



Section 1 Identification of the substance/mixture and the company

- 1.1 Product identifier **LegioCid-A[®]**
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified use of substance Oxidant
- 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
- 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




Section 2 Hazards identification

- 2.1 Hazard classification of substance or mixture
 according to Directive (EC) N° 1272/2008
Not app.
The product is not classified as dangerous.
- 2.2 Label elements
 according to Directive (EC) 1272/2008
Not app.
The product is not classified as dangerous according to Directive (EC) 1272/2008
- 2.3 Other hazards
Generation of chlorine gas after contact with concentrated acids.



Section 3 Composition/information on ingredients

- 3.2 Mixtures
 Chemical characteristics
Tetrachlorodecaoxide complex (TCDO-anion), aqueous solution

CAS- no. 92047-76-2
ELINCS-no. 420-970-2
Registration no. 01-0000016753-67-0001

☉ Dangerous ingredients

None.

Section 4 First-aid measures

4.1 Description of first-aid measures

Consult physician if disturbances occur.
No serving in case of unconsciousness or cramps.
Remove immediately all contaminated clothing.
Rinse contaminated clothing immediately.

☉ After inhalation

Usually no effects.
Move affected person immediately to fresh air. Consult physician if disturbances occur.
Upon unconsciousness transport and rest in recovery position.

☉ After skin contact

After skin contact, wash with plenty of water and soap.
Remove immediately all contaminated clothing.
Consult physician if disturbances occur.

☉ After eye contact

After eye contact, rinse eye for 10 to 15 minutes with water holding eye lids apart.
Consult a physician upon eye irritation.

☉ After ingestion

Rinse mouth with cold water.
As first aid measure make person drink (100–150ml) a solution of diluted (1-2 %) ascorbic acid. Otherwise drink plenty of water. See a physician immediately.

4.2 Most important symptoms and effects, acute and delayed

No further data available.

4.3 Indications for immediate medical attention or 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

Product itself is non flammable. Adapt extinguishing media to environment.

☉ Unsuitable extinguishing media for safety reasons

None.

5.2 Special hazards arising from the substance or mixture

Unknown.

5.3 Special protective actions for fire-fighters

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



Section 6 Accidental release of material

6.1 Personal precautions, protective equipment and suitable emergency procedures.

Restricted access to affected area during cleaning. Wear appropriate protective clothing. Ensure sufficient ventilation. Avoid contact to substance.

6.2 Environmental precautions

Don't empty undiluted into canalization/surface water/ground water.

6.3 Methods and material for retention and cleaning up.

Dilute with plenty of water and dispose off as sewage (unless unsuitable due to chemical/technical reasons and/or provisions). High assimilative capacity.

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

No special measures or precautions necessary for handling, storage, transport or in case of fire with water diluted solutions till 10 g TCDO/l max or higher (1:100 till 1:1000).

7.2 Conditions for safe storage including any incompatibilities

 Fire and explosion protection measures

No special measures required. Do not smoke.

 Requirements for storage rooms and container

No special requirements for storage rooms.

Do not store the original container gas-tight.

Do not store with acids and other chlorine products.

 Material incompatibility

Unknown.

 Recommended storage temperature

+5°C to +35°C, protect from sun

 VbF class

Not applicable.

7.3 Specific end uses

Oxidant.

Section 8 Exposure controls/personal protection

8.1 Control parameters

The product does not contain relevant quantities of substances with critical values that have to be monitored at the workplace.

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 end of work. Avoid eye and skin contact.

Avoid inhaling of steams/aerosols. Change contaminated work wear and clean it before reuse. Preventive skin protection.

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

Not necessary.

Hand protection

Not necessary

Eye protection

Tightly sealed goggles

Personal protection

Appropriate protective clothes

Environmental exposure controls

Do not allow undiluted product to be released into the canalization/ groundwater/ surface water.

Section 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties.

Appearance	Liquid
Color	Pastel green to transparent
Odor	Characteristic, not unpleasant
Odor threshold	No data available.
pH	Approx. 8.2 – 8.4
Melting point	-11 °C

⦿	Boiling point / boiling range	102.6 °C
⦿	Flash point	Not applicable
⦿	Evaporation rate	No data available.
⦿	Flammability	Not applicable (active component exists only in aqueous solutions)
⦿	Upper explosion limit	No data available.
⦿	Lower explosion limit	No data available.
⦿	Vapor pressure (25 °C)	2.7 kPa
⦿	Density (20°C)	1.099 g/cm ³
⦿	Water solubility (20°C)	Soluble, user-defined mixable
⦿	Partition coefficient; n-octanol-water	No data available.
⦿	Auto ignition temperature	No data available.
⦿	Decomposition temperature	No data available.
⦿	Viscosity (20°C)	1.1 mPas
⦿	Explosive properties	The product is none-explosive.
⦿	Oxidizing properties	Oxidant

9.2 Other data

⦿	Surface tension	79,5 Nm / 20 °C
---	-----------------	-----------------

Section 10 Stability and reactivity

10.1 Reactivity

No hazardous reaction when using according to intended purpose.

10.2 Chemical stability

No decomposition when using according to intended purpose.

10.3 Possibility of hazardous reactions

Mixing with other acids can generate chlorine dioxide.

10.4 Conditions to avoid

Do not expose to extreme temperatures.

10.5 Incompatible materials

Avoid contact with acids and other chlorine products.

10.6 Hazardous decomposition products

Due to an inappropriate handling and contamination with concentrated acids chlorine dioxide can be generated.

Section 11 Toxicological information

11.1

Information on toxicological effects

LD₅₀ values relevant for classification of individual components

TCDO:

LD₅₀ (rat) 4.58ml/kg-LW (live weight) (24 hours)

LD₅₀ (rabbit) negative: 10% solution does not show conjunctive irritations after application.

According to valuation key of Etad-Sub-Committee for Toxicology

- classified non-irritant (LC₅₀(96h) > 1000 ppm)
- concentrate very poor conjunctival irritations up to 24 hours after application

Acute toxicity)

Based on available data the classification criteria are not met.

Corrosive/Irritant to skin

Based on available data the classification criteria are not met.

Serious eye damage/eye irritation

Based on available data the classification criteria are not met.

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 classified as mutagen.

Based on available data the classification criteria are not met.

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).

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 classified 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

The substance is classified according to regulation (EC)1272/2008 Annex 1.

Section 12 Ecological information

- 12.1 Toxicity
- No eco-toxicological tests carried out on the product itself. Classification of preparation according to CLP-Regulation (EC) 1272/2008 Annex I. There is no adverse effect of the product if it is diluted with plenty of water.
- ⦿ Aquatic toxicity of individual components:
- TCDO:
- Acute toxicity fish:
LC50 (96 h) > 1000 mg/l rainbow trout (*Oncorhynchus mykiss*)
- Acute toxicity daphnia:
EC50 (24 h): 1210 mg/l – *Daphnia magna*
- Algal toxicity:
EC50 (72 h): ca. 430 mg/l – *Scenedesmus subspicatus*
NOEC (72 h) > 80 mg/l – *Scenedesmus subspicatus*
- 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 for the product itself.
- 12.6 Other adverse effects
- Do not allow undiluted product to reach ground water, water course or sewage system.

Section 13 Disposal considerations

- 13.1 Waste treatment methods
- Dilute with plenty of water, can be disposed of down the drain (as long as there are no respectively chemical, technical or legal directives).
- ⦿ Waste key number
- Not applicable.
- ⦿ Waste name
- Not applicable
- ⦿ European waste catalogue
- Note: EWC-waste key is origin-related. This may lead to a change in the classification. The decision is up to the end user.

- Contaminated packaging material

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

Section 14 Transport information

- No dangerous good according to regulation for transport of dangerous goods.
- 14.1 UN-Number
ADR, RID, AND, IMDG, IATA: Void.
- 14.2 Proper UN-shipping name
ADR, RID, AND, IMDG, IATA: Void.
- 14.3 Transport hazard class
ADR, RID, AND, IMDG, IATA: Void.
- 14.4 Packaging group
ADR, RID, AND, IMDG, IATA: Void.
- 14.5 Environmental hazards
Not applicable.
- 14.6 Special precautions for the user
Not applicable.
- 14.7 Transport in bulk according to Annex II of MARPOL and according to IBC-Code
Not applicable.

Section 15 Regulatory information

- 15.1 Safety-, health-, ambient- and legislation specific instructions for substance or mixture
This safety data sheet complies with the Regulations (EC) Reach N° 1907/2006.
The mixture is classified according to regulation (EC) 1272/2008 Annex I.

National regulatory:

Austria:

- ChemG 1996-amendment 2011
This product is not classified as a hazardous mixture (no hazardous preparation) according to the Austrian chemical legislation of 1996- amendment 2011.
- VbF - Directive about combustible liquids (BGBl 1991/240)
This product is not classified as combustible liquid acc. VbF.

Germany:

- Classification in water hazard classes according VwVwS dated 17.05.1999/ annex 4.
WHC 1 (low water hazardous)

- ⦿ Hazardous Incident Ordinance
Hazardous Incident Ordinance, Annex: Not mentioned.

15.2 Chemical safety assessment
The mixture is not subject to safety assessment.

Section 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 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 only for the uses listed in Section 1.

The categorization according to regulation CLP (EC) 1272/2008 is based on the 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 hazardous material database and the ECHA.

- ⦿ Relevant H-Phrases
Not applicable.
 - ⦿ Relevant hazard classification
Not applicable.
 - ⦿ Edition Replaces previous versions dated 25.02.2016
Amendments: 11
 - ⦿ 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
WHC water hazard class
ECHA European Chemicals Agency (<http://www.echa.eu>)
-