CAS No: 1314-13-2 MSDS



# **MATERIAL SAFETY DATA SHEET (MSDS)**

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

1.1. Product identifier

Product form : Substance

:

EC index no : 030-013-00-7
EC no : 215-222-5
CAS No : 1314-13-2
Product code : 06552

Chemical structure :

ZnO

#### 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 : Laboratory chemicals, Manufacture of substances

### 1.2.2. Uses advised against

No additional information available

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

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## **SECTION 2: Hazards identification**

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

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

Hazardous to the aquatic H410 environment — Chronic Hazard, Category 1

Full text of classification categories and H statements : see section 16

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### Classification according to Directive 67/548/EEC or 1999/45/EC

N; R50/53

Full text of R-phrases: see section 16

### Adverse physicochemical, human health and environmental effects

No additional information available

#### 2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP] Extra labelling to displayExtra classification(s) to display

Hazard pictograms (CLP)

\*\*\*

GHS09

Signal word (CLP) : Warning

Hazard statements (CLP) : H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (CLP) : P273 - Avoid release to the environment

P501 - Dispose of contents/container to ...

## 2.3. Other hazards

No additional information available

## **SECTION 3: Composition/information on ingredients**

#### 3.1. Substance

 Name
 : ZINC OXIDE AR

 CAS No
 : 1314-13-2

 EC no
 : 215-222-5

 EC index no
 : 030-013-00-7

Full text of R- and H-phrases: see section 16

#### 3.2. Mixture

Not applicable

#### **SECTION 4: First aid measures**

## 4.1. Description of first aid measures

First-aid measures after inhalation : Assure fresh air breathing. If breathing is difficult, remove victim to fresh air and keep

at rest in a position comfortable for breathing.

First-aid measures after skin contact : Wash with plenty of soap and water. 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. Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Do not induce vomiting.

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

No additional information available

### 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 : Carbon dioxide. Dry powder. Foam. Water spray.

Unsuitable extinguishing media : Do not use a heavy water stream.

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

No additional information available

### 5.3. Advice for firefighters

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory

protection.

## **SECTION** 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required.

#### 6.2. Environmental precautions

Very toxic to aquatic life with long lasting effects.

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

Methods for cleaning up : Minimize generation of dust. On land, sweep or shovel into suitable containers.

## 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 : Avoid contact with skin and eyes. Avoid dust formation. Provide good ventilation in

process area to prevent formation of vapour.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating,

drinking or smoking and when leaving work.

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

Storage conditions : Store in a well-ventilated place. Keep container tightly closed. Store in original

container. Keep container tightly closed.

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

No additional information available

#### **SECTION 8: Exposure controls/personal protection**

## 8.1. Control parameters

No additional information available

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### 8.2. Exposure controls

Hand protection : protective gloves

Eye protection : Chemical goggles or safety glasses

Skin and body protection : Wear fire/flame resistant/retardant clothing

Respiratory protection : Wear respiratory protection

### **SECTION 9: Physical and chemical properties**

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

Physical state : Solid

Colour : White powder.

Odour : odourless.

Odour threshold : No data available

pH : No data available

Relative evaporation rate (butylacetate=1) : No data available

Melting point : 1975 °C

Freezing point : No data available

Boiling point : No data available

Flash point : No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Flammability (solid, gas) : No data available

Vapour pressure : No data available

Relative vapour density at 20 °C : No data available

Relative density : No data available

Density : 5.6 g/cm<sup>3</sup>

Solubility : Water: Insoluble in water

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

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## **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Direct sunlight. Air contact. Moisture.

### 10.5. Incompatible materials

Oxidizing agent.

### 10.6. Hazardous decomposition products

No additional information available

### **SECTION 11: Toxicological information**

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Reproductive toxicity : Not classified Specific target organ toxicity (single : Not classified

exposure)

Specific target organ toxicity (repeated

exposure)

: Not classified

Aspiration hazard : Not classified

## **SECTION 12: Ecological information**

## 12.1. Toxicity

Ecology - water : Very toxic to aquatic life with long lasting effects.

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#### 12.2. Persistence and degradability

## **ZINC OXIDE AR (1314-13-2)**

Persistence and degradability May cause long-term adverse effects in the environment.

#### 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

Product/Packaging disposal

recommendations

: Dispose of contents/container to ...

## **SECTION 14: Transport information**

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

## 14.1. UN number

 UN-No. (ADR)
 : 3077

 UN-No. (IMDG)
 : 3077

 UN-No.(IATA)
 : 3077

 UN-No.(ADN)
 : 3077

 UN-No. (RID)
 : 3077

### 14.2. UN proper shipping name

Proper Shipping Name (ADR)

: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Proper Shipping Name (IMDG)

: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Proper Shipping Name (IATA)

: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Proper Shipping Name (ADN)

: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Proper Shipping Name (RID)

: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Transport document description (ADR) : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III,

(E)

Transport document description (IMDG) : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III,

MARINE POLLUTANT

Transport document description (IATA) : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III

Transport document description (ADN) : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III

Transport document description (RID) : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III

#### 14.3. Transport hazard class(es)

#### **ADR**

Transport hazard class(es) (ADR) : 9
Danger labels (ADR) : 9

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### **IMDG**

Transport hazard class(es) (IMDG) : 9
Danger labels (IMDG) : 9



## IATA

Transport hazard class(es) (IATA) : 9
Hazard labels (IATA) : 9



#### ADN

Transport hazard class(es) (ADN) : 9
Danger labels (ADN) : 9



### RID

Transport hazard class(es) (RID) : 9
Danger labels (RID) : 9



## 14.4. Packing group

Packing group (ADR) : III
Packing group (IMDG) : III
Packing group (IATA) : III
Packing group (ADN) : III
Packing group (RID) : III

## 14.5. Environmental hazards

Dangerous for the environment : Yes
Marine pollutant : Yes

Other information : No supplementary information available

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#### 14.6. Special precautions for user

#### - Overland transport

Classification code (ADR) : M7

Special provision (ADR) : 274, 335, 601, 375

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 : T1, BK1, BK2

instructions (ADR)

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 : V13

(ADR)

Special provisions for carriage - Bulk : VC1, VC2

(ADR)

Special provisions for carriage - Loading,

unloading and handling (ADR)

: CV13

Hazard identification number (Kemler No.) : 90

Orange plates :

90 3077

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

## - Transport by sea

Special provision (IMDG) : 274, 335, 966, 967, 969

Limited quantities (IMDG) : 5 kg
Excepted quantities (IMDG) : E1

Packing instructions (IMDG) : P002, LP02
Packing provisions (IMDG) : PP12
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 : 30kgG

(IATA)

PCA packing instructions (IATA) : 956
PCA max net quantity (IATA) : 400kg
CAO packing instructions (IATA) : 956

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CAO max net quantity (IATA) : 400kg

Special provision (IATA) : A97, A158, A179, A197

ERG 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 provision (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 : T1, BK1, BK2

instructions (RID)

Portable tank and bulk container special

provisions (RID)

: TP33

Tank codes for RID tanks (RID) : SGAV, LGBV

Transport category (RID) : 3 Special provisions for carriage – Packages : W13

(RID)

Special provisions for carriage – Bulk

(RID)

: VC1, VC2

Special provisions for carriage - Loading

and unloading (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 73/78 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 OXIDE AR is not on the REACH Candidate List ZINC OXIDE AR is not on the REACH Annex XIV List

#### 15.1.2. National regulations

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#### Germany

AwSV/VwVwS Annex reference : Water hazard class (WGK) 2, hazardous to water (Classification according to

VwVwS, Annex 3; WGK No 2187)

12th Ordinance Implementing the Federal

Immission Control Act - 12.BlmSchV

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

## 15.2. Chemical safety assessment

No additional information available

### **SECTION 16: Other information**

## Full text of R-, H- and EUH-phrases:

Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
H410	Very toxic to aquatic life with long lasting effects
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
N	Dangerous for the environment

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

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