

Safety Data Sheet (SDS) ZNN SL/01

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According to UN GHS 9th Ed
Revision Date: 2022/11/14

First print date: 2018/09/28

Version: 2.2

SECTION 1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY/UNDERTAKING

Product identifier:

Identification as on the label/Trade name: **Agro-ZNO**

Additional information: Product code ZNN SL/01

Relevant identification uses of the substance and uses advised against:

Identified uses: Fertilizer.

Uses advised against: Use only as directed.

Details of the supplier of the Safety Data Sheet:

AECI Limited
14 Field Road, LILANTON

Emergency telephone numbers:

Griffon Poison information centre: 082 446 8946
Poisons Information Helpline: 0861 555 777
AECI Limited: (011) 823 8000 (o/h) Spill Tech: 086 100 0366 (a/h)

SECTION 2. HAZARD IDENTIFICATION

Classification of the substances or mixture

The mixture is classified as hazardous.

SANS 10234:2019, Regulation EC 1272/2008 [EU-GHS/CLP]	
Hazard classes/Hazard categories	Hazard statement
Acute toxicity oral (Category 4)	H302
Skin corrosion (Category 1)	H314
STOT SE 3	H335
Hazardous to the aquatic environment (Acute 1)	H400
Hazardous to the aquatic environment (Chronic 1)	H410

For full text of H statements see section 16

The most important adverse effects

The most important adverse physiochemical effects: None.

The most important adverse human health effects: Causes severe skin burns and eye damage.

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Label elements

Hazard pictograms:



Signal Word: DANGER

Hazard Statements: H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H335 May cause respiratory irritation. H410 Very toxic to the aquatic environment with long lasting effects.

Precautionary Statements: P264 Wash thoroughly after handling. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P310 Immediately call a POISON CENTRE. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Special labelling of certain mixtures: None.

Other hazards: None

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture

Ingredients: Classification hazardous.

Substance name (IUPAC/EC)	CAS –No.	Concentration % by weight	Classification
	EC-No.		EC1272/2008
Zinc nitrate	10196-18-6	30-40%	Oxidising solid (Category 2) H272. Acute toxicity oral (Category 4) H302. Skin irritation (Category 2) H315. Eye irritation (Category 2) H319. STOT SE 3 H335. Aquatic acute 1 H400. Aquatic chronic 1 H410.
	600-255-3		
Nitric acid	7697-37-2	1-3%	Skin corrosion (Category 1C) H314. Acute toxicity inhalation (Category 3) H331.
	231-714-2		

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4. FIRST AID MEASURES

Description of first aid measures:

In case of inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

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In case of skin contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

In case of eye contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

In case of ingestion Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Most important symptoms and effects, both acute and delayed:

Inhalation: Exposure causes respiratory irritation and burns.

Ingestion: Harmful if swallowed.

Skin contact: Corrosive to skin causes severe burns.

Eye contact: Causes serious eye damage.

Indication of any immediate medical attention and special treatment needed:

Treat symptomatically.

SECTION 5. FIRE -FIGHTING MEASURE

Extinguisher media:

Suitable extinguisher media: Carbon dioxide, dry powder or alcohol resistant foam.

SMALL FIRE: Extinguish small fires with carbon dioxide, dry powder, or alcohol-resistant foam.

LARGE FIRE: Water spray can be used for larger fires or cooling of unaffected stock but avoid the accumulation of polluted run-off from the site.

Unsuitable extinguishing media: Do not use high volume water jet, due to contamination risk.

Special hazards arising from the mixture:

No information.

Advice for fire-fighters:

Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear. Be sure to use an approved/certified respirator or equivalent.

SECTION 6. ACCIDENTAL RELEASE

Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to Section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

For emergency responders: Use an approved/certified respirator or equivalent, isolate the spill area and limit the access to emergency responders only. Avoid any contact with spilled material, use adequate protective clothes and gloves.

Environmental precautions:

Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

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Methods for containment and cleaning up:

For small spills Contain spilled material if possible. Collect in suitable and properly labelled containers. Absorb with materials such as: sand, earth, vermiculite or diatomaceous earth.

For large spills Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g., sand, earth, vermiculite or diatomaceous earth and place in well labelled container for disposal according to local regulations.

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.

Additional information:

None.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling:

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not get in eyes or on skin or clothing.

Protective measures: Observe directions on label and instructions for use.

Advice on general occupational hygiene: Do not eat drink or smoke when handling this product.

Conditions for safe storage, including incompatibilities:

Store product in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use.

Specific end uses:

Use as directed. Use original container.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

Occupational exposure limits (OEL):

Nitric acid TWA OEL-RL 2 ppm, 5 mg/m³, STEL OEL-RL 4 ppm, 10mg/m³

Biological exposure indices (BEI): No information available.

Additional exposure limits under the conditions of use: No information available.

Exposure control: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. A Risk Assessment should be conducted before handling is to commence to determine specific exposure control.

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Appropriate engineering controls: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

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. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection: Use tight fitting safety goggles or face shield.

Hand protection: Use chemical resistant gloves. Examples of preferred glove barrier materials include Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, Polyvinyl alcohol, Polyvinyl chloride.

Body protection: The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator.

Environmental exposure controls: Prevent product from entry into sewers and water courses.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance (form): Liquid.

Colour: White.

Odour: Slight chemical odour.

Odour threshold: No information available.

pH: 0.58 (100% solution), 5.50-7.50 (0.1% solution).

Melting point/range (°C): No information available.

Boiling point/range (°C): No information available.

Flash point (°C): No information.

Evaporation rate: No information available.

Flammability (solid, gas, liquid): No information available

Ignition temperature (°C): No information available.

Upper/lower flammability/explosive limits: No information available.

Vapour pressure (20°C): No information available.

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Vapour density: No information available.

Density: 1.32-1.36 g/cm³

Water solubility (g/l) at 20°C: No information available.

n-Octanol/Water partition coefficient: No information available.

Auto-ignition temperature: No information available.

Decomposition temperature: No information available.

Viscosity, dynamic (mPa s): No information available.

Physical hazards:

Explosive properties: None.

Other information:

Fat solubility (solvent-oil to be specified): No information available.

Bulk density: No information available.

Dissociation constant in water (p Ka): No information available.

Oxidation-reduction potential: No information available.

SECTION 10. STABILITY AND REACTIVITY

Reactivity:

The product is stable under normal conditions.

Chemical stability:

Stable under normal storage conditions for 2 years.

Possibility of hazardous reactions:

No information available.

Conditions to avoid:

May discolour on exposure to light.

Incompatible materials:

Strong oxidizing agents. May be corrosive to metals. Keep away from alkalis and other acid product.

Hazardous decomposition products:

Nitrous oxides.

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SECTION 11. TOXICOLOGICAL INFORMATION

Toxicokinetics, metabolism and distribution:

Non-human toxicological data: No Information available.

Information on toxicological effects:

Acute toxicity:

Zinnit

Acute toxicity oral LD₅₀ 1568 mg/kg (Category 4) (calculated).

Acute toxicity inhalation 199 mg/ℓ (calculated).

Nitric acid

Acute toxicity inhalation 2.65 mg/ℓ (ECHA).

Chronic toxicity: No information available.

Skin corrosion/irritation: Corrosive to skin and eyes based on pH 0,58 on 100% solution.

Serious eye damage/irritation: No information available.

Respiratory or skin sensitization: No information available.

Germ cell mutagenicity: No information available.

Carcinogenicity: No information available.

Reproductive toxicity: No information available.

STOT-single exposure: No information available.

STOT-repeated exposure: No information available.

Aspiration hazard: No information available.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity:

No information available.

Persistence and degradability:

No information available.

Bioaccumulative potential:

No information available.

Mobility in soil

Very soluble in water.

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Results of PBT& vPvB assessment:

No information available.

Other adverse effects:

No information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods:

Consider suitable waste recycling, re-use or recovery options. Dispose of in accordance with municipal, provincial and national regulations. Waste Classification and Management Regulations (GN 634 of 2013). Dispose and or manage in accordance with the requirements contained in R634 Waste Classification & Management Regulations, R635 National Norms & Standards for the Assessment of Waste for Landfill Disposal and R636 National Norms & Standards for Disposal of Waste to Landfill.

Product/ packaging disposal:

Treat as hazardous waste and dispose of in accordance with municipal, provincial and national regulations.

SECTION 14. TRANSPORT INFORMATION

	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN-Number	3264	3264	3264
UN Proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S (Nitric acid)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S (Nitric acid)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S (Nitric acid)
Transport hazard class:	8	8	8
Transport pictogram:			
Packaging group:	III	III	III
Marine pollutant:	Yes	Yes	Yes
Special precautions for user:	Warning corrosive liquid	Warning corrosive liquid	Warning corrosive liquid
Transport in bulk according to MARPOL 73/78 Annex II and the IBC code	Not required	Not required	Not required

Inland waterways: Not required

Emergency response information: Not required

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation for the mixture:

Relevant information regarding authorization: Occupational Health and Safety Act 1993. Regulation for Hazardous Chemical Agents, 2021. UN Recommendations on the Transport of Dangerous Goods Model Regulations Rev. 21 (2019), Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Rev 9, 2021.

ACGIH: American Conference of Governmental Industrial Hygienists (ACGIH)

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Relevant information regarding restrictions: None.

EU regulations: Regulation EC 1272/2008 [EU-GHS/CLP]

Other National regulations: National Road Traffic Act, 1996 (ACT NO. 93 of 1996).

SANS 10228:2012- The identification and classification of dangerous goods for transport by road and rail modes.

National Environmental Management: Waste Act 59 of 2008.

Chemical Safety Assessment carried out? No

SECTION 16. OTHER INFORMATION

Indication of changes:

All sections.

Relevant classification and H statements (number and full text):

Aquatic acute 1: Hazardous to the aquatic environment (Acute 1)

Aquatic chronic 1: Hazardous to the aquatic environment (Chronic 1)

STOT SE 3: Specific target organ toxicity single exposure (Category 3)

H270 H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H315 Causes skin irritation. H319 Causes serious eye irritation. H331 Toxic if inhaled. H335 May cause respiratory irritation. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects.

Training instructions:

Use as indicated on the label, special training may be required for application.

Further information:

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

Notice to readers:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees.

This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.