

# SAFETY DATA SHEET ACCORDING TO 1907/2006/EC, 453/2010/EU, 2015/830/EU (REACH)

## ZINC NITRATE

Revised on / Version: 19/7/2019/ 0003  
Replaces revision of / Version: 7/3/2018 / 0002

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

- 1.1 Product Identifier**  
**Product Name** : ZINC NITRATE  
**Product description** : Fertiliser  
**Product Type** : Liquid
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**  
Relevant uses: Fertiliser  
Uses advised against: All uses not specified in this section or in section 7.3
- 1.3 Details of the supplier of the safety data sheet**  
Rolfes Agri (Pty) Ltd  
288 Mundt Street  
Waltloo  
Pretoria  
South Africa  
Tel: +27(0)12 803 0145  
Fax: +27(0)12 803 8418
- 1.4 Emergency telephone number**  
**National advisory body/Poison Centre**  
**Telephone number** : SOUTH AFRICA  
Griffon Poison Information Centre  
(24 Hour Poisoning Emergency Helpline)  
+27(0)82 446 8946



**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture:****CLP Regulation (EC) no 1272/2008:**

Classification of this product has been carried out in accordance with CLP Regulation (EC) no 1272/2008.

Acute Tox. 4: Acute Toxicity, Category 4, H302  
Skin Irrit. 2: Skin irritation, Category 4, H315  
Eye Dam. 1: Eye Damage, Category 1, H318  
Aquatic Acute 1: Aquatic Acute, Category 1, H400  
Aquatic Chronic 1: Aquatic Chronic, Category 1, H410

**2.2 Label elements****CLP Regulation (EC) no 1272/2008:****Hazard pictogram(s):****Signal word**

: Danger

**Hazard statement(s)**

: H302 - Harmful if swallowed.  
H315 - Causes skin irritation  
H319 - Causes serious eye damage.  
H400 - Very toxic to aquatic life  
H410 - Very toxic to aquatic life with long lasting effects

**Precautionary statement(s) :**

P101 - If medical advice is needed, have product container or label at hand.  
P102 - Keep out of reach of children.  
P103 - Read label before use.  
P264 - Wash hands thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P273 - Avoid release to the environment  
P280 - Wear protective gloves/face shield/eye protection.  
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician.  
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do, continue rinsing.  
P332+P313 - If skin irritation occurs: Get medical advice/attention.  
P337+P313 - If eye irritation persists: Get medical advice/attention.  
P321 - Specific treatment (see Section 4 on this label).  
P330 - Rinse mouth.  
P362 - Take off contaminated clothing and wash before reuse.  
P391 - Collect spillage  
P501 - Dispose of the contents/containers in accordance with the current legislation on waste treatment.

**2.3 Other hazards**

Non-applicable

**SECTION 3: Composition/information on ingredients****3.1 Substance:** Non-applicable**3.2 Mixture:****Chemical description:** Multi-Constituent Substance**Component(s):**

<b>Chemical Name:</b>	Zinc Nitrate
<b>CAS:</b>	7779-88-6
<b>EC:</b>	231-943-8
<b>Index:</b>	-
<b>REACH:</b>	-

## SECTION 4: First Aid Measures

### 4.1 Description of first aid measures

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

#### By inhalation:

Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Do NOT give mouth-to-mouth resuscitation if victim ingested or inhaled the substance. Keep person at rest and warm. Treat symptomatically and supportively as and when required. Obtain medical advice if necessary.

#### By skin contact:

Wipe off excess material from skin then immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly cleanshoes before reuse.

#### By eye contact:

Immediately flush eyes with lukewarm water or saline solution for at least 15 minutes, lifting lower and upper eyelids occasionally. Check for and remove any contact lenses after 5 minutes. Get medical attention if necessary.

#### By ingestion / aspiration:

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

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

No information available.

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

**Notes to physician** : None.  
**Specific treatments** : Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1 Fire Extinguishing Media

#### Suitable extinguishing media:

Not combustible, but substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Increases flammability of any combustible substance in contact with it

#### Fire extinguishing media:

Water or water spray in early stages of fire. Foam or dry chemical may also be used..

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

#### Hazards from the substance or mixture:

If water is used, dike fire control water for later disposal. Keep away from streams or lakes.

#### Hazardous thermal decomposition products:

During fire, irritating and toxic gases will be released due to thermal decomposition or combustion.

**5.3 Additional provisions:**

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. In the event of a fire, wear full protective clothing and self-contained breathing apparatus with full-face piece operated in the pressure demand or other positive pressure mode.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures:**

Ventilate area of leak or spill. Wear appropriate personal protective equipment.

**6.2 Environmental precautions:**

Keep product away from drains, surface and underground water.

**6.3 Methods and materials for containment and cleaning up****Spills:**

Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer.

**Large Spills:**

Dyke far ahead of liquid spills for later disposal. Prevent entry of the substance into waterways, sewers, basements or confined areas.

**6.4 Reference to other sections:**

See Section 1 for emergency contact information.

See Section 8 for information on appropriate personal protective equipment.

See Section 13 for additional waste treatment information.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling:****A.- Precautions for safe manipulation**

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

**B.- Technical recommendations for the prevention of fires and explosions**

Due to its non-flammable nature, the product does not present a fire risk under normal conditions of storage, manipulation and use.

**C.- Technical recommendations to prevent ergonomic and toxicological risks**

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

**D.- Technical recommendations to prevent environmental risks**

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

**7.2 Conditions for safe storage, including any incompatibilities:****A.- Technical measures for storage**

Minimum Temp.: 5 °C

Maximum Temp.: 30 °C

Maximum time: 36 Months

**B.- General conditions for storage**

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

- 7.3 Specific end use(s)** Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

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

### **8.1 Control parameters**

There are no occupational exposure limits for the substances contained in the product

### **8.2 Exposure controls**

#### **Appropriate engineering controls:**

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### **Individual protection measures**

##### **Hygiene measures:**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

##### **Eye/face protection:**

Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

##### **Skin protection**

##### **Hand protection:**

Protective gloves against minor risks.

##### **Body protection:**

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact..

##### **Other skin protection:**

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

##### **Respiratory protection:**

For conditions of use where exposure to the substance is apparent and engineering controls are not feasible, consult an industrial hygienist. For emergencies, or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. **WARNING:** Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

##### **Environmental exposure controls:**

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. No significant release into the air is expected.

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

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

For complete information, please refer to product datasheet.

#### **Appearance**

Physical state	: Liquid
Colour	: Colorless to yellowish liquid
Odour	: Slight nitric acid odor.

#### **Volatility:**

Boiling point at atmospheric pressure	:
Vapour pressure at 20 °C	: Not determined

**ZINC NITRATE**

Vapour pressure at 50 °C : Not determined  
 Evaporation rate at 20 °C : Not determined

**Product description:**

Density at 20 °C : 1.32 -1.35  
 Relative density at 20 °C : Not determined  
 Dynamic viscosity at 20 °C : Not determined  
 Kinematic viscosity at 20 °C : Not determined  
 Kinematic viscosity at 40 °C : Not determined  
 pH : Not determined  
 Vapour density at 20 °C : Not determined  
 Partition coefficient n-octanol/water 20 °C : Not determined  
 Solubility in water at 20 °C : Soluble in water.  
 Solubility properties : Not determined  
 Decomposition temperature : Not determined  
 Melting point/freezing point : Not determined  
 Explosive properties : No explosive properties  
 Oxidising properties : Oxidiser

**9.2 Other information:** No additional information.

**SECTION 10: Stability and reactivity****10.1 Reactivity:**

React with metallic powders

**10.2 Chemical stability:**

Chemically stable under the conditions of storage, handling and use.

**10.3 Possibility of hazardous reactions:**

Aqueous solution is an acid.

**10.4 Conditions to avoid:**

Heat, flames, ignition sources and incompatibles.

**10.5 Incompatible materials:**

Metal powders, cyanides, sodium hypophosphite, stannous chloride, phosphorus, thiocyanates, carbon, metallic sulfides, sulfur, organic materials. Substance is capable of reacting rapidly with reducing agents and combustible materials at elevated temperatures

**10.6 Hazardous decomposition products:**

Oxides of nitrogen and toxic metal fumes may form when heated to decomposition.

**SECTION 11: Toxicological information****11.1 Information on toxicological effects**

<b>Acute toxicity</b>	
Oral	LD50 Oral - Rat 1190 mg/kg
Chronic Toxicity	No additional information
<b>Corrosion Irritation</b>	
Dermal	Skin Rabbit – severe skin irritation – 24 h
Ocular	Eye Rabbit – moderate eye irritation – 24 h
Sensitization	No additional information
Single Target Organ STOT	Inhalation – May cause respiratory irritation
Numerical measures	No additional information
Carcinogenicity	No additional information
Mutagenicity	No additional information
Reproductive Toxicity	No additional information

## SECTION 12: Ecological information

The experimental information related to the eco-toxicological properties of the product itself is not available.

### 12.1 Toxicity:

This material is expected to be toxic to aquatic life. This material is not expected to significantly bioaccumulate.

### 12.2 Persistence and degradability:

In accordance with column 2 of REACH Annex VII, the ready biodegradability test does not need to be conducted as the substance is inorganic.

### 12.3 Bioaccumulative potential: Not bio-accumulated.

### 12.4 Mobility in soil: Soluble in water.

### 12.5 Results of PBT and vPvB assessment:

This substance/mixture does not meet the PBT and vPvB criteria of REACH regulation, annex XIII

### 12.6 Other adverse effects: No information available.

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

#### Product

#### **Methods of disposal:**

The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

#### **Hazardous waste:**

No information available.

#### Packaging









#### **Methods of disposal:**

The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

#### **Special precautions:**

This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	Land transport (ADR/RID)	Inland waterway transport (AND/ADNR)	Sea Transport (IMDG)	Air transport (ICAO-TI / IATA- DGR)
14.1 UN Number	1514	1514	1514	1514
14.2 UN proper shipping name	Zinc nitrate	Zinc nitrate	Zinc nitrate	Zinc nitrate
14.3 Transport hazard class(es)	5 	5 	5 	5 
14.4 Packing group	II	II	II	II
14.5 Environmental hazards	Yes 	Yes 	Yes 	Yes 
14.6 Special precautions for user	No data available	No data available	No data available	No data available
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:	IBC08	IBC08	IBC08	IBC08

## SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:**  
Candidate substances for authorisation under the Regulation (EC) 1907/2006 (REACH): Non-applicable  
Regulation (EC) 1005/2009, about substances that deplete the ozone layer: Non-applicable  
Active substances not included in Annex I under Regulation (EU) No 528/2012: Non-applicable  
REGULATION (EU) No 689/2012, in relation to the import and export of hazardous chemical products: Non-applicable

**Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH,etc ....):**

Non-applicable

**Other legislation:**

Law No.360 / 2003 on the dangerous substances and preparations

Law nr.349 / 2007 regarding the reorganization of the institutional framework for chemicals management

Law no.249 / 2011 to amend article 4 of Law nr.349 / 2007 on the reorganization of the institutional framework chemicals management

Government Decision no. 477/2009 on the establishment of penalties for infringements of the provisions of Regulation (EC) No. 1.907 / 2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45 / EC and repealing Regulation (EEC) No. 793/93 and Regulation (EC) no. 1.488 / 94 Commission and Council Directive 76/769 / EEC and Directives 91/155 / EEC, 93/67 / EEC, 93/105 / EC and 2000/21 / EC Commission Law no.254 / 2011 amending article 26 of Law No.360 / 2003 on the preparations and substances dangerous GD nr.662 / 2011 repealing Government Decision no. 347/2003 regarding restrictions on the marketing and use of certain dangerous substances and preparations.



Emergency Ordinance no.60 / 2013 for completing art. 4 para. (1) of Law no. 349/2007 on the reorganization framework institutional management of chemicals GD Nr.1408 / 2008 and Annexes 1-6 on classification, packaging and labeling of dangerous substances GD nr.937 / 2010 and Annexes 1 to 5 on the classification, packaging and labeling in the marketing of dangerous preparations  
GD no.122 / 2010 on the penalties applicable to infringements of the provisions of Regulation (EC) no.1272 / 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548 / EEC and 1999/45 / EC, and amending Regulation (EC) no.1907 / 2006  
GD no.398 / 2010 establishing measures to enforce the provisions of Regulation (EC) nr.1272 / 2008 on classification, labeling and packaging of substances and mixtures.  
Decision no. 1218/2006 establishing minimum safety requirements for ensuring occupational health and protection workers from risks related to chemical agents.  
Law no. 319/2006 - Law on safety and health at work  
GD 621/2005 on the management of packaging and packaging waste.  
GD 1872/2006 amending and supplementing Government Decision 621/2005 on the management of packaging and packaging waste  
The Waste Regulations 2011, 2011 No. 988.

**Specific provisions in terms of protecting people or the environment:**

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of the local circumstances in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

**15.2 Chemical Safety Assessment:**

The supplier has not carried out evaluation of chemical safety.

**SECTION 16: Other information****Legislation related to safety data sheets:**

This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) N° 1907/2006 (Regulation (EU) N° 453/2010, Regulation (EC) N° 2015/830)

**Modifications related to the previous security card which concerns the ways of managing risks. :**

Non-applicable

**Texts of the legislative phrases mentioned in section 2:**

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3.

**Texts of the legislative phrases mentioned in section 3:**

Non-applicable

**CLP Regulation (EC) n° 1272/2008:**

Acute Tox. 4: Acute Toxicity, Category 4, H302  
Skin Irrit. 2: Skin irritation, Category 4, H315  
Eye Dam. 1: Eye Damage, Category 1, H318  
Aquatic Acute 1: Aquatic Acute, Category 1, H400  
Aquatic Chronic 1: Aquatic Chronic, Category 1, H410

**Classification procedure:**

Non-applicable

**Advice related to training:**

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

**Principal bibliographical sources:**

<http://esis.jrc.ec.europa.eu>  
<http://echa.europa.eu>  
<http://eur-lex.europa.eu>

**Relevant P-, H- and EUH-phrases (number and full text)**

P101 - If medical advice is needed, have product container or label at hand.  
P102 - Keep out of reach of children.  
P103 - Read label before use.  
P264 - Wash hands thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P273 - Avoid release to the environment  
P280 - Wear protective gloves/face shield/eye protection.  
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician.  
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do, continue rinsing.  
P332+P313 - If skin irritation occurs: Get medical advice/attention.  
P337+P313 - If eye irritation persists: Get medical advice/attention.  
P321 - Specific treatment (see Section 4 on this label).  
P330 - Rinse mouth.  
P362 - Take off contaminated clothing and wash before reuse.  
P391 - Collect spillage  
P501 - Dispose of the contents/containers in accordance with the current legislation on waste treatment.

**Abbreviations and acronyms:**

ADR: European agreement concerning the international carriage of dangerous goods by road  
IMDG: International maritime dangerous goods code  
IATA: International Air Transport Association  
ICAO: International Civil Aviation Organisation  
COD: Chemical Oxygen Demand  
BOD5: 5-day biochemical oxygen demand  
BCF: Bioconcentration factor  
LD50: Lethal Dose 50  
CL50: Lethal Concentration 50  
EC50: Effective concentration 50  
Log-POW: Octanol–water partition coefficient  
KOC: PARTITION COEFFICIENT OF ORGANIC CARBON

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**Notice to reader****DISCLAIMER AND LIMITATION OF LIABILITY**

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