

## Section 1 Identification of the substance/mixture and the company


- 1.1 Product identifier
- Trade name **LEGIOCID®B**
- Use of substance Lithium hypochlorite
- CAS-N° 13840-33-0
- EINECS-N° 237-558-1
- Registration number acc. REACH Not available.
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
- Identified use of substance Activator for TCDO
- 1.3 Supplier TCDO Produktionsgesellschaft mbH  
Carola-Blome-Str. 7  
A-5020 Salzburg  
Tel: +43 662 434342-0  
Fax: +43 662 434342-3
- Contact Mr. G. Weiss  
Email: [office@wapotec.at](mailto:office@wapotec.at)
- 1.4 Emergency phone +43 662 43 43 42-0  
Office hours:  
MO - TH: 8.00 - 16.00  
FR: 8.00 - 12.00
- Toxicity information centre Vienna:**  
Phone: +43 1 406 43 43  
Available 0-24h

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## Section 2 Hazards identification

- 2.1 Hazard classification of substance or mixture
-  according to Directive (EC) N° 1272/2008
- Oxidizing solids cat. 2**  
**Acute toxicity cat. 4** (after swallowing)  
**Skin irritation cat. 1B**  
**Acute water-hazardous cat. 1**
- H272 May intensify fire; oxidizer.  
H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H400 Very toxic to aquatic life.  
EUH031 Contact with acids liberates toxic gas.

## 2.2 Label elements

 according to Regulation (EC) 1272/2008

**Danger**

H272	May intensify fire; oxidizer.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H400	Very toxic to aquatic life.
P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P210	Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P220	Keep/Store away from clothing/ acids / combustible materials.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P303 + P361 + P353	IF ON SKIN OR HAIR: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P370 + P378	In case of fire: Use carbon dioxide, foam or water spray for extinction.
P501	Dispose of contents/container to collection system.
EUH031	Contact with acids liberates toxic gas.

 Danger defining components for labeling

Lithium hypochlorite (CAS: 13840-33-0; EC: 237-558-1)

## 2.3 Other hazards

Unknown.

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**Section 3 Composition/information on ingredients**

## 3.1 Substances

Name	CAS # / EC # / Index #
Lithium hypochlorite, at least 35% active chlorine	13840-33-0 / 237-558-1/---

**Section 4**

**First-aid measures**

- 4.1 Description of first-aid measures
  - Remove immediately all clothing contaminated with product.
  - Consult a physician if you feel unwell.
  - No serving in case of unconsciousness or cramps.
  - After inhalation
      - Move affected person immediately to fresh air and bring at rest in a comfortable position. Consult a physician. Upon unconsciousness transport and rest in recovery position.
    - After skin contact
      - Upon skin contact, wash immediately with plenty of water and soap. Remove immediately all contaminated clothing. Consult a physician.
    - After eye contact
      - Upon eye contact, flush immediately with running water for at least 10 to 15 minutes, lifting lids. Consult a physician/eye clinic.
    - After swallowing
      - Rinse mouth with water. Upon consciousness give large amounts of water to drink. Consult a physician immediately. Do not induce vomiting.
- 4.2 Most important symptoms and effects, both acute and delayed
  - No further data available.
- 4.3 Indication of immediate medical attention and special treatment needed.
  - Depending on patient's condition, symptoms and general condition should be evaluated by a physician.

**Section 5**

**Fire-fighting measures**

- 5.1 Extinguishing media
  - Suitable extinguishing media
    - Water spray jet, alcohol resistant foam, carbon dioxide or dry extinguishing media.
  - Unsuitable extinguishing media for safety reasons
    - Full water jet
- 5.2 Special hazards arising from the substances or mixture.
  - Fire may release following gases: HCl (hydrogen chloride), Lithium oxide.

Spontaneously flammable in contact with oxidizing material e.g. wood, paper, cotton.

5.3 Special protective actions for fire-fighters

Special protective equipment: Wear full protective clothing and self-contained breathing apparatus.

## Section 6 Accidental release of material

- 6.1 Personal precautions, protective equipment and suitable emergency procedures.  
Restricted access to affected area until cleaning work has been completed. Wear suitable protective equipment. Ensure sufficient ventilation. Avoid dust development. Avoid contact to substance. Avoid inhaling dust.
- 6.2 Environmental precautions  
Do not allow product to reach surface water, ground water or sewage system. If the product contaminates lakes, rivers or sewages, inform appropriate authorities in accordance with local regulations.
- 6.3 Methods and material for retention and cleaning up.  
Absorb mechanically. Ensure sufficient ventilation. Dispose contaminated material as waste in proper container according to section 13.
- 6.4 Reference to other sections  
Protective measures see section 8  
Disposal see section 13

## Section 7 Handling and storage

- 7.1 Precautions for safe handling  
Avoid contact with skin and eyes. Do not inhale dust. Wash thoroughly after handling. Keep away from ignition sources – do not smoke.  
Use only in well-ventilated places. Wear protective clothing. Keep eye rinsing flasks/emergency showers ready near the workplace.
- 7.2 Conditions for safe storage including any incompatibilities
- Fire and explosion protection measures

Keep away from ignition source – do not smoke.  
Protect from heat.  
Take measures against electrostatic charging.  
Oxidizing substance.
  - Requirements for storage rooms and container

Store tightly sealed in a cool, dry and well-ventilated place. Do not allow water to penetrate. Do not store with acids and easily oxidizing substances.
  - Material incompatibility

Keep away from oxidizing materials
  - Recommended storage temperature

Keep away from heat and direct sunlight.

	<ul style="list-style-type: none"> <li>⦿ VbF class</li> </ul>	Not applicable.
7.3	Specific end uses	
	Activator for TCDO	

## Section 8 Exposure controls/personal protection

### 8.1 Control parameters

The product does not contain relevant quantities of substances with components to be controlled according to limit values at work.

### 8.2 Limitation and monitoring of exposure

#### ⦿ General protective and hygiene measures

Follow usual precautions when dealing with chemicals. Keep away from food and drinks. Do not eat or drink at work, wash hands before breaks and at end of work. Avoid contact with eyes, skin, clothing, flammable substances, acids, acid salts, acid gases, strong oxidants, moisture and water. Avoid inhaling of steam/aerosols. Change contaminated work wear and clean it before the next wearing. Protective equipment should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

#### ⦿ Respiratory protection

Wear an approved respirator if ventilation is inadequate.

#### ⦿ Hand protection

Protective gloves are recommended (e.g. rubber). The selection of protective gloves depends not only on the material, but also on further quality characteristics and varies from manufacturer to manufacturer. Selection of glove material after consideration of respective break through times, permeation rates and degradation.

#### ⦿ Eye protection

Tightly sealed goggles

#### ⦿ Personal protection

Appropriate protective clothes. Personal protection should be selected specifically depending on the concentration respectively the quantity of the used mixture.

#### ⦿ Environmental exposure controls

Do not allow to be released undiluted into the canalization /groundwater/surface water. If the product contaminates lakes, rivers or sewages, inform appropriate authorities in accordance with local regulations.

## Section 9 Physical and chemical properties

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

⦿ Appearance	Solid, granules
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● Color	White
● Odor	Chlorine
● Odor threshold	No data available.
● pH	Not applicable.
● Melting point	Decomposes at 135 °C
● Boiling point / boiling range	Not applicable.
● Flash point	Not applicable.
● Evaporation rate	No data available.
● Flammability	No data available.
● Upper explosion limit	No data available.
● Lower explosion limit	No data available.
● Vapor pressure (50 °C)	No data available.
● Bulk density	approx. 0.9 – 1.0 kg/l
● Water solubility (25°C)	approx. 43 g/100g
● Partition coefficient; n-octanol-water	No data available.
● Auto ignition temperature	No data available.
● Decomposition temperature	No data available.
● Viscosity (20 °C)	No data available.
● Explosive properties	No data available.
● Oxidizing properties	Substance considered oxidizing according to category 2.

9.2 Other data  
None.



## Section 10 Stability and reactivity

- 10.1 Reactivity  
No hazardous reaction when using according to intended purpose.
- 10.2 Chemical stability  
Stable if used according to specification.
- 10.3 Possibility of hazardous reactions

- 10.4 Possible hazardous reactions with oxidizing materials and acids  
 Conditions to avoid  
 Stable if used according to specification.  
 To avoid thermal decomposing do not overheat.
- 10.5 Incompatible materials  
 Keep away from acids and oxidizing materials.
- 10.6 Hazardous decomposition products  
 Chlorine.

**Section 11 Toxicological information**

11.1 Information on toxicological effects

- Classification relevant LD<sub>50</sub>/LC<sub>50</sub>-values of individual components

Name	CAS-Number	
Lithium Hypochlorite	13840-33-0	LD <sub>50</sub> (oral/rat)=674 mg/kg

- Acute toxicity  
 Category 4 (oral): Harmful if swallowed.
- Corrosive/irritant to skin  
 Category 1B: Causes serious skin and eye damage.
- Serious eye damage/eye irritation  
 Category 1: Causes severe skin burns and eye damage.
- Respiratory/skin sensitisation  
 Based on available data the classification criteria are not met.
- Germ cell mutagenicity  
 The product does not contain any ingredients at a concentration equal or higher than 0.1%, being listed as mutagen.  
 Based on available data the classification criteria are not met.
- Carcinogenicity  
 Hypochlorite salts are classified in group 3 ("Not classifiable as carcinogenic for human.") according to the International Agency for Research on Cancer (IARC)  
 Based on available data the classification criteria are not met.
- Reproductive toxicity  
 The product does not contain any ingredients at a concentration equal or higher than 0.1%, being listed as toxic for reproduction.  
 Based on available data the classification criteria are not met.
- Specific target organ toxicity for single exposure  
 Based on available data the classification criteria are not met.
- Specific target organ toxicity for multiple exposure  
 Based on available data the classification criteria are not met.

Aspiration hazard

Based on available data the classification criteria are not met.

Further information

Classification of preparation according to CLP-Regulation (EC) 1272/2008 Annex I.

## Section 12 Ecological information

12.1

Toxicity

Little is known about the toxicity of the lithium ion in the aqueous environment and will depend on the quality of the water as a whole. Due to its oxidizing properties, the hypochlorite ion is expected to be extremely toxic for water organisms.

Aquatic toxicity of single components

No data available.

12.2

Persistence and degradability

No data available.

12.3

Bioaccumulation potential

No data available.

12.4

Mobility in soil

No data available for the product itself.

12.5

Results of PBT- and vPvB-assessment

No data available.

12.6

Other adverse effects

Do not allow product to reach ground water, water bodies or the sewage system.

## Section 13 Disposal considerations

13.1

Waste treatment methods

Product residues have to be disposed by authorized companies only.  
Do not allow the product to reach soil, water bodies or sewage system.

Waste code number

51540 g (ÖNORM S 2100); List of waste codes

Waste name

Other salts, freely soluble

European waste catalogue

060314 (solid salts and solutions other than those mentioned in 060311 and 060313)  
Note: The EWC-waste key is origin-related. This may lead to another classification. The decision is up to the end user.



Contaminated packaging

Recommendation: Empty container completely and deliver to a specialized



company for reconditioning, recycling or disposal.

## Section 14 Transport information



- 14.1 UN-number  
1471
- 14.2 Proper UN-shipping name  
ADR/RID: LITHIUMHYPOCHLORIT, TROCKEN  
IMDG. LITHIUM HYPOCHLORITE, DRY
- 14.3 Transport hazard class  
  
5.1
- 14.4 Packaging group  
II
- 14.5 Environmental hazards  

- 14.6 Special precautions for user  
 White powder with a pungent odor. Water-soluble. The lowest ambient temperature decomposing the substance may be around 60° C. Contact with organic substances or ammonium compounds may cause fire. Contact with acids liberates chlorine, an irritating, corrosive and toxic gas. Affects most metals in humid ambience. Dust irritates mucosae.  
 EmS: F-H, S-Q
- 14.7 Transport in bulk according to Annex II of MARPOL and according to IBC-Code.  
Not relevant.

## Section 15 Regulatory information

- 15.1 Safety-, health- and environmental regulations/legislation specific for substance or mixture  
 This safety data sheet complies with the regulations (EC) REACH-VO N° 1907/2006. The substance is classified according to the regulations VO (EC) of CLP 1272/2008 annex I.

### National regulatory:

Austria:

-  ChemG 1996-amendment 2011  
This product is classified hazardous according to the Austrian chemical legislation of 1996 - amendment 2011.
-  VbF - Directive about combustible liquids (BGBl 1991/240)

Not applicable.

Germany:

- ⦿ Classification in water hazard classes according VwVwS dated 17.05.1999/annex 3  
WP 2 (water pollutant)
- ⦿ Hazardous incidence ordinance  
The quantity thresholds of the Hazardous Incidence Ordinance must be observed. Annex 1, Nr.3.

15.2 Chemical safety assessment  
No data available.

## Section 16 Other information

The information provided on this SDS is correct to the best of our knowledge and information, but is not to be considered as warranty or quality specification nor creates contractual relationship. The information given is designed only as guidance for safe handling. Since unknown risk potentials can never be completely ruled out, the product should be handled with the usual care when dealing with chemicals and is only allowed for the uses listed in Section 1.

Classification of the single component according to Annex VI of regulation CLP (EC) 1272/2008 as well as upon manufacturer details completed by indications from the hazardous material database and the ECHA.

### ⦿ Relevant H-phrases

H272	May intensify fire; oxidizer.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H400	Very toxic to aquatic life.
EUH031	Contact with acids liberates toxic gas.

### ⦿ Relevant hazard classification

Sol.oxid.2	Oxidizing solids category 2
Acut. tox. 4	Acute toxicity category 4
Skin Corr. 1B	Skin irritation category 1B
Aqu. acut. 1	Acute toxic to aquatic life category 1

⦿ Edition Version replaces previous dated 06.03.2016  
Amendments: section 11, 14

⦿ Written by UmEnA GmbH (<http://www.umena.at>)

⦿ Translated by WAPOTEC GmbH

⦿ Short cuts PBT persistent, bio-accumulative, toxic  
vPvB high persistent, high bio-accumulative  
ECHA European Chemicals Agency (<http://www.echa.eu>)