

# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision date Not Applicable

Revision Number N/A

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

### 1.1. Product identifier

Product Code(s) MM1372.00-0250

Product Name Levetiracetam

Form Not applicable

REACH registration number -

*NOTE [8] - No registration number is given for this substance because it is under the threshold in REACH Article 6(1) and not subject to the registration requirements according to REACH Title II*

EC No (EU Index No) 600-348-9

CAS No. 102767-28-2

Pure substance/mixture Substance

Formula C8 H14 N2 O2

Molecular weight 170.21

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

Recommended use Laboratory use

Uses advised against No information available

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

#### Supplier

Will be updated as per company.

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## 1.4. Emergency telephone number

Emergency Telephone Will be updated as per company.

| Emergency Telephone - §45 - (EC)1272/2008 |                          |
|---|--------------------------|
| Europe                                    | 112                      |
| Austria                                   | No information available |
| Bulgaria                                  |                          |
| Croatia                                   |                          |
| Cyprus                                    |                          |
| Czech Republic                            |                          |
| Denmark                                   |                          |
| France                                    |                          |
| Hungary                                   |                          |
| Ireland                                   |                          |
| Italy                                     |                          |
| Lithuania                                 |                          |
| Luxembourg                                |                          |
| Netherlands                               |                          |
| Norway                                    |                          |
| Portugal                                  |                          |
| Romania                                   |                          |
| Slovakia                                  |                          |
| Slovenia                                  |                          |
| Spain                                     |                          |
| Sweden                                    |                          |
| Switzerland                               |                          |

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Classification according to  
Regulation (EC) No. 1272/2008 [CLP]

|                       |                     |
|-----------------------|---------------------|
| Acute toxicity - Oral | Category 4 - (H302) |
|-----------------------|---------------------|

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|                       |                     |
|-----------------------|---------------------|
| Eye irritation        | Category 2 - (H319) |
| Reproductive toxicity | Category 2 - (H361) |

## 2.2. Label elements

Contains Levetiracetam



### Signal word

Warning

### Hazard statements

H302 - Harmful if swallowed.

H319 - Causes serious eye irritation.

H361 - Suspected of damaging fertility or the unborn child.

### Precautionary Statements - EU (§28, 1272/2008)

P201 - Obtain special instructions before use

P264 - Wash face, hands and any exposed skin thoroughly after handling

P280 - Wear protective gloves, protective clothing, eye protection and face protection

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

P308 + P313 - IF exposed or concerned: Get medical advice/attention

P501 - Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable

P337 + P313 - If eye irritation persists: Get medical advice/attention

## 2.3. Other hazards

No information available.

### PBT & vPvB

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

### Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors.

| Chemical name | EU - REACH (1907/2006) - Article 59(1)<br>- Candidate List of Substances of Very<br>High Concern (SVHC) for Authorisation | EU - REACH (1907/2006) - Endocrine<br>Disruptor Assessment List of<br>Substances |
|---------------|---|--|
| Levetiracetam | -   | -  |

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances

| Chemical name                | Weight-% | REACH registration number | EC No (EU Index No) | Classification according to Regulation (EC) No. 1272/2008 [CLP] | Specific concentration limit (SCL) | M-Factor | M-Factor (long-term) | Notes |
|------------------------------|----------|---------------------------|---------------------|---|------------------------------------|----------|----------------------|-------|
| Levetiracetam<br>102767-28-2 | 100      | -                         | 600-348-9           | Acute Tox. 4 (H302)<br>Eye Irrit. 2 (H319)<br>Repr. 2 (H361)    | -                                  | -        | -                    | -     |

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

**Acute Toxicity Estimate**  
No information available

This product does not contain candidate substances of very high concern at a concentration  $\geq 0.1\%$  (Regulation (EC) No. 1907/2006 (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.  |
| 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                       | Wash skin with soap and water. In the case of skin irritation or allergic reactions see a doctor.   |
| Ingestion                          | Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a doctor.  |
| Self-protection of the first aider | Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).   |

# Will be updated as per company.

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

**Symptoms** May cause redness and tearing of the eyes. Burning sensation.

**Effects of Exposure** May cause adverse reproductive effects - such as birth defect, miscarriages, or infertility.

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

**Note to doctors** Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**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** No information available.

### 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. Use personal protective equipment as required.

**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.

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## 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. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes.  |
| General hygiene considerations | Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. |

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

|                                 |   |
|---------------------------------|---|
| Storage Conditions <sup>#</sup> | Please refer to the manufacturer's certificate for specific storage and transport temperature conditions. Store only in the original receptacle unless other advice is given on the CoA. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Store locked up. |
|---------------------------------|---|

|                          |         |
|--------------------------|---------|
| Storage class (TRGS 510) | LGK 11. |
|--------------------------|---------|

### 7.3. Specific end use(s)

|                               |  |
|-------------------------------|--|
| 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 |
|-----------------|---|

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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** No information available

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

**Predicted No Effect Concentration (PNEC)** No information available.

## 8.2. Exposure controls

### Personal protective equipment

**Eye/face protection** Avoid contact with eyes. Wear safety glasses with side shields (or goggles). If splashes are likely to occur, wear safety glasses with side-shields.

**Hand protection** Wear suitable gloves. The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374.

#### Gloves

|                     |                 |                    |  |
|---------------------|-----------------|--------------------|--|
| Duration of contact | Glove thickness | Break through time | PPE - Glove material   |
|                     | 0.11 mm         | 480 minutes        | Wear protective butyl rubber gloves<br>Wear protective nitrile rubber gloves |

**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** Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product.

**Environmental exposure controls** Do not allow into any sewer, on the ground or into any body of water.

## SECTION 9: Physical and chemical properties

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## 9.1. Information on basic physical and chemical properties

|                 |                          |
|-----------------|--------------------------|
| Appearance      | Solid                    |
| Physical state  | Solid                    |
| Colour          | white                    |
| Odour           | No information available |
| Odour threshold | No information available |

| Property                                | Values                   | Remarks • Method |
|---|--------------------------|------------------|
| Melting point / freezing point          | 118 °C                   | None known       |
| Initial boiling point and boiling range | No data available        | None known       |
| Flammability                            | No data available        | None known       |
| Flammability Limit in Air               |                          | None known       |
| Upper flammability or explosive limits  | No data available        |                  |
| Lower flammability or explosive limits  | No data available        |                  |
| Flash point                             | No data available        | None known       |
| Autoignition temperature                | No data available        | None known       |
| Decomposition temperature               |                          | None known       |
| SADT (°C)                               | No data available        | None known       |
| pH                                      | No data available        | None known       |
| pH (as aqueous solution)                | No data available        | None known       |
| Kinematic viscosity                     | No data available        | None known       |
| Dynamic viscosity                       | No data available        | None known       |
| Water solubility                        | No data available        | None known       |
| Solubility(ies)                         | Acetone                  |                  |
| Partition coefficient                   | No data available        | None known       |
| Vapour pressure                         | No data available        | None known       |
| Relative density                        | No data available        | None known       |
| Bulk density                            | No data available        |                  |
| Liquid Density                          | No data available        |                  |
| Relative vapour density                 | No data available        | None known       |
| Particle characteristics                |                          |                  |
| Particle Size                           | No information available |                  |
| Particle Size Distribution              | No information available |                  |

## 9.2. Other information

|                   |              |
|-------------------|--------------|
| Molecular formula | C8 H14 N2 O2 |
| Molecular weight  | 170.21       |

### 9.2.1. Information with regards to physical hazard classes

No information available

### 9.2.2. Other safety characteristics

No information available



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## 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 None under normal processing.

### 10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

### 10.5. Incompatible materials

Incompatible materials None known based on information supplied.

### 10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

## SECTION 11: Toxicological information

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

#### Information on likely routes of exposure

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.

Skin contact Specific test data for the substance or mixture is not available.

Ingestion Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Harmful if swallowed. (based on components).

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

**Symptoms** May cause redness and tearing of the eyes.

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

**Acute toxicity** Harmful if swallowed.

**Numerical measures of toxicity** No information available

**Skin corrosion/irritation** Based on available data, the classification criteria are not met.

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

**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

**Carcinogenicity** Based on available data, the classification criteria are not met.

**Reproductive toxicity** Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. Suspected of damaging fertility or the unborn child.

**STOT - single exposure** Based on available data, the classification criteria are not met.

**STOT - repeated exposure** Based on available data, the classification criteria are not met.

**Aspiration hazard** Based on available data, the classification criteria are not met.

### **11.2. Information on other hazards**

#### **11.2.1. Endocrine disrupting properties**

**Endocrine disrupting properties** Based on available data, the classification criteria are not met.

#### 11.2.2. Other information

##### **Other adverse effects**

No information available.

## **SECTION 12: Ecological information**

#### 12.1. Toxicity

##### **Ecotoxicity**

The environmental impact of this product has not been fully investigated.

#### 12.2. Persistence and degradability

##### **Persistence and degradability**

No information available.

#### 12.3. Bioaccumulative potential

##### **Bioaccumulation**

No information available.

#### 12.4. Mobility in soil

##### **Mobility in soil**

No information available.

#### 12.5. Results of PBT and vPvB assessment

##### **PBT and vPvB assessment**

Based on available data, the classification criteria are not met.

#### 12.6. Endocrine disrupting properties

##### **Endocrine disrupting properties**

Based on available data, the classification criteria are not met.

#### 12.7. Other adverse effects

##### **Other adverse effects**

No information available.

##### **PMT or vPvM properties**

Based on available data, the classification criteria are not met.

## **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

|  |                |
|--|----------------|
| <b>14.2 UN proper shipping name</b>      | Not regulated  |
| <b>14.3 Transport hazard class(es)</b>   | Not regulated  |
| <b>14.4 Packing group</b>                | Not regulated  |
| <b>14.5 Environmental hazards</b>        | Not applicable |
| <b>14.6 Special precautions for user</b> |                |
| <b>Special Provisions</b>                | None           |

#### **IMDG**

|   |                          |
|---|--------------------------|
| <b>14.1 UN number or ID number</b>                                  | Not regulated            |
| <b>14.2 UN proper shipping name</b>                                 | Not regulated            |
| <b>14.3 Transport hazard class(es)</b>                              | Not regulated            |
| <b>14.4 Packing group</b>   | Not regulated            |
| <b>14.5 Environmental hazards</b>                                   | Not applicable           |
| <b>14.6 Special precautions for user</b>                            |                          |
| <b>Special Provisions</b>   | None                     |
| <b>14.7 Maritime transport in bulk according to IMO instruments</b> | No information available |

#### **RID**

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

#### **ADR**

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

#### **ADN**

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

## **SECTION 15: Regulatory information**

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

#### National regulations

##### **Germany**

**Water hazard class (WGK)** slightly hazardous to water (WGK 1)  
**Chemical Prohibition Ordinance (ChemVerbotsV)** Not applicable

##### **TRGS 905**

Not applicable

##### Switzerland

**Ordinance on the Incentive Tax on Volatile Organic Compounds (OVOC) SR 814.018** Not applicable  
**Storage of Hazardous Material** SC 11/13  
**WPO (GSchV) SR 814.201; WPA (GSchG) SR 814.20** Class B  
**Major Accidents Ordinance SR 814.012** Not applicable

##### **European Union**

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.

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

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

##### **DIRECTIVE (EU) 2021/1187 on the marketing and use of explosives precursors**

Not applicable

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

Not applicable

##### **Ozone-depleting substances (ODS) regulation (EC) 2024/590**

Not applicable

### International Inventories

#### **TSCA**

Company has not confirmed that the chemical substances in this product are on the TSCA Inventory, and Company is distributing this product solely for use either in applications statutorily exempt from TSCA and regulated under other laws (e.g., FFDCA, FIFRA) or in research and development activities in accordance with the TSCA Inventory R&D exemption provided at 40 CFR 720.36. It is the end-user's responsibility to understand and follow the requirements that apply to its use of this product.

#### **DSL/NDSL**

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

#### **KECL**

Contact supplier for inventory compliance status

#### **PICCS**

Contact supplier for inventory compliance status

#### **AIC**

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 Chemicals Inventory

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

### 15.2. Chemical safety assessment

#### **Chemical Safety Report**

A Chemical Safety Assessment is not required for this substance

## **SECTION 16: Other information**

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

#### **Full text of any hazard and/or precautionary statements referred to under Sections 2-15**

H302 - Harmful if swallowed

H319 - Causes serious eye irritation

H361 - Suspected of damaging fertility or the unborn child

P264 - Wash face, hands and any exposed skin thoroughly after handling

P270 - Do not eat, drink or smoke when using this product

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

P330 - Rinse mouth

P501 - Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable

P280 - Wear protective gloves, protective clothing, eye protection and face protection

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

P337 + P313 - If eye irritation persists: Get medical advice/attention

P201 - Obtain special instructions before use

P202 - Do not handle until all safety precautions have been read and understood

P308 + P313 - IF exposed or concerned: Get medical advice/attention

P405 - Store locked up

#### Legend

|           |   |
|-----------|---|
| ACGIH     | American Conference of Governmental Industrial Hygienists   |
| AIDII     | Italian Association of Industrial Hygienists  |
| ADN       | Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe)     |
| ADR       | Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)                 |
| AIIC      | Australian Inventory of Industrial Chemicals  |
| ATE       | Acute Toxicity Estimate   |
| ASTM      | American Society for the Testing of Materials   |
| bar       | Biological Reference Values for Chemical Compounds in the Work Area                                 |
| BAT       | Biological tolerance values for occupational exposure   |
| BEL       | Biological exposure limits  |
| bw        | Body weight   |
| Ceiling   | Maximum limit value   |
| CLP       | Classification, Labelling and Packaging Regulation; Regulation (EC) No 1272/2008                    |
| CMR       | Carcinogen, Mutagen or Reproductive Toxicant  |
| DFG       | German Research Foundation  |
| DOT       | Department of Transportation (United States)  |
| DSL       | Domestic Substances List (Canada)   |
| ECHA      | European Chemicals Agency   |
| EC Number | European Community number   |
| EmS       | Emergency Schedule  |
| ENCS      | Existing and New Chemical Substances (Japan)  |
| EPA       | Environmental Protection Agency   |
| EWC       | European Waste Codes  |
| GHS       | Globally Harmonized System  |
| IARC      | International Agency for Research on Cancer   |
| IATA      | International Air Transport Association   |
| IBC       | International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk |
| ICAO      | International Civil Aviation Organisation   |
| IECSC     | Inventory of Existing Chemical Substances in China  |
| IMDG      | International Maritime Dangerous Goods  |
| IMO       | International Maritime Organization   |
| ISO       | International Organisation for Standardisation  |
| KECI      | Korean Existing Chemicals Inventory   |
| LC50      | Lethal Concentration to 50% of a test population  |

|         |   |
|---------|---|
| LD50    | Lethal Dose to 50% of a test population (Median Lethal Dose)  |
| MAL     | Measuring Technical Hygienic Air Needs  |
| MARPOL  | International Convention for the Prevention of Pollution from Ships                                     |
| MDLPS   | Ministry of Labour and Social Policy  |
| n.o.s.  | Not Otherwise Specified   |
| NOAEC   | No Observed Adverse Effect Concentration  |
| NOAEL   | No Observed Adverse Effect Level  |
| NOELR   | No Observable Effect Loading Rate   |
| NZIoC   | New Zealand Inventory of Chemicals  |
| OECD    | Organization for Economic Cooperation and Development   |
| OEL     | Occupational exposure limits  |
| PBT     | Persistent, Bioaccumulative and Toxic substance   |
| PICCS   | Philippines Inventory of Chemicals and Chemical Substances  |
| PMT     | Persistent, Mobile and Toxic  |
| PPE     | Personal protective equipment   |
| QSAR    | Quantitative Structure Activity Relationship  |
| REACH   | Registration, Evaluation, Authorisation, and Restriction of Chemicals (REACH) Regulation (EC 1907/2006) |
| RID     | Agreement concerning the International Carriage of Dangerous Goods by Rail (Europe)                     |
| SADT    | Self-Accelerating Decomposition Temperature   |
| SAR     | Structure-activity relationship   |
| SDS     | Safety Data Sheet   |
| SL      | Surface Limit   |
| STEL    | Short Term Exposure Limit   |
| STOT RE | Specific target organ toxicity - Repeated exposure  |
| STOT SE | Specific target organ toxicity - Single exposure  |
| SVHC    | Substance of very high concern  |
| TCSI    | Taiwan Chemical Substance Inventory   |
| TDG     | Transport of Dangerous Goods (Canada)   |
| TRGS    | Technical Rule for Hazardous Substances   |
| TSCA    | Toxic Substances Control Act (United States)  |
| TWA     | Time-Weighted Average   |
| UN      | United Nations  |
| VOC     | Volatile organic compounds  |
| vPvB    | Very Persistent and Very Bioaccumulative  |
| vPvM    | Very Persistent and Very Mobile   |
| Sen+    | Sensitiser  |
| Sk*     | Skin designation  |
| **      | Hazard Designation  |

| 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 |
| Chronic aquatic toxicity              | Calculation method |
| Acute 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

Revision date N/A

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

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The Final Document will be available at the time of consignment.

# Can vary as per company.

**End of Safety Data Sheet**