



# 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 01-Jun-2023

Revision Number 1

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

### 1.1. Product identifier

**Product Code(s)** MM0017.03-0025  
**Product Name** 4-Chlorobenzaldehyde  
**Form** Not applicable

*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)** 203-247-4  
**CAS No** 104-88-1  
**Chemical name** 4-Chlorobenzaldehyde  
**Pure substance/mixture** Substance  
**Formula**  $C_7H_5ClO$   
**Molecular weight** 140.57

### 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

LGC Limited  
Queens Road  
Teddington  
Middlesex TW11 0LY  
UNITED KINGDOM  
:+44 (0) 20 8943 7000  
Fax :+44 (0) 20 8943 2767  
eMail : gb@lgcstandards.com

Web : [www.lgcstandards.com](http://www.lgcstandards.com)

For further information, please contact

**E-mail address** [sds-request@lgcgroup.com](mailto:sds-request@lgcgroup.com)



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## 1.4. Emergency telephone number

Emergency Telephone

For Hazardous Materials or Dangerous Goods Incident  
Spill, Leak, Fire Exposure, or Accident  
Call CHEMTREC:  
USA & Canada 1-800-424-9300  
Rest of the world +1 703-741-5970

| 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

Regulation (EC) No 1272/2008

|                                           |                     |
|-------------------------------------------|---------------------|
| Acute toxicity - Oral                     | Category 4 - (H302) |
| Acute toxicity - Inhalation (Dusts/Mists) | Category 2 - (H330) |
| Skin corrosion/irritation                 | Category 2 - (H315) |
| Serious eye damage/eye irritation         | Category 2 - (H319) |
| Skin sensitisation                        | Category 1 - (H317) |
| Chronic aquatic toxicity                  | Category 2 - (H411) |



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### 2.2. Label elements

Contains 4-Chlorobenzaldehyde



**Signal word**  
Danger

#### Hazard statements

H302 - Harmful if swallowed  
H315 - Causes skin irritation  
H317 - May cause an allergic skin reaction  
H319 - Causes serious eye irritation  
H330 - Fatal if inhaled  
H411 - Toxic to aquatic life with long lasting effects

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

P260 - Do not breathe dust/fume/gas/mist/vapours/spray  
P273 - Avoid release to the environment  
P280 - Wear protective gloves and eye/face protection  
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
P310 - Immediately call a POISON CENTER or doctor  
P391 - Collect spillage  
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

### 2.3. Other hazards

Toxic to aquatic life.

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

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 |
|----------------------|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| 4-Chlorobenzaldehyde | -                                                                                                                         | -                                                                                |

## SECTION 3: Composition/information on ingredients

### 3.1 Substances



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| 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) |
|----------------------------------|----------|---------------------------|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|----------|----------------------|
| 4-Chlorobenzaldehyde<br>104-88-1 | 100      | -                         | 203-247-4           | Acute Tox. 2 (H330)<br>Acute Tox. 4 (H302)<br>Skin Irrit. 2 (H315)<br>Eye Irrit. 2 (H319)<br>Skin Sens. 1 (H317)<br>Aquatic Chronic 2 (H411) |                                    |          |                      |

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

### Acute Toxicity Estimate

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

| Chemical name                    | Oral LD50 mg/kg | Dermal LD50 mg/kg | Inhalation LC50 - 4 hour - dust/mist - mg/L | Inhalation LC50 - 4 hour - vapour - mg/L | Inhalation LC50 - 4 hour - gas - ppm |
|----------------------------------|-----------------|-------------------|---------------------------------------------|------------------------------------------|--------------------------------------|
| 4-Chlorobenzaldehyde<br>104-88-1 | 1575            | 5000              | No data available                           | No data available                        | No data 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. Immediate medical attention is required.

#### Inhalation

If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. Do not breathe dust. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. 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



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|                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                           | persists.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Skin contact</b>                       | 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.                                                                                                                                                                                                                                                                                                                                   |
| <b>Ingestion</b>                          | Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a doctor or poison control centre immediately.                                                                                                                                                                                                                                                                                                                                                                       |
| <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. Do not breathe dust. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. |

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

|                 |                                                                                                                                           |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Symptoms</b> | Coughing and/ or wheezing. Difficulty in breathing. Itching. Rashes. Hives. May cause redness and tearing of the eyes. Burning sensation. |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------|

### 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>   | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| <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. |
|---------------------------------------------------|-------------------------------------------------------------------------------|

### 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. |
|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|

## SECTION 6: Accidental release measures



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

**Personal precautions** Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid generation of dust. Do not breathe dust. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**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** Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

## 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 breathe dust. Avoid generation of dust. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse.

**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. Do not breathe dust. Take off contaminated clothing and wash it before reuse. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

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

**Storage Conditions** Please refer to the manufacturer's certificate for specific storage and transport temperature



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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.

### 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 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)** 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).

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

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

**Respiratory protection** When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

**General hygiene considerations** Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this



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product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection. Do not breathe dust. Take off contaminated clothing and wash it before reuse. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. 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

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

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

| Property                                | Values                   | Remarks • Method         |
|-----------------------------------------|--------------------------|--------------------------|
| Melting point / freezing point          | 46 °C                    | None known               |
| Initial boiling point and boiling range | 214 °C                   | 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                             | 88 °C                    | None known               |
| Autoignition temperature                | 302 °C                   | None known               |
| Decomposition temperature               |                          | None known               |
| pH                                      | No data available        | None known               |
| pH (as aqueous solution)                | No data available        | No information available |
| Kinematic viscosity                     | No data available        | None known               |
| Dynamic viscosity                       | No data available        | None known               |
| Water solubility                        | 935 mg/l                 | @ 20 °C                  |
| Solubility(ies)                         | No data available        | None known               |
| Partition coefficient                   | 2.13                     | None known               |
| Vapour pressure                         | 0.9 hPa                  | @ 20°C                   |
| Relative density                        | 1.19                     | @ 60 °C                  |
| 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 weight | 140.57 |
|------------------|--------|





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Molecular formula  $C_7H_5ClO$

9.2.1. Information with regards to physical hazard classes  
Not applicable

9.2.2. Other safety characteristics  
No information available

### 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 Excessive heat.

#### 10.5. Incompatible materials

Incompatible materials Strong acids. Strong bases. Strong oxidising agents.

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

#### Product Information

Inhalation Specific test data for the substance or mixture is not available. Fatal if inhaled. (based on components).



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|              |                                                                                                                                                                                                                                                     |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 | 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. |
| 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 | Coughing and/ or wheezing. Difficulty in breathing. Itching. Rashes. Hives. Redness. May cause redness and tearing of the eyes. |
|----------|---------------------------------------------------------------------------------------------------------------------------------|

### Numerical measures of toxicity

#### Acute toxicity

#### Component Information

| Chemical name        | Oral LD50           | Dermal LD50          | Inhalation LC50          |
|----------------------|---------------------|----------------------|--------------------------|
| 4-Chlorobenzaldehyde | = 840 mg/kg ( Rat ) | > 5000 mg/kg ( Rat ) | > 0.321 mg/L ( Rat ) 4 h |

### 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.        |
| Serious eye damage/eye irritation | Classification based on data available for ingredients. Causes serious eye irritation. |
| Respiratory or skin sensitisation | May cause an allergic skin reaction.                                                   |
| Germ cell mutagenicity            | No information available.                                                              |
| Carcinogenicity                   | No information available.                                                              |
| Reproductive toxicity             | No information available.                                                              |



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STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

## 11.2. Information on other hazards

### 11.2.1. Endocrine disrupting properties

Endocrine disrupting properties No information available.

### 11.2.2. Other information

Other adverse effects No information available.

## SECTION 12: Ecological information

### 12.1. Toxicity

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

| Chemical name        | Algae/aquatic plants                              | Fish                                            | Toxicity to microorganisms | Crustacea |
|----------------------|---------------------------------------------------|-------------------------------------------------|----------------------------|-----------|
| 4-Chlorobenzaldehyde | EC50: 15.8 mg/l<br>(Desmodesmus subspicatus, 72h) | LC50: 2 - 2.4mg/L (96h,<br>Pimephales promelas) | -                          | -         |

### 12.2. Persistence and degradability

Persistence and degradability No information available.

### 12.3. Bioaccumulative potential

Bioaccumulation There is no data for this product.

### Component Information

| Chemical name        | Partition coefficient |
|----------------------|-----------------------|
| 4-Chlorobenzaldehyde | 2.13                  |

### 12.4. Mobility in soil



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Mobility in soil No information available.

### 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       |
|----------------------|-------------------------------|
| 4-Chlorobenzaldehyde | PBT assessment does not apply |

### 12.6. Endocrine disrupting properties

Endocrine disrupting properties No information available.

### 12.7. 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 UN2811  
14.2 UN proper shipping name Toxic solid, organic, n.o.s. (4-Chlorobenzaldehyde)  
14.3 Transport hazard class(es) 6.1  
14.4 Packing group II  
Description UN2811, Toxic solid, organic, n.o.s. (4-Chlorobenzaldehyde), 6.1, II  
14.5 Environmental hazards Yes  
14.6 Special precautions for user  
Special Provisions A3, A5  
ERG Code 6L

### IMDG

14.1 UN number or ID number UN2811  
14.2 UN proper shipping name Toxic solid, organic, n.o.s. (4-Chlorobenzaldehyde)  
14.3 Transport hazard class(es) 6.1  
14.4 Packing group II



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|                                                                     |                                                                                                        |
|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| <b>Description</b>                                                  | UN2811, Toxic solid, organic, n.o.s., 6.1, II, Marine pollutant                                        |
| <b>14.5 Marine pollutant</b>                                        | P                                                                                                      |
| <b>Environmental hazards</b>                                        | Yes                                                                                                    |
| <b>14.6 Special precautions for user</b>                            |                                                                                                        |
| <b>Special Provisions</b>                                           | 274                                                                                                    |
| <b>EmS-No</b>                                                       | F-A, S-A No information available                                                                      |
| <b>14.7 Maritime transport in bulk according to IMO instruments</b> | No information available                                                                               |
| <b><u>RID</u></b>                                                   |                                                                                                        |
| <b>14.1 UN number or ID number</b>                                  | UN2811                                                                                                 |
| <b>14.2 UN proper shipping name</b>                                 | Toxic solid, organic, n.o.s. (4-Chlorobenzaldehyde)                                                    |
| <b>14.3 Transport hazard class(es)</b>                              | 6.1                                                                                                    |
| <b>14.4 Packing group</b>                                           | II                                                                                                     |
| <b>Description</b>                                                  | UN2811, Toxic solid, organic, n.o.s. (4-Chlorobenzaldehyde), 6.1, II, Environmentally Hazardous        |
| <b>14.5 Environmental hazards</b>                                   | Yes                                                                                                    |
| <b>14.6 Special precautions for user</b>                            |                                                                                                        |
| <b>Special Provisions</b>                                           | 274, 614                                                                                               |
| <b>Classification code</b>                                          | T2                                                                                                     |
| <b><u>ADR</u></b>                                                   |                                                                                                        |
| <b>14.1 UN number or ID number</b>                                  | UN2811                                                                                                 |
| <b>14.2 UN proper shipping name</b>                                 | Toxic solid, organic, n.o.s. (4-Chlorobenzaldehyde)                                                    |
| <b>14.3 Transport hazard class(es)</b>                              | 6.1                                                                                                    |
| <b>14.4 Packing group</b>                                           | II                                                                                                     |
| <b>Description</b>                                                  | UN2811, Toxic solid, organic, n.o.s. (4-Chlorobenzaldehyde), 6.1, II, (D/E), Environmentally Hazardous |
| <b>14.5 Environmental hazards</b>                                   | Yes                                                                                                    |
| <b>14.6 Special precautions for user</b>                            |                                                                                                        |
| <b>Special Provisions</b>                                           | 274, 614                                                                                               |
| <b>Classification code</b>                                          | T2                                                                                                     |
| <b>Tunnel restriction code</b>                                      | (D/E)                                                                                                  |

## 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) obviously hazardous to water (WGK 2)

Poland

SDS created according to the following Polish regulation: Act of February 25, 2011 on



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chemical substances and their mixtures (Journal of Laws of 2018, item 143, as amended). Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing the European Chemicals Agency (EC) as amended. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labeling and packaging of substances and mixtures, as amended. Regulation of the Minister of Health of 10 August 2012 on the criteria and method of classifying chemical substances and their mixtures (Journal of Laws of 2012, item 1018). Regulation of the Minister of Health of 20 April 2012 on labeling packaging of hazardous substances and mixtures and some mixtures (Journal of Laws of 2012, item 445). Regulation of the Minister of Family, Labor and Social Policy of 12 June 2018 on the maximum allowable concentrations and intensities of factors harmful to health in the work environment (Journal of Laws of 2018, item 1286). Announcement of the Minister of Economy, Labor and Social Policy of August 28, 2003 on the publication of the unified text of the Ordinance of the Minister of Labor and Social Policy on general health and safety at work regulations (Journal of Laws of 2003, No. 169, item 1650). Regulation of the Minister of Health of 30 December 2004 on occupational safety and health related to the presence of chemical agents in the workplace (Journal of Laws of 2005, No. 11, item 86). Act of December 14, 2012 on waste (Journal of Laws of 2013, item 21) Regulation of the Minister of Health of December 30, 2004 on occupational health and safety related to the presence of chemical agents in the workplace (Journal U. of 2005, No. 11, item 86). Waste Act of December 14, 2012 (Journal of Laws of 2013, item 21). Act of 13 June 2013 on the management of packaging and packaging waste, Journal of Laws 2013, item 888). Government statement of September 24, 2002 - European Agreement on the International Carriage of Dangerous Goods by Road (ADR) (Journal of Laws No. 194, item 1629 and Journal of Laws of 2003, No. 207, item 2013 and 2014).

## 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

## Dangerous substance category per Seveso Directive (2012/18/EU)

H2 - ACUTE TOXIC

E2 - Hazardous to the Aquatic Environment in Category Chronic 2



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## Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

### International Inventories

|               |                                                  |
|---------------|--------------------------------------------------|
| TSCA          | Complies                                         |
| 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 |
| AIIC          | 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  
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 H-Statements referred to under section 3

H302 - Harmful if swallowed  
H315 - Causes skin irritation  
H317 - May cause an allergic skin reaction  
H319 - Causes serious eye irritation  
H330 - Fatal if inhaled  
H411 - Toxic to aquatic life with long lasting effects

#### Legend

SVHC: Substances of Very High Concern for Authorisation:



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

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)  
Ceiling Maximum limit value \* Skin 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 |
| 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)  
EPA (Environmental Protection Agency)  
Acute Exposure Guideline Level(s) (AELG(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)  
Japan GHS Classification  
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)  
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 Regulation (EC) No. 1907/2006

## Disclaimer

The information in this safety data sheet (SDS) has been prepared with due care and is true and accurate to the best of our knowledge. The user must determine the suitability of the information for its particular purpose, ensure compliance with existing laws and regulations, and be aware that other or additional safety or performance considerations may arise when using, handling and/ or storing the material. The information in this SDS does not purport to be all inclusive or a guarantee as to the properties of the material supplied, and should be used only as a guide. LGC makes no warranties or representations as to the accuracy and completeness of the information contained herein, shall not be held responsible for the suitability of this information for the user's intended purposes or the consequences of such use, and shall not be liable for any damage or loss, howsoever arising, direct or otherwise.

**End of Safety Data Sheet**