------|
| preparation into small containers (dedicated filling line, including weighing)                                  | - systemic                                |                         |       |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) | Worker - dermal, long-term - systemic     | 0.343 mg/kg/day         | 0.457 |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) | Worker - combined, long-term - systemic   |                         | 0.659 |
| PROC10 - Roller application or brushing                                                                         | Worker - inhalative, long-term - systemic | 0.085 mg/m <sup>3</sup> | 0.017 |
| PROC10 - Roller application or brushing                                                                         | Worker - dermal, long-term - systemic     | 0.165 mg/kg/day         | 0.219 |
| PROC10 - Roller application or brushing                                                                         | Worker - combined, long-term - systemic   |                         | 0.237 |
| PROC13 - Treatment of articles by dipping and pouring                                                           | Worker - inhalative, long-term - systemic | 0.851 mg/m <sup>3</sup> | 0.173 |
| PROC13 - Treatment of articles by dipping and pouring                                                           | Worker - dermal, long-term - systemic     | 0.411 mg/kg/day         | 0.548 |
| PROC13 - Treatment of articles by dipping and pouring                                                           | Worker - combined, long-term - systemic   |                         | 0.721 |
| PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising               | Worker - inhalative, long-term - systemic | 0.993 mg/m <sup>3</sup> | 0.201 |
| PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising               | Worker - dermal, long-term - systemic     | 0.172 mg/kg/day         | 0.229 |
| PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising               | Worker - combined, long-term - systemic   |                         | 0.43  |
| PROC15 - Use as laboratory reagent                                                                              | Worker - inhalative, long-term - systemic | 0.993 mg/m <sup>3</sup> | 0.201 |
| PROC15 - Use as laboratory reagent                                                                              | Worker - dermal, long-term - systemic     | 0.034 mg/kg/day         | 0.045 |
| PROC15 - Use as laboratory reagent                                                                              | Worker - combined, long-term - systemic   |                         | 0.247 |

#### **Section 4 - Guidance to check compliance with the exposure scenario**

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** BIS-[4-(2,3-EPOXI)PHENYL]PROPANE  
**Pure substance/mixture** Substance  
**REACH registration number** 01-2119456619-26-XXXX  
**CAS No** 1675-54-3  
**EC No (EU Index No)** 216-823-5  
**Supplier** Univar Solutions UK Ltd  
 Aquarius House  
 6 Mid Point Business Park  
 Bradford  
 GBR  
  
**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306  
  
**E-mail address** SDS.EMEA@univarsolutions.com

### Section 1 - Title

**Title** Use in coatings (Professional)  
**Type** Worker  
**Main user group** Professional uses: Public domain (administration, education, entertainment, services, craftsmen)  
**Environmental release category(ies)** ERC8c - Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC8f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix  
**Process category(ies)** PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)  
 PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities  
 PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities  
 PROC10 - Roller application or brushing  
 PROC11 - Non industrial spraying  
 PROC13 - Treatment of articles by dipping and pouring  
 PROC15 - Use as laboratory reagent  
 PROC19 - Hand-mixing with intimate contact and only PPE available  
**Sector(s) of use** SU22 - Professional uses

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC8c - Wide dispersive indoor use resulting in inclusion into or onto a matrix  
 - ERC8f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix

**Covers concentrations up to** 100%

#### Amounts used

|       |                                       |
|-------|---------------------------------------|
| Type  | Daily amount for wide dispersive uses |
| Value | 50                                    |
| Units | kg/d                                  |

#### Product characteristics

|                          |        |
|--------------------------|--------|
| Physical form of product | Liquid |
|--------------------------|--------|

#### Other operational conditions of use affecting environmental exposure

|                                                                  |       |
|------------------------------------------------------------------|-------|
| Release fraction to air from wide dispersive use (regional only) | 0%    |
| Release fraction to wastewater from wide dispersive use          | 0.12% |
| Release fraction to soil from wide                               | 0%    |



|                                |  |
|--------------------------------|--|
| dispersive use (regional only) |  |
|--------------------------------|--|

**Conditions and measures related to municipal sewage treatment plant**

|                                              |                                             |
|----------------------------------------------|---------------------------------------------|
| Assumed domestic sewage treatment plant flow | 2000 m3/d                                   |
| Removal efficiency (total)                   | 5.253%                                      |
| Sludge treatment                             | Controlled application to agricultural soil |

**Environmental factors not influenced by risk management**

|                                            |            |
|--------------------------------------------|------------|
| Receiving water dilution (fresh or marine) | 18000 m3/d |
|--------------------------------------------|------------|

| <b>Control of worker exposure</b>                                                      |                                                                                                                                     |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) |
| Covers concentrations up to                                                            | 25%                                                                                                                                 |
| Physical form of product                                                               | Liquid                                                                                                                              |
| Vapour pressure                                                                        | 0.00741 Pa                                                                                                                          |
| Temperature associated to vapour pressure                                              | 70 C                                                                                                                                |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                   |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a basic standard of general ventilation (1 to 3 air changes per hour)                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training      |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented                                                                |
| Indoor/Outdoor use                                                                     | Outdoor                                                                                                                             |
| Assumes process temperature up to                                                      | 40 C                                                                                                                                |

|                                                                                        |                                                                                                                                   |
|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities |
| Covers concentrations up to                                                            | 25%                                                                                                                               |
| Physical form of product                                                               | Liquid                                                                                                                            |
| Vapour pressure                                                                        | 0.00741 Pa                                                                                                                        |
| Temperature associated to vapour pressure                                              | 70 C                                                                                                                              |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a basic standard of general ventilation (1 to 3 air changes per hour)                                                     |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training    |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented                                                              |
| Indoor/Outdoor use                                                                     | Outdoor                                                                                                                           |
| Assumes process temperature up to                                                      | 40 C                                                                                                                              |

|                             |                                                                                                                               |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)       | PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities |
| Covers concentrations up to | 25%                                                                                                                           |
| Physical form of product    | Liquid                                                                                                                        |

|                                                                                        |                                                                                                                                |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Vapour pressure                                                                        | 0.00741 Pa                                                                                                                     |
| Temperature associated to vapour pressure                                              | 70 C                                                                                                                           |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                              |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a basic standard of general ventilation (1 to 3 air changes per hour)                                                  |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented                                                           |
| Indoor/Outdoor use                                                                     | Outdoor                                                                                                                        |
| Assumes process temperature up to                                                      | 40 C                                                                                                                           |

|                                                                                        |                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC10 - Roller application or brushing                                                                                                                                                |
| Covers concentrations up to                                                            | 25%                                                                                                                                                                                    |
| Physical form of product                                                               | Liquid                                                                                                                                                                                 |
| Vapour pressure                                                                        | 0.00741 Pa                                                                                                                                                                             |
| Temperature associated to vapour pressure                                              | 70 C                                                                                                                                                                                   |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                      |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a basic standard of general ventilation (1 to 3 air changes per hour)                                                                                                          |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Wear a respirator providing a minimum efficiency of 90% |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented                                                                                                                   |
| Indoor/Outdoor use                                                                     | Outdoor                                                                                                                                                                                |
| Assumes process temperature up to                                                      | 40 C                                                                                                                                                                                   |

|                                                                                        |                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC11 - Non industrial spraying                                                                                                                                                       |
| Covers concentrations up to                                                            | 25%                                                                                                                                                                                    |
| Physical form of product                                                               | Liquid                                                                                                                                                                                 |
| Vapour pressure                                                                        | 0.00741 Pa                                                                                                                                                                             |
| Temperature associated to vapour pressure                                              | 70 C                                                                                                                                                                                   |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                      |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                             |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Wear a respirator providing a minimum efficiency of 90% |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented                                                                                                                   |
| Indoor/Outdoor use                                                                     | Indoor                                                                                                                                                                                 |
| Assumes process temperature up to                                                      | 40 C                                                                                                                                                                                   |

|                             |                                  |
|-----------------------------|----------------------------------|
| Process category(ies)       | PROC11 - Non industrial spraying |
| Covers concentrations up to | 25%                              |
| Physical form of product    | Liquid                           |
| Vapour pressure             | 0.00741 Pa                       |

|                                                                                        |                                                                                                                                                                                              |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Temperature associated to vapour pressure                                              | 70 C                                                                                                                                                                                         |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                            |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a basic standard of general ventilation (1 to 3 air changes per hour)                                                                                                                |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection<br>Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training<br>Wear a respirator providing a minimum efficiency of 90% |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented                                                                                                                         |
| Indoor/Outdoor use                                                                     | Outdoor                                                                                                                                                                                      |
| Assumes process temperature up to                                                      | 40 C                                                                                                                                                                                         |

|                                                                                        |                                                                                                                                   |
|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC13 - Treatment of articles by dipping and pouring                                                                             |
| Covers concentrations up to                                                            | 25%                                                                                                                               |
| Physical form of product                                                               | Liquid                                                                                                                            |
| Vapour pressure                                                                        | 0.00741 Pa                                                                                                                        |
| Temperature associated to vapour pressure                                              | 70 C                                                                                                                              |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a basic standard of general ventilation (1 to 3 air changes per hour)                                                     |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection<br>Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented                                                              |
| Indoor/Outdoor use                                                                     | Outdoor                                                                                                                           |
| Assumes process temperature up to                                                      | 40 C                                                                                                                              |

|                                                                                        |                                                                                                                                  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC15 - Use as laboratory reagent                                                                                               |
| Covers concentrations up to                                                            | 100%                                                                                                                             |
| Physical form of product                                                               | Liquid                                                                                                                           |
| Vapour pressure                                                                        | 0.00741 Pa                                                                                                                       |
| Temperature associated to vapour pressure                                              | 70 C                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection<br>Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented                                                             |
| Indoor/Outdoor use                                                                     | Indoor                                                                                                                           |
| Assumes process temperature up to                                                      | 40 C                                                                                                                             |

|                                  |                                                                   |
|----------------------------------|-------------------------------------------------------------------|
| Process category(ies)            | PROC19 - Hand-mixing with intimate contact and only PPE available |
| Covers concentrations up to      | 25%                                                               |
| Physical form of product         | Liquid                                                            |
| Vapour pressure                  | 0.00741 Pa                                                        |
| Temperature associated to vapour | 70 C                                                              |

|                                                                                        |                                                                                                                                           |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| pressure                                                                               |                                                                                                                                           |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                         |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a basic standard of general ventilation (1 to 3 air changes per hour) Provide extract ventilation to points where emissions occur |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training            |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented                                                                      |
| Covers skin contact area up to                                                         | 960 cm2                                                                                                                                   |
| Indoor/Outdoor use                                                                     | Indoor                                                                                                                                    |
| Assumes process temperature up to                                                      | 40 C                                                                                                                                      |

|                                                                                        |                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC19 - Hand-mixing with intimate contact and only PPE available                                                                                                                      |
| Covers concentrations up to                                                            | 25%                                                                                                                                                                                    |
| Physical form of product                                                               | Liquid                                                                                                                                                                                 |
| Vapour pressure                                                                        | 0.00741 Pa                                                                                                                                                                             |
| Temperature associated to vapour pressure                                              | 70 C                                                                                                                                                                                   |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                      |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a basic standard of general ventilation (1 to 3 air changes per hour)                                                                                                          |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Wear a respirator providing a minimum efficiency of 90% |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented                                                                                                                   |
| Covers skin contact area up to                                                         | 960 cm2                                                                                                                                                                                |
| Indoor/Outdoor use                                                                     | Outdoor                                                                                                                                                                                |
| Assumes process temperature up to                                                      | 40 C                                                                                                                                                                                   |

### Section 3 - Exposure estimation

**Environmental release category(ies) - ERC8c - Wide dispersive indoor use resulting in inclusion into or onto a matrix**  
**- ERC8f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix**

#### Predicted No Effect Concentration (PNEC)

|                            |             |
|----------------------------|-------------|
| Freshwater                 | 0.006 mg/l  |
| Freshwater sediment        | 0.341 mg/kg |
| Marine water               | 0.001 mg/l  |
| Marine sediment            | 0.034 mg/kg |
| Soil                       | 0.065 mg/kg |
| Impact on Sewage Treatment | 10 mg/l     |

#### Calculation method

Used EUSES model

| Environment         | predicted exposure level | Risk characterisation ratio (RCR) |
|---------------------|--------------------------|-----------------------------------|
| Freshwater          | 0.00322 mg/l             | 0.536                             |
| Freshwater sediment | 0.155 mg/kg              | 0.454                             |
| Marine water        | 0.000314 mg/l            | 0.523                             |
| Marine sediment     | 0.015 mg/kg              | 0.442                             |

|                             |            |       |
|-----------------------------|------------|-------|
| STP: Sewage Treatment Plant | 0.028 mg/l | <0.01 |
| Soil                        | 0.05 mg/kg | 0.779 |

**Derived No Effect Level (DNEL):**

**Worker - dermal, long-term - systemic**

0.75 mg/kg

**Worker - inhalative, long-term - systemic**

4.93 mg/m<sup>3</sup>

| <b>Calculation method</b>                                                                                                           | <b>Used ECETOC TRA model</b>              |                          |                                   |
|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------|-----------------------------------|
| Process category(ies)                                                                                                               | Exposure route                            | predicted exposure level | Risk characterisation ratio (RCR) |
| PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) | Worker - inhalative, long-term - systemic | 0.596 mg/m <sup>3</sup>  | 0.121                             |
| PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) | Worker - dermal, long-term - systemic     | 0.411 mg/kg/day          | 0.548                             |
| PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) | Worker - combined, long-term - systemic   |                          | 0.669                             |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities   | Worker - inhalative, long-term - systemic | 0.596 mg/m <sup>3</sup>  | 0.121                             |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities   | Worker - dermal, long-term - systemic     | 0.411 mg/kg/day          | 0.548                             |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities   | Worker - combined, long-term - systemic   |                          | 0.669                             |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities       | Worker - inhalative, long-term - systemic | 0.596 mg/m <sup>3</sup>  | 0.121                             |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities       | Worker - dermal, long-term - systemic     | 0.411 mg/kg/day          | 0.548                             |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities       | Worker - combined, long-term - systemic   |                          | 0.669                             |
| PROC10 - Roller application or brushing                                                                                             | Worker - inhalative, long-term - systemic | 0.059 mg/m <sup>3</sup>  | 0.012                             |
| PROC10 - Roller application or brushing                                                                                             | Worker - dermal, long-term - systemic     | 0.165 mg/kg/day          | 0.219                             |
| PROC10 - Roller application or brushing                                                                                             | Worker - combined, long-term - systemic   |                          | 0.231                             |
| PROC11 - Non industrial spraying                                                                                                    | Worker - inhalative, long-term - systemic | 0.34 mg/m <sup>3</sup>   | 0.069                             |
| PROC11 - Non industrial spraying                                                                                                    | Worker - dermal, long-term - systemic     | 0.643 mg/kg/day          | 0.857                             |
| PROC11 - Non industrial spraying                                                                                                    | Worker - combined, long-term              |                          | 0.926                             |

|                                                                      |                                              |                         |       |
|----------------------------------------------------------------------|----------------------------------------------|-------------------------|-------|
|                                                                      | - systemic                                   |                         |       |
| PROC11 - Non industrial spraying                                     | Worker - inhalative, long-term<br>- systemic | 0.295 mg/m <sup>3</sup> | 0.06  |
| PROC11 - Non industrial spraying                                     | Worker - dermal, long-term -<br>systemic     | 0.643 mg/kg/day         | 0.857 |
| PROC11 - Non industrial spraying                                     | Worker - combined, long-term<br>- systemic   |                         | 0.917 |
| PROC13 - Treatment of articles by<br>dipping and pouring             | Worker - inhalative, long-term<br>- systemic | 0.596 mg/m <sup>3</sup> | 0.121 |
| PROC13 - Treatment of articles by<br>dipping and pouring             | Worker - dermal, long-term -<br>systemic     | 0.411 mg/kg/day         | 0.548 |
| PROC13 - Treatment of articles by<br>dipping and pouring             | Worker - combined, long-term<br>- systemic   |                         | 0.669 |
| PROC15 - Use as laboratory reagent                                   | Worker - inhalative, long-term<br>- systemic | 0.993 mg/m <sup>3</sup> | 0.201 |
| PROC15 - Use as laboratory reagent                                   | Worker - dermal, long-term -<br>systemic     | 0.034 mg/kg/day         | 0.045 |
| PROC15 - Use as laboratory reagent                                   | Worker - combined, long-term<br>- systemic   |                         | 0.247 |
| PROC19 - Hand-mixing with intimate<br>contact and only PPE available | Worker - inhalative, long-term<br>- systemic | 0.17 mg/m <sup>3</sup>  | 0.034 |
| PROC19 - Hand-mixing with intimate<br>contact and only PPE available | Worker - dermal, long-term -<br>systemic     | 0.411 mg/kg/day         | 0.549 |
| PROC19 - Hand-mixing with intimate<br>contact and only PPE available | Worker - combined, long-term<br>- systemic   |                         | 0.583 |
| PROC19 - Hand-mixing with intimate<br>contact and only PPE available | Worker - inhalative, long-term<br>- systemic | 0.059 mg/m <sup>3</sup> | 0.012 |
| PROC19 - Hand-mixing with intimate<br>contact and only PPE available | Worker - dermal, long-term -<br>systemic     | 0.411 mg/kg/day         | 0.549 |
| PROC19 - Hand-mixing with intimate<br>contact and only PPE available | Worker - combined, long-term<br>- systemic   |                         | 0.561 |

#### Section 4 - Guidance to check compliance with the exposure scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** BIS-[4-(2,3-EPOXI PROPOXI)PHENYL]PROPANE  
**Pure substance/mixture** Substance  
**REACH registration number** 01-2119456619-26-XXXX  
**CAS No** 1675-54-3  
**EC No (EU Index No)** 216-823-5  
**Supplier** Univar Solutions UK Ltd  
 Aquarius House  
 6 Mid Point Business Park  
 Bradford  
 GBR  
  
**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306  
  
**E-mail address** SDS.EMEA@univarsolutions.com

### Section 1 - Title

**Title** Consumer use  
**Type** Consumer  
**Main user group** Consumer uses: Private households (= general public = consumers)  
**Environmental release category(ies)** ERC8c - Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC8f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix  
**Product category(ies)** PC1 - Adhesives, sealants PC9 - Coatings and paints, fillers, putties, thinners PC9b - Fillers, putties, plasters, modelling clay  
**Sector(s) of use** SU21 - Consumer uses

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC8c - Wide dispersive indoor use resulting in inclusion into or onto a matrix  
 - ERC8f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix

#### Amounts used

|       |                                       |
|-------|---------------------------------------|
| Type  | Daily amount for wide dispersive uses |
| Value | 1                                     |
| Units | kg/d                                  |

#### Product characteristics

|                          |        |
|--------------------------|--------|
| Physical form of product | Liquid |
|--------------------------|--------|

#### Other operational conditions of use affecting environmental exposure

|                                                                   |      |
|-------------------------------------------------------------------|------|
| Release fraction to air from wide dispersive use (regional only)  | 0%   |
| Release fraction to wastewater from wide dispersive use           | 1.5% |
| Release fraction to soil from wide dispersive use (regional only) | 0%   |

#### Conditions and measures related to municipal sewage treatment plant

|                                              |                        |
|----------------------------------------------|------------------------|
| Assumed domestic sewage treatment plant flow | 2000 m <sup>3</sup> /d |
| Removal efficiency (total)                   | 5.253%                 |

**Conditions and measures related to external treatment of waste for disposal**

|                         |                                                                                              |
|-------------------------|----------------------------------------------------------------------------------------------|
| Waste treatment methods | Household solid waste (e.g., product packaging) is treated at municipal waste disposal sites |
|-------------------------|----------------------------------------------------------------------------------------------|

**Control of consumer exposure**

|                                                                               |                                                      |
|-------------------------------------------------------------------------------|------------------------------------------------------|
| Product categories [PC]                                                       | PC1 - Adhesives, sealants                            |
| Covers concentrations up to                                                   | 100%                                                 |
| Amounts used                                                                  | 20 g/event                                           |
| Exposure duration                                                             | Avoid carrying out operation for more than 5 minutes |
| Use frequency                                                                 | Covers use up to 1 events per day                    |
| Covers skin contact area up to                                                | 2 cm <sup>2</sup>                                    |
| Use in room with a volume of minimum                                          | 1 m <sup>3</sup>                                     |
| Minimum room ventilation rate for handling/application (air changes per hour) | 0.6                                                  |

|                                                                               |                                                                        |
|-------------------------------------------------------------------------------|------------------------------------------------------------------------|
| Product categories [PC]                                                       | PC1 - Adhesives, sealants                                              |
| Covers concentrations up to                                                   | 100%                                                                   |
| Amounts used                                                                  | 20 g/event                                                             |
| Exposure duration                                                             | Avoid carrying out activities involving exposure for more than 4 hours |
| Use frequency                                                                 | Covers use up to 1 events per day                                      |
| Covers skin contact area up to                                                | 2 cm <sup>2</sup>                                                      |
| Use in room with a volume of minimum                                          | 20 m <sup>3</sup>                                                      |
| Minimum room ventilation rate for handling/application (air changes per hour) | 0.6                                                                    |

|                                                                               |                                                      |
|-------------------------------------------------------------------------------|------------------------------------------------------|
| Product categories [PC]                                                       | PC9a - Coatings and paints, thinners, paint removers |
| Covers concentrations up to                                                   | 100%                                                 |
| Amounts used                                                                  | 3750 g/event                                         |
| Exposure duration                                                             | Avoid carrying out operation for more than 5 minutes |
| Use frequency                                                                 | Covers use up to 1 events per day                    |
| Covers skin contact area up to                                                | 430 cm <sup>2</sup>                                  |
| Use in room with a volume of minimum                                          | 1 m <sup>3</sup>                                     |
| Minimum room ventilation rate for handling/application (air changes per hour) | 0.6                                                  |

|                                                                               |                                                      |
|-------------------------------------------------------------------------------|------------------------------------------------------|
| Product categories [PC]                                                       | PC9a - Coatings and paints, thinners, paint removers |
| Covers concentrations up to                                                   | 100%                                                 |
| Amounts used                                                                  | 3750 g/event                                         |
| Exposure duration                                                             | Avoid carrying out operation for more than 2.2 hours |
| Use frequency                                                                 | Covers use up to 1 events per day                    |
| Covers skin contact area up to                                                | 860 cm <sup>2</sup>                                  |
| Use in room with a volume of minimum                                          | 20 m <sup>3</sup>                                    |
| Minimum room ventilation rate for handling/application (air changes per hour) | 0.6                                                  |

|                                                                               |                                                      |
|-------------------------------------------------------------------------------|------------------------------------------------------|
| Product categories [PC]                                                       | PC9b - Fillers, putties, plasters, modelling clay    |
| Covers concentrations up to                                                   | 100%                                                 |
| Amounts used                                                                  | 200 g/event                                          |
| Exposure duration                                                             | Avoid carrying out operation for more than 5 minutes |
| Use frequency                                                                 | Covers use up to 1 events per day                    |
| Covers skin contact area up to                                                | 2 cm <sup>2</sup>                                    |
| Use in room with a volume of minimum                                          | 1 m <sup>3</sup>                                     |
| Minimum room ventilation rate for handling/application (air changes per hour) | 0.6                                                  |



|                                                                               |                                                                        |
|-------------------------------------------------------------------------------|------------------------------------------------------------------------|
| hour)                                                                         |                                                                        |
| Product categories [PC]                                                       | PC9b - Fillers, putties, plasters, modelling clay                      |
| Covers concentrations up to                                                   | 100%                                                                   |
| Amounts used                                                                  | 200 g/event                                                            |
| Exposure duration                                                             | Avoid carrying out activities involving exposure for more than 4 hours |
| Use frequency                                                                 | Covers use up to 1 events per day                                      |
| Covers skin contact area up to                                                | 22 cm <sup>2</sup>                                                     |
| Use in room with a volume of minimum                                          | 20 m <sup>3</sup>                                                      |
| Minimum room ventilation rate for handling/application (air changes per hour) | 0.6                                                                    |

### Section 3 - Exposure estimation

**Environmental release category(ies) - ERC8c - Wide dispersive indoor use resulting in inclusion into or onto a matrix - ERC8f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix**

#### Predicted No Effect Concentration (PNEC)

|                            |             |
|----------------------------|-------------|
| Freshwater                 | 0.006 mg/l  |
| Freshwater sediment        | 0.341 mg/kg |
| Marine water               | 0.001 mg/l  |
| Marine sediment            | 0.034 mg/kg |
| Soil                       | 0.065 mg/kg |
| Impact on Sewage Treatment | 10 mg/l     |

| Environment                 | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------|--------------------------|-----------------------------------|
| Freshwater                  | 0.00109 mg/l             | 0.181                             |
| Freshwater sediment         | 0.052 mg/kg              | 0.153                             |
| Marine water                | 0.0001 mg/l              | 0.167                             |
| Marine sediment             | 0.00483 mg/kg            | 0.142                             |
| STP: Sewage Treatment Plant | 0.00711 mg/l             | <0.01                             |
| Soil                        | 0.013 mg/kg              | 0.195                             |

#### Derived No Effect Level (DNEL):

|                                             |                        |
|---------------------------------------------|------------------------|
| Consumer - oral, long-term - systemic       | 0.5 mg/kg/day          |
| Consumer - dermal, long-term - systemic     | 0.0893 mg/kg/day       |
| Consumer - inhalative, long-term - systemic | 0.87 mg/m <sup>3</sup> |

#### Calculation method

The Consexpo model has been used to estimate consumer exposures unless otherwise indicated

| Product category(ies)     | Exposure route                              | predicted exposure level      | Risk characterisation ratio (RCR) |
|---------------------------|---------------------------------------------|-------------------------------|-----------------------------------|
| PC1 - Adhesives, sealants | Consumer - inhalative, long-term - systemic | 0.000000052 mg/m <sup>3</sup> | <0.01                             |
| PC1 - Adhesives, sealants | Consumer - dermal, long-term - systemic     | 0.015 mg/kg/day               | 0.168                             |
| PC1 - Adhesives, sealants | Consumer - oral, long-term - systemic       | 0 mg/kg/day                   | <0.01                             |
| PC1 - Adhesives, sealants | Consumer - combined, long-term - systemic   |                               | 0.168                             |
| PC1 - Adhesives, sealants | Consumer - inhalative, long-term - systemic | 0.00000015 mg/m <sup>3</sup>  | <0.01                             |
| PC1 - Adhesives, sealants | Consumer - dermal, long-term - systemic     | 0.015 mg/kg/day               | 0.168                             |

|                                                      |                                             |                               |       |
|------------------------------------------------------|---------------------------------------------|-------------------------------|-------|
| PC1 - Adhesives, sealants                            | Consumer - oral, long-term - systemic       | 0 mg/kg/day                   | <0.01 |
| PC1 - Adhesives, sealants                            | Consumer - combined, long-term - systemic   |                               | 0.168 |
| PC9a - Coatings and paints, thinners, paint removers | Consumer - inhalative, long-term - systemic | 0.000000024 mg/m <sup>3</sup> | <0.01 |
| PC9a - Coatings and paints, thinners, paint removers | Consumer - dermal, long-term - systemic     | 0.015 mg/kg/day               | 0.168 |
| PC9a - Coatings and paints, thinners, paint removers | Consumer - oral, long-term - systemic       | 0 mg/kg/day                   | <0.01 |
| PC9a - Coatings and paints, thinners, paint removers | Consumer - combined, long-term - systemic   |                               | 0.168 |
| PC9a - Coatings and paints, thinners, paint removers | Consumer - inhalative, long-term - systemic | 0.0000044 mg/m <sup>3</sup>   | <0.01 |
| PC9a - Coatings and paints, thinners, paint removers | Consumer - dermal, long-term - systemic     | 0.015 mg/kg/day               | 0.168 |
| PC9a - Coatings and paints, thinners, paint removers | Consumer - oral, long-term - systemic       | 0 mg/kg/day                   | <0.01 |
| PC9a - Coatings and paints, thinners, paint removers | Consumer - combined, long-term - systemic   |                               | 0.168 |
| PC9b - Fillers, putties, plasters, modelling clay    | Consumer - inhalative, long-term - systemic | 0.000000026 mg/m <sup>3</sup> | <0.01 |
| PC9b - Fillers, putties, plasters, modelling clay    | Consumer - dermal, long-term - systemic     | 0.015 mg/kg/day               | 0.168 |
| PC9b - Fillers, putties, plasters, modelling clay    | Consumer - oral, long-term - systemic       | 0 mg/kg/day                   | <0.01 |
| PC9b - Fillers, putties, plasters, modelling clay    | Consumer - combined, long-term - systemic   |                               | 0.168 |
| PC9b - Fillers, putties, plasters, modelling clay    | Consumer - inhalative, long-term - systemic | 0.000000015 mg/m <sup>3</sup> | <0.01 |
| PC9b - Fillers, putties, plasters, modelling clay    | Consumer - dermal, long-term - systemic     | 0.015 mg/kg/day               | 0.168 |
| PC9b - Fillers, putties, plasters, modelling clay    | Consumer - oral, long-term - systemic       | 0 mg/kg/day                   | <0.01 |
| PC9b - Fillers, putties, plasters, modelling clay    | Consumer - combined, long-term - systemic   |                               | 0.168 |

#### **Section 4 - Guidance to check compliance with the exposure scenario**

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.