

# Zinc sulphate heptahydrate

## Safety Data Sheet

**Z0526**

according to Regulation (EU) 2015/830

Version: 2.0

Date of issue: 26/01/2011    Revision date 21/09/2017  
Supersedes 13/09/2011

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

#### 1.1. Product identifier

Product form : Substance  
Trade name : Zinc sulphate heptahydrate  
EC Index-No. : 030-006-00-9  
EC-No. : 291-793-3  
CAS-No. : 7446-20-0  
REACH registration No : 01-2119474684-27  
Product code : Z0526  
Formula : ZnSO<sub>4</sub> · 7H<sub>2</sub>O

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### 1.2.1. Relevant identified uses

Main use category : Professional use  
Industrial/Professional use spec : For professional use only. Duchefa Biochemie B.V. products are intended only for "in vitro laboratory" research purposes.

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

##### Supplier

Duchefa Biochemie B.V.  
A. Hofmanweg 71  
2031 BH Haarlem - The Netherlands  
T +31(0)23-5319093 - F +31(0)23-5318027  
[info@duchefa.nl](mailto:info@duchefa.nl)

#### 1.4. Emergency telephone number

Emergency number : Supplier contact information:  
+31(0)23-5319093 (M-F 09:00-17:00)  
+31(0)6-30109355 (outside office hours)

Organisation/Company	Address	Comment
World Health Organization world directory of poison centres	<a href="http://apps.who.int/poisoncentres/">http://apps.who.int/poisoncentres/</a>	Consult website for a local poison centre

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 4 H302  
Serious eye damage/eye irritation, Category 1 H318  
Hazardous to the aquatic environment — Acute Hazard, Category 1 H400  
Hazardous to the aquatic environment — Chronic Hazard, Category 1 H410

Full text of H statements : see section 16

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### Adverse physicochemical, human health and environmental effects

No additional information available

### 2.2. Label elements

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Hazard statements (CLP)

: H302 - Harmful if swallowed.  
H318 - Causes serious eye damage.  
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (CLP)

: P280 - Wear protective gloves, protective clothing, face protection, eye protection.  
P273 - Avoid release to the environment  
P305+P351 - IF IN EYES: Rinse cautiously with water for several minutes.  
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
P309+P310 - IF exposed or if you feel unwell: Immediately call a POISON CENTER/doctor

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Name : Zinc sulphate heptahydrate  
CAS-No. : 7446-20-0  
EC-No. : 291-793-3  
EC Index-No. : 030-006-00-9

Name	Product identifier	%
Zinc sulphate	(CAS-No.) 7446-20-0 (EC-No.) 231-793-3 (EC Index-No.) 030-006-00-9	>= 99

Full text of H-statements: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures after inhalation : Move the affected person away from the contaminated area and into the fresh air  
Get medical advice/attention.

First-aid measures after skin contact : Wash skin with plenty of water  
Take off contaminated clothing.

- First-aid measures after eye contact : Get immediate medical advice/attention  
Immediately rinse with water for a prolonged period while holding the eyelids wide open.
- First-aid measures after ingestion : Get medical advice/attention  
Give water to drink.

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

- Symptoms/effects : Diarrhea  
Vomiting  
Irritating  
Redness, pain  
Cardiac and blood circulation effects.

## 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- Suitable extinguishing media : Dry powder  
Carbon dioxide (CO<sub>2</sub>).  
Water.

### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : Not flammable.
- Hazardous decomposition products in case of fire : When exposed to heat, may decompose liberating hazardous gases  
- SO<sub>x</sub>.

### 5.3. Advice for firefighters

- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.
- Other information : Reduce vapour with fog or fine water spray. Prevent fire fighting water from entering the environment.

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

- Emergency procedures : Avoid contact with skin. Ventilate spillage area.
- Measures in case of dust release : Do not breathe dust. Use good housekeeping practices to avoid rendering dust airborne.

#### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

Prevent entry to sewers and public waters.

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

- Methods for cleaning up : This material and its container must be disposed of in a safe way, and as per local legislation. Sweep up dry powder and dispose properly.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Minimize generation of dust.

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

Storage conditions : Store at room temperature  
Store in a dry place.

### 7.3. Specific end use(s)

For professional use only. Duchefa Biochemie B.V. products are intended only for "in vitro laboratory" research purposes.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

#### Hand protection:

Type	Material	Permeation	Thickness (mm)	Standard
Gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0,11	EN 374

#### Eye protection:

Safety glasses

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

Dust production: dust mask with filter type P2

## SECTION 9: Physical and chemical properties

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

Physical state	: Solid
Appearance	: Powder.
Molecular mass	: 287,6 g/mol
Colour	: White.
Odour	: Odourless.
Odour threshold	: No data available
pH	: 4 - 6 (20°C)(50 g/l)
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 100 °C
Freezing point	: No data available
Boiling point	: No data available
Flash point	: The product is not flammable
Auto-ignition temperature	: No data available
Decomposition temperature	: > 39 - 280 °C Elimination of water of crystallisation
Flammability (solid, gas)	: No data available

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Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1,97 g/cm <sup>3</sup> (20°C)
Solubility	: Water: 965 g/l
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Release of crystallization water if heated.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

Oxidising agents.

### 10.6. Hazardous decomposition products

When heated to decomposition, emits dangerous fumes:

- SO<sub>x</sub>.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity	: Oral: Harmful if swallowed.
Additional information	: May cause gastrointestinal irritation, nausea, vomiting and diarrhoea Dizziness, headaches, drop in blood pressure, nausea

#### Zinc sulphate heptahydrate (7446-20-0)

LD50 oral rat	1260 mg/kg
Skin corrosion/irritation	: Slightly irritating to the skin pH: 4 - 6 (20°C)(50 g/l)
Serious eye damage/irritation	: Causes serious eye damage. pH: 4 - 6 (20°C)(50 g/l)
Respiratory or skin sensitisation	: Not classified
Additional information	: Possible oedema of the upper respiratory tract
Germ cell mutagenicity	: Not classified

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Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Potential adverse human health effects and symptoms	: Irritation: may cause irritation to the respiratory system.
Other information	: See actual entry in RTECS for complete information: ZH5300000.

## SECTION 12: Ecological information

### 12.1. Toxicity

Zinc sulphate heptahydrate (7446-20-0)	
LC50 fish 1	0,1 - 0,43 mg/l Oncorhynchus mykiss (Rainbow trout)
EC50 Daphnia 1	12 mg/l Daphnia magna

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

Additional information : Prevent entry to sewers and public waters. Endangering to drinking water

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Dispose of this material and its container at hazardous or special waste collection point.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

## SECTION 14: Transport information

In accordance with ADR / IMDG / IATA




ADR	IMDG	IATA
<b>14.1. UN number</b>		
3077	3077	3077
<b>14.2. UN proper shipping name</b>		
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.	Environmentally hazardous substance, solid, n.o.s.
<b>Transport document description</b>		
UN 3077 ENVIRONMENTALLY	UN 3077 ENVIRONMENTALLY	UN 3077 Environmentally hazardous

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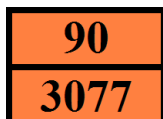
according to Regulation (EU) 2015/830

ADR	IMDG	IATA
HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III, (E)	HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III, MARINE POLLUTANT	substance, solid, n.o.s., 9, III
<b>14.3. Transport hazard class(es)</b>		
9	9	9
		
<b>14.4. Packing group</b>		
III	III	III
<b>14.5. Environmental hazards</b>		
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes
No supplementary information available		

### 14.6. Special precautions for user

#### . Overland transport

Classification code (ADR) : M7  
Special provisions (ADR) : 274, 335, 601, 375  
Limited quantities (ADR) : 5kg  
Excepted quantities (ADR) : E1  
Portable tank and bulk container instructions (ADR) : T1, BK1, BK2  
Portable tank and bulk container special provisions (ADR) : TP33  
Tank code (ADR) : SGAV, LGBV  
Vehicle for tank carriage : AT  
Transport category (ADR) : 3  
Special provisions for carriage - Packages (ADR) : V13  
Special provisions for carriage - Bulk (ADR) : VC1, VC2  
Special provisions for carriage - Loading, unloading and handling (ADR) : CV13  
Hazard identification number (Kemler No.) : 90  
Orange plates :



Tunnel restriction code (ADR) : E  
EAC code : 2Z

#### - Transport by sea

Special provisions (IMDG) : 274, 335, 966, 967, 969  
Limited quantities (IMDG) : 5 kg  
Excepted quantities (IMDG) : E1  
Packing instructions (IMDG) : P002, LP02  
Special packing provisions (IMDG) : PP12

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IBC packing instructions (IMDG)	: IBC08
IBC special provisions (IMDG)	: B3
Tank instructions (IMDG)	: T1, BK1, BK2, BK3
Tank special provisions (IMDG)	: TP33
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-F
Stowage category (IMDG)	: A
Stowage and handling (IMDG)	: SW23
MFAG-No	: 171

### - Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y956
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 956
PCA max net quantity (IATA)	: 400kg
CAO packing instructions (IATA)	: 956
CAO max net quantity (IATA)	: 400kg
Special provisions (IATA)	: A97, A158, A179, A197
ERG code (IATA)	: 9L

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Zinc sulphate heptahydrate is not on the REACH Candidate List

Zinc sulphate heptahydrate is not on the REACH Annex XIV List

#### 15.1.2. National regulations

##### Germany

12th Ordinance Implementing the Federal Immission Control Act -  
12.BImSchV

: Is not subject of the 12. BImSchV  
(Hazardous Incident Ordinance)

##### Netherlands

SZW-lijst van kankerverwekkende stoffen

: Zinc sulphate heptahydrate is listed

SZW-lijst van mutagene stoffen

: The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding

: The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen –  
Vruchtbaarheid

: The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling

: The substance is not listed

##### Denmark

Recommendations Danish Regulation

: Young people below the age of 18  
years are not allowed to use the  
product



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### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Indication of changes:

1.4	Emergency number	Modified	
2	Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]	Removed	Obsolete
8.2	Hand protection	Modified	Specified material, thickness, et cetera of gloves
9.1	Solubility in water	Modified	
12.1	LC50 fish 1	Modified	

Abbreviations and acronyms:

ATE	Acute Toxicity Estimate
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
BCF	Bioconcentration factor
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DPD	Dangerous Preparations Directive 1999/45/EC
DSD	Dangerous Substances Directive 67/548/EEC
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
PBT	Persistent Bioaccumulative Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
SDS	Safety Data Sheet

Data sources

: Manufacturer. REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. Supplier.

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
H302	Harmful if swallowed.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects

SDS Biochemicals version 2018

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*