

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 14.01.2015


Version number 40

Revision: 14.01.2015


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

- **1.1 Product identifier**
- **Trade name:** zinc chloride
- **Article number:** 0360
- **CAS Number:**  
7646-85-7
- **EC number:**  
231-592-0
- **Index number:**  
030-003-00-2
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture :** For Laboratory, Research or Manufacturing use.
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Avantor Performance Materials B.V.  
P.O.Box 1  
7400 AA Deventer  
The Netherlands  
Tel: (+31) (0)570 - 687500  
Fax: (+31) (0)570 - 687574  
E-mail : jtbaker.nl@avantormaterials.com
- **Informing department:**  
E-mail : pawel.skiba@avantormaterials.com  
Avantor Performance Materials Sales Office Tel.: +31(0) 570 687500
- **1.4 Emergency telephone number:**  
Environment Health & Safety department  
during normal opening times (8 am till 5.30 pm) tel: (+31)(0) 570 687500


**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
  - **Classification according to Regulation (EC) No 1272/2008**  
Skin Corr. 1B      H314 Causes severe skin burns and eye damage.  
Aquatic Acute 1    H400 Very toxic to aquatic life.  
Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.  
Acute Tox. 4      H302 Harmful if swallowed.
  - **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**  
C; Corrosive  
R34:      Causes burns.  
Xn; Harmful  
R22:      Harmful if swallowed.  
N; Dangerous for the environment  
R50/53:    Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
  - **Information concerning particular hazards for human and environment:** void
  - **2.2 Label elements**
  - **Labelling according to Regulation (EC) No 1272/2008**  
The substance is classified and labelled according to the CLP regulation.
  - **Hazard pictograms**
- 

GHS05



GHS07



GHS09
- **Signal word** Danger
  - **Hazard statements**  
H302 Harmful if swallowed.

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*H314 Causes severe skin burns and eye damage.**H410 Very toxic to aquatic life with long lasting effects.***Precautionary statements***P260 Do not breathe dust/fume/gas/mist/vapours/spray.**P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.**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 doctor/physician.**P405 Store locked up.**P501 Dispose of contents/container in accordance with local/regional/national/international regulations.***2.3 Other hazards****Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**SECTION 3: Composition/information on ingredients****3.1 Chemical characterisation: Substances****CAS No. Designation:**

7646-85-7 zinc chloride

**Identification number(s):****EC number:** 231-592-0**Index number:** 030-003-00-2**SECTION 4: First aid measures****4.1 Description of first aid measures****General information***Instantly remove any clothing soiled by the product.**Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.***After inhalation** *In case of unconsciousness bring patient into stable side position for transport.***After skin contact** *Instantly wash with water and soap and rinse thoroughly.***After eye contact** *Rinse opened eye for several minutes under running water. Then consult doctor.***After swallowing***Rinse out mouth and then drink plenty of water.**Seek medical treatment.**Instantly call for doctor.**Drink copious amounts of water and provide fresh air. Instantly call for doctor.***4.2 Most important symptoms and effects, both acute and delayed** *No further relevant information available.***4.3 Indication of any immediate medical attention and special treatment needed***No further relevant information available.***SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing agents***CO<sub>2</sub>, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.***For safety reasons unsuitable extinguishing agents** *Water with a full water jet.***5.2 Special hazards arising from the substance or mixture** *No further relevant information available.*

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- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus.

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**  
Inform respective authorities in case product reaches water or sewage system.
- **6.3 Methods and material for containment and cleaning up:**  
Use neutralising agent.  
Dispose of contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling  
See Section 8 for information on personal protection equipment.  
See Section 13 for information on disposal.

**SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling** Thorough dedusting.
- **Information about protection against explosions and fires:** no special requirements
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
This product is hygroscopic.  
Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

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

· **8.1 Control parameters**

- **Components with critical values that require monitoring at the workplace:**

**7646-85-7 zinc chloride**

WEL Short-term value: 2 mg/m<sup>3</sup>

Long-term value: 1 mg/m<sup>3</sup>

- **Additional information:** The lists that were valid during the compilation were used as basis.

· **8.2 Exposure controls**

- **Personal protective equipment**
- **General protective and hygienic measures**  
Keep away from foodstuffs, beverages and food.  
Instantly remove any soiled and impregnated garments.  
Wash hands during breaks and at the end of the work.  
Avoid contact with the eyes and skin.
- **Breathing equipment:** Not necessary if room is well-ventilated.
- **Protection of hands:**  
Protective gloves.  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

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.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:** Tightly sealed safety glasses.

### SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Powder

Colour: White

- Smell: Odourless

- Odour threshold: Not determined.

- pH-value: Not applicable.

- **Change in condition**

Melting point/Melting range: 318 °C

Boiling point/Boiling range: 721 °C

- Flash point: Not applicable

- Inflammability (solid, gaseous) Product is not inflammable.

- **Ignition temperature:**

Decomposition temperature: Not determined.

- Self-inflammability: Not determined.

- Danger of explosion: Product is not explosive.

- **Critical values for explosion:**

Lower: Not determined.

Upper: Not determined.

- Steam pressure at 20 °C: 1 hPa

- Density at 20 °C 2.91 g/cm<sup>3</sup>

- Settled apparent density at 20 °C 1400 kg/m<sup>3</sup>

- Relative density Not determined.

- Vapour density Not applicable.

- Evaporation rate Not applicable.

- **Solubility in / Miscibility with**

Water at 20 °C: 3680 g/l

- Partition coefficient (n-octanol/water): Not determined.

- **Viscosity:**

dynamic: Not applicable.

kinematic: Not applicable.

- **9.2 Other information** No further relevant information available.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity**

- **10.2 Chemical stability**

- **Thermal decomposition / conditions to be avoided:** Heat, boiling temperatures.

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- **10.3 Possibility of hazardous reactions** No dangerous reactions known
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:** Harmful if swallowed.
- **LD/LC50 values that are relevant for classification:**

|      |      |                 |
|------|------|-----------------|
| Oral | LD50 | 350 mg/kg (rat) |
|------|------|-----------------|

- **Primary irritant effect:**
- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **Sensitisation:** No sensitizing effect known.
- **Additional toxicological information:**  
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**  
Water danger class (D) 3 (Assessment by list): extremely hazardous for water.  
Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.  
Must not reach sewage water or drainage ditch undiluted or unneutralised.  
Danger to drinking water if even extremely small quantities leak into soil.  
Also poisonous for fish and plankton in water bodies.  
Very toxic for aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

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**SECTION 14: Transport information**

|  |   |
|--|---|
| · 14.1 UN-Number<br>· ADR, IMDG, IATA  | UN2331  |
| · 14.2 UN proper shipping name<br>· ADR<br>· IMDG, IATA  | 2331 ZINC CHLORIDE, ANHYDROUS<br>ZINC CHLORIDE, ANHYDROUS   |
| · 14.3 Transport hazard class(es)<br>· ADR   |   |
|                 |   |
| · Class<br>· Label   | 8 (C2) Corrosive substances.<br>8   |
| · IMDG, IATA   |   |
|                |   |
| · Class<br>· Label   | 8 Corrosive substances.<br>8  |
| · 14.4 Packing group<br>· ADR, IMDG, IATA  | III   |
| · 14.5 Environmental hazards:<br>· Marine pollutant:   | Environmentally hazardous substance, solid; Marine Pollutant<br>No  |
| · 14.6 Special precautions for user<br>· Kemler Number:<br>· EMS Number:<br>· Segregation groups | Warning: Corrosive substances.<br>80<br>F-A,S-B<br>Acids, heavy metals and their salts (including their organometallic compounds) |
| · 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code                   | Not applicable.   |
| · Transport/Additional information:  |   |
| · ADR<br>· Limited quantities (LQ)<br>· Excepted quantities (EQ)                                 | 5 kg<br>Code: E1<br>Maximum net quantity per inner packaging: 30 g<br>Maximum net quantity per outer packaging: 1000 g            |
| · Transport category<br>· Tunnel restriction code  | 3<br>E  |
| · IMDG<br>· Limited quantities (LQ)<br>· Excepted quantities (EQ)                                | 5 kg<br>Code: E1<br>Maximum net quantity per inner packaging: 30 g<br>Maximum net quantity per outer packaging: 1000 g            |
| · UN "Model Regulation":   | UN2331, ZINC CHLORIDE, ANHYDROUS, 8, III  |

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### SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- **Labelling according to Regulation (EC) No 1272/2008**  
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS05 GHS07 GHS09

- **Signal word** *Danger*
- **Hazard statements**  
H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H410 Very toxic to aquatic life with long lasting effects.
- **Precautionary statements**  
P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
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 doctor/physician.  
P405 Store locked up.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- 15.2 **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing data specification sheet:** EHS
- **Contact:** Paweł Skiba
- **Abbreviations and acronyms:**  
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organisation  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)  
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
Acute Tox. 4: Acute toxicity, Hazard Category 4  
Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B  
Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1  
Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
- **\* Data compared to the previous version altered.**