

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

### 1.1. Product identifier

Substance name : Zinc sulphate heptahydrate  
 EC Index-No. : 030-006-00-9  
 EC-No. : 231-793-3  
 CAS-No. : 7733-02-0  
 Formula :  $ZnSO_4 \cdot 7H_2O$

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

#### 1.2.1. Relevant identified uses

Use of the substance/mixture : Industrial use

#### 1.2.2. Uses advised against

Restrictions on use : No data available

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

Neochem Tarımsal Kimyevi Madd.San.Ve Tic.Ltd.Şti.  
 Kazımdırık mh.284.sk.No:2 Folkart Time Ofis 2 blok kat:6 / 615 Bornova / İzmir  
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[info@neochemkimya.com.tr](mailto:info@neochemkimya.com.tr) - [www.neochemkimya.com.tr](http://www.neochemkimya.com.tr)

### 1.4. Emergency telephone number

Emergency number : +90 216 593 11 57

## 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

#### Adverse physicochemical, human health and environmental effects

Harmful if swallowed. Causes serious eye damage. Very toxic to aquatic life with long lasting effects.

### 2.2. Label elements

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

Hazard pictograms (CLP)



GHS05

GHS07

GHS09

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)

P264 - Wash hands, forearms and face thoroughly after handling.  
 P273 - Avoid release to the environment.  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
 P301+P312 - IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.  
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Name	Product identifier	%
Zinc sulphate heptahydrate	(CAS-No.) 7733-02-0 (EC-No.) 231-793-3 (EC Index-No.) 030-006-00-9	> 99

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or a doctor.
First-aid measures after skin contact	: Wash skin with plenty of water. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Rinse mouth. Do not induce vomiting. Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after eye contact	: Serious damage to eyes.
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### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : The product is not flammable. Use extinguishing media appropriate for surrounding fire. Unsuitable extinguishing media : None known.

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

Hazardous decomposition products in case of fire; : Toxic fumes may be released. Zinc oxide. Sulphur oxides. Smoke.

### 5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	: Ventilate spillage area. Avoid dust formation. Avoid contact with skin and eyes. Avoid breathing dust. Avoid all unnecessary exposure.
Measures in case of dust release	: Mechanically ventilate the spillage area. Where excessive dust may result, use approved respiratory protection equipment.

#### 6.1.2. For emergency responders

Protective equipment

: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures

: Evacuate unnecessary personnel.

#### 6.2. Environmental precautions

Avoid release to the environment. Notify authorities if enters sewers or public waters.

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

For containment

: Collect spillage.

Methods for cleaning up

: Mechanically recover the product. Avoid dust formation. Collect in closed containers for disposal.

Other information

: Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling

: Ensure good ventilation of the work station. Avoid dust formation. Avoid contact with skin and eyes. Avoid breathing dust. Wear personal protective equipment.

Hygiene measures

: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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

Storage conditions

: Keep container tightly closed and dry. Keep in a cool, well-ventilated place away from incompatible materials. Protect from moisture. Avoid dust formation.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Zinc sulphate heptahydrate (7733-02-0)

##### DNEL/DMEL (Workers)

Long-term - systemic effects, dermal	8.3 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	1 mg/m <sup>3</sup>

##### DNEL/DMEL (General population)

Long-term - systemic effects, oral	0.83 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	1.3 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	8.3 mg/kg bodyweight/day

##### PNEC (Water)

PNEC aqua (freshwater)	20.6 µg/l
PNEC aqua (marine water)	6.1 µg/l

##### PNEC (Sediment)

PNEC sediment (freshwater)	117.8 mg/kg dwt
PNEC sediment (marine water)	56.5 mg/kg dwt

##### PNEC (Soil)

PNEC soil	35.6 mg/kg dwt
PNEC (STP)	

PNEC sewage treatment plant	52 µg/l
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#### 8.2. Exposure controls

##### Appropriate engineering controls:

Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

**Hand protection:**

Protective gloves. Standard EN 374 - Protective gloves against chemicals.

**Eye protection:**

Safety glasses with side shields. In case of dust production: protective goggles. Standard EN 166 - Personal eye-protection.

**Skin and body protection:**

Wear suitable protective clothing. In case of dust production: dustproof clothing

**Respiratory protection:**

In case of insufficient ventilation, wear suitable respiratory equipment. Dust production: dust mask with filter type P1. Standard EN149 - Filtering Halfmasks to protect against particles

**Personal protective equipment symbol(s):**



**Environmental exposure controls:**

Avoid release to the environment.

## SECTION 9: Physical and chemical properties

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

Physical state	: Solid
Appearance	: Powder
Colour	: White.
Odour	: Odourless
Odour threshold	: No data available
pH	: 4 - 6 (50 g/l - 20 °C)
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 100 °C
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
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	: Soluble in water; 965 g/l (20 °C)
Log Pow	: No data available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: No data available
Explosive properties	: Not explosive
Oxidising properties	: Not oxidizing
Explosive limits	: Not applicable

## 9.2. Other information

Bulk density : 800 - 1000 kg/m<sup>3</sup>

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials

Strong oxidizing agents.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed.

#### Zinc sulphate heptahydrate (7733-02-0)

LD50 oral	≈ 926 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 636 - 1350
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	:Not classified
Carcinogenicity	:Not classified
Reproductive toxicity	:Not classified
STOT-single exposure	:Not classified
STOT-repeated exposure	:Not classified
Aspiration hazard	:Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

Acute aquatic toxicity	: Very toxic to aquatic life.
Chronic aquatic toxicity	: Very toxic to aquatic life with long lasting effects.

### 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

No additional information available






### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Regional legislation (waste)	: Dispose in a safe manner in accordance with local/national regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Do not re-use empty containers. Empty containers should be taken for recycling, recovery or waste in accordance with local regulation.
European List of Waste (LoW) code	: According to the European Waste Catalogue, waste codes are not product specific, but application specific. Waste codes should be assigned by the user.

### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
3077	3077	3077	3077	3077
<b>14.2. UN proper shipping name</b>				
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc sulphate heptahydrate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc sulphate heptahydrate)	Environmentally hazardous substance, solid, n.o.s. (Zinc sulphate heptahydrate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc sulphate heptahydrate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc sulphate heptahydrate)
<b>Transport document description</b>				
UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc sulphate heptahydrate), 9, III, (-)	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc sulphate heptahydrate), 9, III, MARINE POLLUTANT	UN 3077 Environmentally hazardous substance, solid, n.o.s. (Zinc sulphate heptahydrate), 9, III	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc sulphate heptahydrate), 9, III	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc sulphate heptahydrate), 9, III
<b>14.3. Transport hazard class(es)</b>				
9	9	9	9	9
				
<b>14.4. Packing group</b>				
III	III	III	III	III
<b>ADR</b>				
<b>14.5. Environmental hazards</b>				
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes



#### 14.6. Special precautions for user

##### - Overland transport

Classification code (ADR)	: M7
Special provisions (ADR)	: 274, 335, 375, 601
Limited quantities (ADR)	: 5kg
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P002, IBC08, LP02, R001
Special packing provisions (ADR)	: PP12, B3
Mixed packing provisions (ADR)	: MP10
Portable tank and bulk container instructions (ADR)	: T1, BK1, BK2, BK3
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 :	<div style="border: 1px solid black; padding: 2px; display: inline-block;">90</div> <div style="border: 1px solid black; padding: 2px; display: inline-block;">3077</div>
Tunnel restriction code (ADR)	: -
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)	: LP02, P002
Special packing provisions (IMDG)	: PP12
IBC packing instructions (IMDG)	: IBC08
IBC special provisions (IMDG)	: B3
Tank instructions (IMDG)	: BK1, BK2, BK3, T1
Tank special provisions (IMDG)	: TP33
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-F
Stowage category (IMDG)	: A
Stowage and handling (IMDG)	: SW23

##### - 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
RG code (IATA)	: 9L

**- Inland waterway transport**

Classification code (ADN)	: M7
Special provisions (ADN)	: 274, 335, 375, 601
Limited quantities (ADN)	: 5 kg
Excepted quantities (ADN)	: E1
Carriage permitted (ADN)	: T* B**
Equipment required (ADN)	: PP, A
Number of blue cones/lights (ADN)	: 0

**- Rail transport**

Classification code (RID)	: M7
Special provisions (RID)	: 274, 335, 375, 601
Limited quantities (RID)	: 5kg
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P002, IBC08, LP02, R001
Special packing provisions (RID)	: PP12, B3
Mixed packing provisions (RID)	: MP10
Portable tank and bulk container instructions (RID)	: T1, BK1, BK2, BK3
Portable tank and bulk container special provisions: TP33 (RID)	
Tank codes for RID tanks (RID)	: SGAV, LGBV
Transport category (RID)	: 3
Special provisions for carriage – Packages (RID)	: W13

Special provisions for carriage – Bulk (RID)	: VC1, VC2
Special provisions for carriage - Loading, unloading and handling (RID)	: CW13, CW31
Colis express (express parcels) (RID)	: CE11
Hazard identification number (RID)	: 90

**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

Reference to AwSV

: Water hazard class (WGK) 3, Highly hazardous to water (Classification according to AwSV; ID No. 432)

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 : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting: The substance is not listed  
giftige stoffen – Borstvoeding

NIET-limitatieve lijst van voor de voortplanting: The substance is not listed  
giftige stoffen – Vruchtbaarheid

NIET-limitatieve lijst van voor de voortplanting : The substance is not listed  
giftige stoffen – Ontwikkeling

##### Denmark

Danish National Regulations

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

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

### SECTION 16: Other information

Abbreviations and acronyms:

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
EC50	Median effective concentration
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent Bioaccumulative Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative

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.

#### Disclaimer of Liability

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