

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

1.1	Product identifier	
	Trade name	<b>LEGIOCID®B</b>
	Use of substance	Lithium hypochlorite
	CAS-N°	13840-33-0
1.2	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: <a href="mailto:office@wapotec.at">office@wapotec.at</a>
1.4	Emergency phone	+43 662 43 43 42-0 Office hours: MO - TH: 8.00 - 16.00 FR: 8.00 - 12.00

## 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 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.

According to Regulation CE 1999/45/EG

**O** (oxidizing)

**Xn** (harmful to health)

**C** (irritant)

**N** (dangerous to the environment)

R 8	Contact with combustible material may cause fire.
R 22	Toxic if swallowed.

R 31 Contact with acids liberates toxic gas.  
 R 34 Causes burns.  
 R 50 Very toxic to aquatic organisms.

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 at long term to aquatic life.  
 EUH031 Contact with acids liberates toxic gas.  
 P210 Keep away from heat/sparks/open flames/hot surfaces.  
 – No smoking.  
 P220 Keep/Store away from clothing, 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.

 According to Directive (EC) 1999/45



**O**; oxidizing



**N**; dangerous to the environment



**C**; irritant

R 8 Contact with combustible material may cause fire.  
 R 22 Toxic if swallowed.  
 R 31 Contact with acids liberates toxic gas.  
 R 34 Causes burns.  
 R 50 Very toxic to aquatic organisms.

- S 2 Keep out of reach of children.
- S 8 Keep container dry.
- S 26 Upon eye contact, rinse immediately with plenty of water and consult a physician.
- S 28 Upon skin contact, wash immediately with plenty of water.
- S 37/39 Wear suitable protective gloves. Wear eye/face protection.
- S 45 In case of accident or discomfort, immediately call a physician.
- S 60 This material and its container must be disposed of as hazardous waste.

2.3 Other hazards  
Unknown.

### 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/ ---

### 4 First-aid measures

4.1 Description of first-aid measures

Remove immediately all contaminated clothing.  
Consult a physician if you feel unwell.  
No administration when unconscious or seizing

☉ 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

Flush immediately with running water for at least 10 to 15 minutes, lifting lids. Consult a physician upon eye irritation.

☉ After swallowing

Rinse mouth with water. Upon consciousness give large amounts of water to drink. Do not induce vomiting. Consult a physician.

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

No 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.

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## 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.

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## 6 Accidental release of material

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

Restricted access to affected area during cleaning. Wear full protective clothing. Make sure enough air conditioning. Avoid dust development. Avoid contact to substance. Avoid to breath dust.

### 6.2 Environmental precautions

Do not empty into canalization/surface water/ground water.

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

Absorb mechanically. Make sure enough air conditioning. Dispose contaminated material as waste in proper container according to point 13.

### 6.4 Reference to other clauses

Protection measurements see point 8

Disposal see point 13

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## 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 areas in well-ventilated places.

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.

Design of storage rooms and container

Store tightly sealed in a cool, dry and well-ventilated place. Do not allow water to penetrate.  
Keep away from oxidizing materials and acids.

Material incompatibility

Keep away from oxidizing materials

<input type="radio"/> Recommended storage temperature	Keep away from heat and direct sunlight.
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<input type="radio"/> VbF class	Not applicable.
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7.3 Specific end uses

Activator for TCDO

**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 Exposure controls

General protective and hygiene measures

Keep away from food and beverages. Do not eat and drink during work. Wash hands before work break and after work.

Change contaminated clothing immediately.

Avoid contact with eyes, skin, clothing, combustible materials, acids, acid salt, acid gas, strong oxidants, moisture and water. Avoid inhaling dust and vapor.

Respiratory protection

Wear an approved respirator if ventilation is inadequate.

Hand protection

Protective gloves are recommended.

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














Sealed safety glasses.

 Personal protection

Protective clothing.

## 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties.

 Appearance	solid, granules
 Colour	white
 Odour	chlorine
 pH-value	n.a.
 Melting point	decomposes at 135 °C
 Boiling point / boiling range	n.a.
 Flash point	not flammable
 Bulk density	appr. 0,9 - 1,0 kg/l
 Water solubility at 25 °C	appr. 43 g/100g
 Vapour pressure (0 °C)	n.t.
 Density (20 °C)	n.t.
 Density (20 °C)	n.t.
 Oxidizing properties	Substance considered oxidizing according to category 2.

9.2 Further information

None.

## 10 Stability and reactivity

10.1 Reactivity

No hazardous reactions when used for intended uses.

10.2 Chemical stability

Solid when used for intended uses.

10.3 Possibility of hazardous reactions

Possible hazardous reactions with oxidizing materials and acids

10.4 Conditions to avoid

Solid when used for intended uses.

Do not expose high temperatures to avoid decomposing.

10.5 Incompatible materials

Keep away from acids and oxidizing materials.

## 10.6 Hazardous decomposition products

Chlorine.

## 11 Toxicological information

## 11.1 Acute toxicity

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

Primary irritations

Skin contact: irritant

Eye contact: irritant

Sensitization

No sensitizing effects known.

Carcinogenicity

The product does not contain any ingredients at a concentration equal or higher than 0,1%, being listed as carcinogen at the International Agency for Cancer Research (IARC) or the American Conference for Governmental Industrial Hygienic (ACGIH).

Further information

The substance is categorized according manufacturer details.

## 12 Ecological information

## 12.1 Toxicity

Little is known about the toxicity of the lithium ion in the aqueous environment and this 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.

## 12.2 Persistence and degradability

No data available.

## 12.3 Bioaccumulative 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 empty into ground water, in waters or in canalization.

## 13 Disposal considerations

### 13.1 Waste treatment methods

Do not dispose of the product with domestic waste. Do not enter in canalization.

Waste code number

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

Waste name

Other salts, readily soluble

European waste catalogue

060314 (solid salts and solutions except 060311 and 060313)

Notice: EWC-waste key depends on origin. This may cause another classification. The decision is up to the last user.

Contaminated packaging

Recommendation: Empty container completely and deliver to a specialized company for reconditioning, recycling or disposal.

## 14 Transport information

### 14.1 UN-number

1471

### 14.2 Proper UN-shipping name

LITHIUMHYPOCHLORIT, TROCKEN  
LITHIUM HYPOCHLORITE, DRY

### 14.3 Transport hazard class



5.1

### 14.4 Packaging group

II

### 14.5 Environmental hazards

none

### 14.6 Special precautions for user

White powder with eye-stinging smell. Water-soluble. The lowest ambient temperature decomposing substances 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.

### 14.7 Transport in bulk according to Annex II of MARPOL agreement 73/78 and according to IBC-Code IBC08; EMS: F-H, S-Q



## 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 N° 1907/2006.  
The substance is classified according to the regulations (EC) of CLP 1272/2008 resp. to substance standards (EEC) 67/548 based on manufacturer's data.

### National regulatory:

Austria:

- Labelling according to BGBl II 2000/81 ChemV 1999.  
The product is classified and requires hazards identification.
- ChemG 1996  
This product is classified hazardous according to the Austrian chemical legislation of 1996.
- VbF - Directive about combustible liquids (BGBl 1991/240)  
This product is not classified.

Germany:

- Classification in water hazard classes according VwVwS dated 17.05.1999/ addition 3  
2 (water pollutant)

15.2 Chemical safety assessment

No data available.

## 16 Other information

The information provided on this SDS is correct to the best of our knowledge and information, but not to be considered as warranty or quality specification nor creates contractual relationship. The information given is designed only as a guidance for safe handling. The substance is categorized according to the regulation CLP (EC) 1272/2008 resp. to the substances directive (EEC) 67/548 and based upon manufacturer details.

### ○ Relevant R-Phrases

- |      |   |
|------|---|
| R 8  | Fire hazard on contact with combustible substances. |
| R 22 | Harmful for health when swallowed.                  |
| R 31 | Extricates poison gas when contacts with acid.      |
| R 34 | Causes chemical burns.                              |
| R 50 | Very toxic to aquatic organisms.                    |


### ○ 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 irrit. 1 Skin irritation category 1B  
Aqu. acut. 1 Acute toxic to aquatic life category 1

 Edition Number 2  
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Modification to Directive (EC) 453/2010  
Amendments: article 1, 2, 3, 12, 15

 Written by UmEnA GmbH

 Translated by Wapotec GmbH

 Short cuts n. t. not tested  
n. a. not applicable





