

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

Revision date 04-Apr-2024

Revision Number 1

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

### 1.1. Product identifier

Product Code(s) 124052  
Safety data sheet number 124052  
Product Name WANNATE HT 500

Pure substance/mixture Mixture

Contains HEXAMETHYLENE DIISOCYANATE HOMOPOLYMER

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

Recommended use Binding agent Intermediate

### 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

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

### 1.4. Emergency telephone number

Emergency Telephone SGS - +32 (0)3 575 55 55 (24h)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

|                                       |                     |
|---------------------------------------|---------------------|
| Acute toxicity - Inhalation (Vapours) | Category 4 - (H332) |
| Respiratory sensitisation             | Category 1 - (H334) |
| Skin sensitisation                    | Category 1 - (H317) |
| Category 3 Respiratory irritation     |                     |

### 2.2. Label elements

Contains HEXAMETHYLENE DIISOCYANATE HOMOPOLYMER



### Signal word

Danger

### Hazard statements

H317 - May cause an allergic skin reaction

H332 - Harmful if inhaled

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

### Precautionary statements

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

P280 - Wear protective gloves

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor

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

### Unknown aquatic toxicity

### 2.3. Other hazards

No information available.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Not applicable

### 3.2 Mixtures

| 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) |
|------------------------------------------------------|-----------|---------------------|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|----------|----------------------|
| HEXAMETHYLENE DIISOCYANATE HOMOPOLYMER<br>28182-81-2 | 90 - 100% | 500-060-2           | -                            | Acute Tox. 4 (H332)<br>Skin Sens. 1 (H317)<br>STOT SE 3 (H335)                                                                        | -                                                         | -        | -                    |
| HEXAMETHYLENE -DI-ISOCYANATE<br>822-06-0             | 0 - 10%   | 212-485-8           | -                            | Acute Tox. 3 (H331)<br>Skin Irrit. 2 (H315)<br>Eye Irrit. 2 (H319)<br>Resp. Sens. 1 (H334)<br>Skin Sens. 1 (H317)<br>STOT SE 3 (H335) | Resp. Sens. 1<br>:: C>=0.5%<br>Skin Sens. 1 ::<br>C>=0.5% | -        | -                    |

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

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

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

|                                           |                                                                                                                                                                                                                                                                       |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General advice</b>                     | Show this safety data sheet to the doctor in attendance.                                                                                                                                                                                                              |
| <b>Inhalation</b>                         | Remove to fresh air. IF exposed or concerned: Get medical advice/attention. If symptoms persist, call a doctor. If breathing has stopped, give artificial respiration. Get medical attention immediately.                                                             |
| <b>Eye contact</b>                        | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.                                                                                                                                                     |
| <b>Skin contact</b>                       | Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a doctor.                                                                                                                                     |
| <b>Ingestion</b>                          | Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get medical attention.                                                                                                                                                    |
| <b>Self-protection of the first aider</b> | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid breathing vapours or mists. Use personal protective equipment as required. See section 8 for more information. |

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

|                   |                                                                                                                                                                                                                                                                 |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Symptoms</b>   | Itching. Rashes. Hives. Coughing and/ or wheezing. Difficulty in breathing.                                                                                                                                                                                     |
| <b>Inhalation</b> | Coughing and/ or wheezing. Harmful if inhaled. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Difficulty in breathing. |
| <b>Dermal</b>     | Hives. Itching. Rashes. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing.                                                 |

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

|                        |                                                                        |
|------------------------|------------------------------------------------------------------------|
| <b>Note to doctors</b> | May cause sensitisation in susceptible persons. Treat symptomatically. |
|------------------------|------------------------------------------------------------------------|

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

|                                       |                                                                        |
|---------------------------------------|------------------------------------------------------------------------|
| <b>Suitable Extinguishing Media</b>   | Dry chemical, CO <sub>2</sub> , alcohol-resistant foam or water spray. |
| <b>Large Fire</b>                     | CAUTION: Use of water spray when fighting fire may be inefficient.     |
| <b>Unsuitable extinguishing media</b> | Do not scatter spilled material with high pressure water streams.      |

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

|                                                   |                                                                               |
|---------------------------------------------------|-------------------------------------------------------------------------------|
| <b>Specific hazards arising from the chemical</b> | Product is or contains a sensitiser. May cause sensitisation by skin contact. |
| <b>Hazardous combustion products</b>              | Carbon oxides.                                                                |

### 5.3. Advice for firefighters

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## **SECTION 6: Accidental release measures**

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

**Personal precautions** Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Avoid breathing vapours or mists.

**Other information** Refer to protective measures listed in Sections 7 and 8.

**For emergency responders** Use personal protection recommended in Section 8.

### 6.2. Environmental precautions

**Environmental precautions** See Section 12 for additional Ecological Information.

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

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

### 6.4. Reference to other sections

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## **SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

**Advice on safe handling** 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. Avoid breathing vapours or mists.

**General hygiene considerations** Do not eat, drink or smoke when using this product.

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

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

### 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.

| Chemical name                           | United Kingdom                                                                                  |
|-----------------------------------------|-------------------------------------------------------------------------------------------------|
| HEXAMETHYLENE-DI-ISOCYANATE<br>822-06-0 | 1 mmol isocyanate-derived diamine/mol creatinine - urine<br>( ) - end of the period of exposure |

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

| Chemical name                                           | Oral | Dermal | Inhalation                      |
|---------------------------------------------------------|------|--------|---------------------------------|
| HEXAMETHYLENE DIISOCYANATE<br>HOMOPOLYMER<br>28182-81-2 |      |        | 1 mg/m <sup>3</sup> [5] [7]     |
| HEXAMETHYLENE-DI-ISOCYANATE<br>822-06-0                 |      |        | 0.035 mg/m <sup>3</sup> [5] [6] |

[5] Local health effects.  
[6] Long term.  
[7] Short term.

**Derived No Effect Level (DNEL) - General Public** No information available.

**Predicted No Effect Concentration (PNEC)**

| Chemical name                                              | Freshwater | Freshwater<br>(intermittent release) | Marine water              | Marine water<br>(intermittent release) | Air |
|------------------------------------------------------------|------------|--------------------------------------|---------------------------|----------------------------------------|-----|
| HEXAMETHYLENE<br>DIISOCYANATE<br>HOMOPOLYMER<br>28182-81-2 | 0.127 mg/l |                                      | 0.0127 mg/l               |                                        |     |
| HEXAMETHYLENE-DI-ISOCYANATE<br>822-06-0                    | 0.774 mg/l |                                      | 0.00774 mg/m <sup>3</sup> |                                        |     |

| Chemical name                                              | Freshwater<br>sediment | Marine sediment | Sewage treatment | Soil         | Food chain |
|------------------------------------------------------------|------------------------|-----------------|------------------|--------------|------------|
| HEXAMETHYLENE<br>DIISOCYANATE<br>HOMOPOLYMER<br>28182-81-2 | 266700 mg/kg           | 26670 mg/kg     |                  | 53182 mg/kg  | 38.3 mg/l  |
| HEXAMETHYLENE-DI-ISOCYANATE<br>822-06-0                    | 0.01334 mg/kg          | 0.001334 mg/kg  | 8.42 mg/L        | 0.0026 mg/kg | 8.42 mg/kg |

**8.2. Exposure controls**

**Engineering controls** No information available.

**Personal protective equipment**

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

**Hand protection** Wear suitable gloves. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. Gloves must conform to standard EN 374.

**Skin and body protection** Wear suitable protective clothing.

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations** Do not eat, drink or smoke when using this product.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

**Physical state** Liquid  
**Appearance** Liquid  
**Colour** light yellow  
**Odour** No information available.  
**Odour threshold** No information available

| <b>Property</b>                                | <b>Values</b>            | <b>Remarks • Method</b>   |
|------------------------------------------------|--------------------------|---------------------------|
| <b>Melting point / freezing point</b>          | ~ 24.00 °C               |                           |
| <b>Initial boiling point and boiling range</b> |                          | No information available. |
| <b>Flammability</b>                            |                          | No information available. |
| <b>Flammability Limit in Air</b>               |                          | No information available. |
| <b>Upper flammability or explosive limits</b>  | 9.50                     |                           |
| <b>Lower flammability or explosive limits</b>  | 0.90                     |                           |
| <b>Flash point</b>                             | 158.00 °C                |                           |
| <b>Autoignition temperature</b>                | 460.00 °C                |                           |
| <b>Decomposition temperature</b>               | 250.00 °C                |                           |
| <b>pH</b>                                      |                          | No information available. |
| <b>pH (as aqueous solution)</b>                |                          | No information available. |
| <b>Kinematic viscosity</b>                     | 1800.00 - 3200.00 cSt    |                           |
| <b>Dynamic viscosity</b>                       |                          | No information available. |
| <b>Water solubility</b>                        | Reacts with water        |                           |
| <b>Solubility(ies)</b>                         |                          | No information available. |
| <b>Partition coefficient</b>                   |                          | No information available. |
| <b>Vapour pressure</b>                         |                          | No information available. |
| <b>Relative density</b>                        | 1.16                     | 25 °C.                    |
| <b>Bulk density</b>                            |                          | No information available  |
| <b>Liquid Density</b>                          | No information available | No information available  |
| <b>Relative vapour density</b>                 |                          | No information available. |
| <b>Particle characteristics</b>                |                          | No information available. |
| <b>Particle Size</b>                           | No information available |                           |

|                            |                          |
|----------------------------|--------------------------|
| Particle Size Distribution | No information available |
| Explosive properties       | No information available |
| Oxidising properties       | No information available |

## 9.2. Other information

## **SECTION 10: Stability and reactivity**

### 10.1. Reactivity

|            |                                              |
|------------|----------------------------------------------|
| Reactivity | Stable under recommended storage conditions. |
|------------|----------------------------------------------|

### 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 | Hazardous polymerisation does not occur. |
|------------------------------------|------------------------------------------|

### 10.4. Conditions to avoid

|                     |                 |
|---------------------|-----------------|
| Conditions to avoid | Excessive heat. |
|---------------------|-----------------|

### 10.5. Incompatible materials

|                        |                                           |
|------------------------|-------------------------------------------|
| Incompatible materials | None known based on information supplied. |
|------------------------|-------------------------------------------|

### 10.6. Hazardous decomposition products

|                                  |                |
|----------------------------------|----------------|
| Hazardous decomposition products | Carbon oxides. |
|----------------------------------|----------------|

## **SECTION 11: Toxicological information**

### 11.1. Information on toxicological effects

#### Information on likely routes of exposure

##### Product Information

|              |                                                                                                |
|--------------|------------------------------------------------------------------------------------------------|
| Inhalation   | Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| Eye contact  | May cause temporary eye irritation.                                                            |
| Skin contact | May cause allergic skin reaction.                                                              |
| Ingestion    | Gastrointestinal discomfort.                                                                   |

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

|          |                                                    |
|----------|----------------------------------------------------|
| Symptoms | Itching. Rashes. Hives. Coughing and/ or wheezing. |
|----------|----------------------------------------------------|

#### Acute toxicity

**Numerical measures of toxicity**

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (inhalation-gas) 4,522.60 ppm

ATEmix (inhalation-vapour) 11.06 mg/l

ATEmix (inhalation-dust/mist) 1.51 mg/l

**Component Information**

| Chemical name                                | Oral LD50           | Dermal LD50          | Inhalation LC50                       |
|----------------------------------------------|---------------------|----------------------|---------------------------------------|
| HEXAMETHYLENE<br>DIISOCYANATE<br>HOMOPOLYMER | -                   | > 2000 mg/kg ( Rat ) | = 18500 mg/m <sup>3</sup> ( Rat ) 1 h |
| HEXAMETHYLENE-DI-ISOCYA<br>NATE              | = 738 mg/kg ( Rat ) | > 7000 mg/kg ( Rat ) | = 0.06 mg/L ( Rat ) 4 h               |

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

**Skin corrosion/irritation** No information available.

**Serious eye damage/eye irritation** No information available.

**Respiratory or skin sensitisation** May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** No information available.

**Reproductive toxicity** No information available.

**STOT - single exposure** May cause respiratory irritation.

**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** Not considered to be harmful to aquatic life.

**Unknown aquatic toxicity**

| Chemical name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|---------------|----------------------|------|----------------------------|-----------|
|---------------|----------------------|------|----------------------------|-----------|

|                                 |   |                                             |   |   |
|---------------------------------|---|---------------------------------------------|---|---|
| HEXAMETHYLENE-DI-I<br>SOCYANATE | - | LC50: =26.1mg/L (96h,<br>Brachydanio rerio) | - | - |
|---------------------------------|---|---------------------------------------------|---|---|

**12.2. Persistence and degradability**

**Persistence and degradability** No information available.

**12.3. Bioaccumulative potential**

**Bioaccumulation** There is no data for this product.

**12.4. Mobility in soil**

**Mobility in soil** Reacts with water.

**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         |
|----------------------------------------|---------------------------------|
| HEXAMETHYLENE DIISOCYANATE HOMOPOLYMER | The substance is not PBT / vPvB |
| HEXAMETHYLENE-DI-ISOCYANATE            | 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** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

**SECTION 14: Transport information****IATA**

**14.1 UN number or ID number** Not regulated

**14.2**

**14.3 Transport hazard class(es)** Not regulated

**14.4 Packing group** Not regulated

**14.5 Environmental hazards** Not applicable

**14.6 Special precautions for user**  
**Special Provisions** None

**IMDG**

**14.1 UN number or ID number** Not regulated

**14.3 Transport hazard class(es)** Not regulated

**14.4 Packing group** Not regulated

**14.5 Environmental hazards** Not applicable

**14.6 Special precautions for user**  
**Special Provisions** None

**14.7 Maritime transport in bulk according to IMO instruments** No information available

**RID**

|                                   |                |
|-----------------------------------|----------------|
| 14.1 UN number or ID number       | Not regulated  |
| 14.2 UN proper shipping name      | Not regulated  |
| 14.3 Transport hazard class(es)   | Not regulated  |
| 14.4 Packing group                | Not regulated  |
| 14.5 Environmental hazards        | Not applicable |
| 14.6 Special precautions for user |                |
| Special Provisions                | None           |

**ADR**

|                                   |                |
|-----------------------------------|----------------|
| 14.1 UN number or ID number       | Not regulated  |
| 14.2 UN proper shipping name      | Not regulated  |
| 14.3 Transport hazard class(es)   | Not regulated  |
| 14.4 Packing group                | Not regulated  |
| 14.5 Environmental hazards        | Not applicable |
| 14.6 Special precautions for user |                |
| Special Provisions                | None           |

**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).

**Persistent Organic Pollutants**

Not applicable

**Export Notification requirements**

Not applicable

**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  
NZIoC

Contact supplier for inventory compliance status  
Contact supplier for inventory compliance status

**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - 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** No information available

**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**

H317 - May cause an allergic skin reaction  
H332 - Harmful if inhaled  
H335 - May cause respiratory irritation

**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 \*\*\*Indicates updated data since last publication

**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

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**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**