Safety data sheet according to Regulation (EC) 1907/2006



created: 09.03.2009 updated: 04.05.2018

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Section 1	Identification of the substance/mixture and the company		
1.1	Product identifier	LegioCid®A+	
1.2	Relevant identified uses of the s	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

C Dangerous ingredients

None.

C

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.

C 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/I 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.		

No special requirements for storage rooms. Do not store the original container gas-tight.

Do not store with acids and other chlorine products.

Requirements for storage rooms and container

Material incompatibility

Unknown.

Recommended storage temperature

 $+5^{\circ}$ C to $+35^{\circ}$ 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

ColourPastel green to transparentOdourCharacteristic, not unpleasant

Odour thresholdNo data available.pHApprox. 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 active component exists.

aqueous solutions)

Upper explosion limit
No data available.

C Lower explosion limit No data available.

Vapor pressure (25 °C)
2.7 kPa

© Density (20°C) 1.099 g/cm³

Water solubility (20°C) Soluble, user-defined mixable

Partition coefficient; No data available.

n-octanol-water

C 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 propertiesOxidant

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)

 LD_{50} (rabbit) negative: 10% solution does not show conjunctive irritations after application.

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

- classified non-irritant ($LC_{50}(96h) > 1000 \text{ ppm}$)
- concentrate very poor conjunctival irritations up to 24 hours after application
- C 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.

No dangerous good according to regulation for transport of dangerous goods. UN-Number ADR, RID, AND, IMDG, IATA: Void. Proper UN-shipping name ADR, RID, AND, IMDG, IATA: Void. Transport hazard class
ADR, RID, AND, IMDG, IATA: Void. Proper UN-shipping name ADR, RID, AND, IMDG, IATA: Void. Transport hazard class
Proper UN-shipping name ADR, RID, AND, IMDG, IATA: Void. Transport hazard class
ADR, RID, AND, IMDG, IATA: Void. Transport hazard class
Transport hazard class
·
ADR, RID, AND, IMDG, IATA: Void.
Packing group
ADR, RID, AND, IMDG, IATA: Void.
Environmental hazards
Not applicable.
Special precautions for the user
Not applicable.
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 the 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 (BGBI 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)



Safety data sheet according to Regulation (EG) 1907/2006



created: 01.04.2009 © by Wapotec GmbH updated: 07.12.2018

Section 1	Identification of the subst	ance/mixture and the company	
1.1	Product identifier		
	Trade name	LegioCid®B+	
	Stoffbezeichnung	Sodium hydrogensulphate	
	Index-N°	016-046-00-X	
	CAS-N°	7681-38-1	
	EINECS-N°	231-665-7	
	Registration number acc. REACH	Not available	
1.2	Relevant identifies uses of the substance or the mixture and uses advised		
	Identified use of substance	For pH value adjustment	
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		

Section 2	Hazards identification	n	
2.1	Hazard classification of	substance or mixture	
	© according to Directive (EC) N° 1272/2008		
	Serious eye damage c	ategory 1	
	H318	Causes serious eye damage.	
2.2	Identification labeling		
	according to Direction	ve (EC) N° 1272/2008	



Danger

H318 Causes serious eye damage.

P101 If medical advice is needed, have product

container or label at hand.

P102 Keep out of reach of children.

P280 Wear protective gloves/eye 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.

P310 Immediately call a POISON CENTER or physician.
P501 Dispose of contents/container to collection system

Danger defining components for labeling

Sodium hydrogensulphate

Index: 016-046-00-X, CAS: 7681-38-1, EC: 231-665-7

2.3 Other hazards

Unknown.



Section 3 Composition/information on ingredients

3.1 Substances

Name

Sodium hydrogensulphate

CAS N° 7681-38-1 EC N° 231-665-7 Index N° 016-046-00-X



Section 4 First-aid measures

4.1 Description of first-aid measures

Remove immediately all contaminated clothing.

Consult physician if disturbances occur.

No serving in case of unconsciousness or cramps.

After inhalation

Move affected person immediately to fresh air and place in a resting position. Consult physician.

In case of unconsciousness storage and transport in stable position.

After skin contact

After skin contact, wash with abundant water and soap.

Remove 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. Seek your ophthalmologist immediately or go directly to the clinic.



	C After ingestion
	Rinse mouth with water. If victim is conscious, give plenty of water to drink. Do not induce vomiting, consult a physician.
4.2	Most important symptoms and effects, both acute and delayed.
	Sever ocular lesions. Risk of blindness.
4.3	Indications 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
	C Suitable extinguishing media
	CO ₂ , extinguising powder or water spray jet. Fight larger fires with water jet or alcohol-resistant foam. Product itself is non flammable.
	Unsuitable extinguishing media for safety reasons
	Water jet.
5.2	Special hazards arising from the substance or mixture
	Fire may release following gases: sulphur dioxide (SO ₂).
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 full protective clothing. Make sure enough air conditioning. Avoid formation of dust. Avoid contact to substance. Avoid inhaling of dust/aerosol.
6.2	Environmental precautions
	Do not empty into canalization/surface water/ground water.
6.3	Methods and material for retention and cleaning up.
	Bind with absorbent material. Make sure enough air conditioning. 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	Protections for safe handling
	Avoid contact with eyes and skin. Avoid inhalation of dust. Ensure thorough dedusting. Wash hands thoroughly after handling. Use only in well-ventilated areas. Wear personal protective equipment. Eye rinsing flasks are mandatory near the workplace.
7.2	Conditions for safe storage including any incompatibilities
	Fire and explosion protection measures
	No special measures required Do not smoke.
	 Design of storage rooms and container
	No special requirements for storage rooms. Keep container tightly closed.
	Material incompatibility
	Keep away from oxidizable materials.
	Recommended storage temperatureWithout constraints.
	VbF class Not applicable.
7.3	Specific end uses
	For pH value adjustment.
Section 8	Exposure controls/personal protection
8.1	Control paramters
	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 end of work. Avoid eye and skin contact. Avoid inhaling of dust. 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
	In case of insufficient ventilation approved respiratory equipment must be worn.



C Hand protection

Protective gloves (nitrile, chloroprene rubber) required.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. Choose glove material in consideration of the respective break through times, permeation rates and degradation.

Eye protection

Tightly sealed goggles.

Personal protection

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

Environmental exposure controls

Do not allow product to be released into the canalization /groundwater/surface water. In case of contamination of rivers, lakes or drains the local authorities must be contacted in accordance with the local requirements



Section 9 Physical and chemical properties

9.1	Information on basic physical and chemical properties.	
	Appearance	Solid (powder)
	Colour Colour	Yellowish
	Odour	Odourless
	Odour threshold	No data available.
	C pH	1 – 1.2 (200 g/l)
	Melting point	180 °C
	Boiling point / boiling range	No data available.
	C Flash point	N.a.
	Evaporation rate	No data available.
	Flammability	Not flammable.
	Upper explosion limit	No data available.
	Lower explosion limit	No data available.
	Vapour pressure (50 °C)	No data available.
	Bulk density (20°C)	1400 – 1450 kg/m³
	Water solubility (20 °C)	1080 g/l
	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
The product is none-explosive

Oxidizing properties
 No data available.

9.2 Further information

None.

Section 10	Stability and reactivity
10.1	Reactivity
	No hazardous reaction when using according to regulations.
10.2	Chemical stability
	Moisture-sensitive.
10.3	Possibility of hazardous reactions
	Reacts with water, strong oxidizing agents and strong bases.
10.4	Conditions to avoid
	When exposed to water formation of an acidic corrosive solution. When exposed to base metals the aqueous solution forms hydrogen (risk of explosion).
10.5	Incompatible materials
	Metals.
10.6	Hazardous decomposition products.
	No decomposition products known. In case of fire: see section 5.

Section 11 Toxicological information

11.1 Information on toxicological effects

LD₅₀ values relevant for classification of individual components (literature value)

Name	CAS-N°	
Sodium hydrogensulphate	7681-38-1	LD ₅₀ (oral/rat)= 2490 mg/kg

Acute toxicity

Based on available data the classification criteria are not met.

 ATE_{mix} (oral, calculated) > 2000mg/kg

Corrosive/irritant to skin

Based on available data the classification criteria are not met.

Serious eye damage/eye irritation.

Category 1: Causes serious eye damage.

12.5



Respiratory/skin sensitization

Based on available data the classification criteria are not met.

C 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

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 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 appendix VI.

ı	section 12	Ecological Information
	12.1	Toxicity
		No information available. Classification of preparation according to CLP-Regulation (EC) 1272/2008 appendix VI.
	12.2	Persistence and degradability
		For inorganic substances, the methods for determining the biodegradability are not applicable.
	12.3	Bioaccumulative potential
		No data available.
	12.4	Mobility in soil

No data available for the product itself.

Results of PBT- and vPvB-assessment





For inorganic substances, the methods of PBT / vPvB determination acc. REACH not applicable.

12.6 Other adverse effects

Do not dispose of the product undiluted or in large quantities with ground water/ waters or canalization.

Must not reach sewage water or drainage ditch undiluted or unneutralized.



Section 13	Disposal considerations
13.1	Waste treatment methods
	Product residues are to be disposed of by specifically authorized companies only.
	Do not dispose of the product with ground water/ waters or canalization.
	C Waste key number
	51540 g (ÖNORM \$ 2100); waste list
	Waste name
	Other salts, readily soluble.
	C European waste catalogue
	160303* (inorganic wastes containing dangerous substances)
	Note: EAK-waste key is source-related. This may lead to another 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
	Not applicable.
14.2	UN proper shipping name
	Not applicable.
14.3	Transport hazard class
	Not applicable.
14.4	Packing group
	Not applicable.
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 MARPOL73/78 and the IBC Code

Not applicable.



Section 15 Regulatory information

15.1 Safety-, health- and environmental regulations/legislation specific instructions for the substance or mixture

This safety data sheet complies with the Regulations (EC) Reach N° 1907/2006. The substance is classified according to regulation (EC) 1272/2008 appendix VI

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 (BGBI 1991/240) Not applicable.

Germany:

Regulations on Facilities Handling Substances Dangerous to Water (AwSV) dated 18 April 2017; Identification n° 376 WHC 1 (slightly water pollutant)

Hazardous incidence ordinance

Hazardous incidence ordinance, appendix: not mentioned

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 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.

Classification according to Regulation CLP (EC) 1272/2008 appendix VI.

Relevant H-Phrases

H318 Causes serious eye damage.

Relevant hazard classification

Eye Dam. 1 Serious eye damage category 1

Issue
Replaces previous versions



Written byTranslated by

Short cuts

UmEnA GmbH WAPOTEC GmbH

n. a. not applicable PBT persistent, bio-accumulative, toxic vPvB high persistent, high bio-accumulative ECHA European Chemicals Agency (http://www.echa.eu

Safety Data Sheet according to Regulation (EG) 1907/2006



created: 02.02.2010 updated: 07.12.2018

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Section 1	Identification of the substa	nce/mixture and of the company/undertaking
1.1	Product identifier	
	Trade name	LegioCid [®] C
	Substance	Sodium thiosulphate pentahydrate
	CAS-Nr	10102-17-7
	EINECS-N°	231-867-5
	Registration number acc. REACH	Not available.
1.2	Relevant identified uses of t	he substance or mixture and uses advised against.
	Use of substance	Fixing salt
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 Classification of the substance or mixture

according to Directive (EC) N° 1272/2008

Not app.

The product is not classified hazardous.

2.2 Label elements

according to Directive (EC) 1272/2008

Not app

The product does not need to be labeled according to Directive (EC) 1272/2008.

Danger defining components for labeling

Not app.



2.3 Other hazards

Unknown.

0

Section 3 Information on the ingredients

3.1 Substance

Name	CAS # / EC # / Index #
Sodium thiosulphate pentahydrate	10102-17-7 / 231-867-5 /

0

Section 4 First-aid measures

4.1 Description of first-aid measures

Remove immediately all contaminated clothing.

Consult physician on complaints.

No serving in case of unconsciousness or cramps.

After inhalation

Move affected person immediately to fresh air. Consult physician on complaints. Upon unconsciousness transport and rest in recovery position.

After skin contact

Generally the product is not irritating to the skin. After skin contact, wash with plenty of water and rinse. Consult physician on complaints.

After eye contact

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

After ingestion

Rinse mouth with water. Consult physician if discomfort continues.

- 4.2 Most important symptoms and effects, both acute and delayed
 - No further data available.
- 4.3 Indication of any 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

5.2

5.3



CO ₂ , extinguishing powder or water spray.
Unsuitable extinguishing media for safety reasons
Full water jet.
Special hazards arising from the substance or mixture
Unknown.
Special protective actions for fire-fighters
Special protective equipment: Wear self-contained breathing apparatus and full protective clothing.

0

Section 6	Accidental release of material
6.1	Personal precautions, protective equipment and emergency procedures.
	Restricted access to affected area until cleaning work has been completed. Wear appropriate protective clothing. Ensure sufficient ventilation. Avoid contact to substance. Avoid inhaling dust.
6.2	Environmental precautions
	Do not allow undiluted product to reach surface water, ground water or sewage system.
6.3	Methods and material for containment and cleaning up
	Pick up mechanically. Provide 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	
	Do not allow the product to come i Do not inhale dust.	n contact with skin or eyes.
7.2	Conditions for safe storage including	g any incompatibilities
	Fire and explosion protection m	easures
	No special measures required.	
	Requirements for storage rooms	and container
	Keep container in a dry place.	
	Material incompatibility	
	No data available.	
	Recommended storage temperature	Ambient temperature



VbF class
not app.

7.3 Specific end uses

Fixing salt.

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

The usual precautionary measures for contact with chemicals are to observe. Keep away from food and drink.

Do not drink or eat during work. Wash hands before breaks and at the end of the work. Remove contaminated work clothing and clean thoroughly before reuse.

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 required.

C Hand protection

Not required.

Eye protection

Tightly sealed goggles.

Personal protection

Protective work wear.

Environmental exposure controls

Do not allow product to reach sewage system /groundwater/surface water.



Section 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

AppearanceColourWhite

C Odour Odourless

Odour thresholdNo data available.pH6.8 (248 g/l water)

Melting point
48 °C



C	Initial boiling point / boiling range	No data available.
0	Flash point	Not applicable.
0	Evaporation rate	No data available.
0	Flammability	Not flammable.
0	Upper explosion limit	No data available.
0	Lower explosion limit	No data available.
0	Vapour pressure (50 °C)	No data available.
0	Bulk density (20°C)	1.69 g/cm ³
0	Water solubility (20°C)	500 g/l
	Partition coefficient; n-octanol-water	No data available.
0	Auto ignition temperature	No data available.
0	Decomposition temperature	No data available.
0	Viscosity (20°C)	No data available.
0	Explosive properties	This product is non-explosive.
0	Oxidizing properties	No data available.

9.2 Other data

The product is slightly hygroscopic.



Section 10	Stability and reactivity
10.1	Reactivity
	No hazardous reaction when using according to intended purpose.
10.2	Chemical stability
	Stable when using according to intended purpose. No decomposition expected.
10.3	Possibility of hazardous reactions
	No dangerous reactions known.
10.4	Conditions to avoid
	No decomposition when using according to intended purpose
10.5	Incompatible materials
	No data available.
10.6	Hazardous decomposition products
	No hazardous decomposition products known.



Section 11 Toxicological information

11.1 Information on toxicological effects

Classification relevant LD₅₀-values (source: ECHA)

Name	CAS #	
Sodium thiosulphate anhydrous	7772-98-7	LD ₅₀ (oral/rat)>2000 mg/kg LD ₅₀ (dermal/rabbit)>2000 mg/kg

C 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.

Eye contact with dusts may lead to irritations due to mechanical friction.

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. Inhalation of dusts may lead to irritations due to mechanical friction.

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
	The substance is categorized according to CLP-Regulation (EG) 1272/2008 Annex I.
	 Aquatic toxicity of single components
	Fish toxicity: Pimephales promelas $LC_{50} > 10000$ mg/l / 96 h (origin: external MSDS) Daphnia toxicity: Daphnia magna $EC_{50} = 1223$ mg/l 48 h (origin: external MSDS)
12.2	Persistence and degradability
	For inorganic substances, the methods for determining the biodegradability are not applicable.
12.3	Bioaccumulation potential
	No bioaccumulation expected.
12.4	Mobility in soil
	No data available for the product itself.
12.5	Results of PBT- and vPvB-assessment
	For inorganic substances, the methods of PBT / vPvB determination acc. REACH not applicable.
12.6	Other adverse effects
	Do not allow product to reach groundwater, water bodies or soil.

Section 13 Disposal considerations

13.1 Waste treatment methods

Smaller residues can be disposed of together with household waste. Larger amounts have to be disposed of by authorized companies only. Do not allow product to reach the sewage system, soil or water bodies.

Waste key number

51540 g (ÖNORM S 2100); List of waste

Waste name

Other salts, readily 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 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 the Hazardous Material Transportation Act
14.1	UN-Number
	Not applicable.
14.2	UN Proper Shipping Name
	Not applicable.
14.3	Transport hazard class
	Not applicable.
14.4	Packing group
	Not applicable.
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- and environmental regulations/legislation specific for the substance or mixture

This safety data sheet complies with the Regulations (EC) Reach N° 1907/2006. The substance is categorized according to Directive (EC) 1272/2008 Annex I.

National regulatory:

Austria:

ChemG 1996-amendment 2011

This product is not classified hazardous according to the Austrian chemical legislation of 1996-amendment 2011.

VbF - Directive about combustible liquids (BGBI 1991/240)

Not applicable

Germany:

Regulations on Facilities Handling Substances Dangerous to Water (AwSV) dated 18 April 2017

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WHC 1 (slightly hazardous for water)



Hazardous incidence ordinance

Hazardous incidence ordinance, Annex: Not mentioned

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 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 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.

C Issue Replaces previous versions.

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 hazardous class

ECHA European Chemicals Agency (http://www.echa.eu)

