

Safety Data Sheet (SDS) MAGN WS/01

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According to UN GHS 9th
Revision Date: 2022/10/14

First print date: 2016/04/14

Version: 4.2

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

Product identifier:

Identification as on the label/Trade name: **MAGNESIUM NITRATE WS CRYSTALLINE**

Additional information: MAGN WS/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 according to

SANS 10234:2019, Regulation EC 1272/2008 [EU-GHS/CLP]	
Hazard classes/Hazard categories	Hazard statement
Oxidizing solid (Category 3)	H272

For full text of H statements see section 16

The most important adverse effects

The most important adverse physiochemical effects: Oxidising solid.

The most important adverse human health effects: May cause eye irritation.

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Label elements

Hazard pictograms:



Signal Word: Warning

Hazard Statements: H272 May intensify fire: oxidizer.

Precautionary Statements: P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P220 Keep away from clothing and other combustible materials. P264 Wash thoroughly after handling. P280 Wear protective gloves/eye protection. P302 + P332 IF ON SKIN wash with plenty of 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. P337 + P313 If eye irritation persists: Get medical advice.

Special labelling of certain mixtures: None.

Other hazards: None.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture

Ingredients: Classification is based on the following ingredients which may be present.

Substance name (IUPAC/EC)	CAS –No.	Concentration % by weight	Classification
	EC-No.		EC1272/2008
Magnesium nitrate hexahydrate	13446-18-9	<100%	Oxidising solid (Category 3) H272
	603-823-0		

For full text of H statements see section 16

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 if you feel unwell.

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 if irritation persists.

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 if irritation persists.

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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 if you feel unwell or are concerned.

Most important symptoms and effects, both acute and delayed:

Inhalation: Dust may be slightly irritating, sore throat or coughing can occur.

Ingestions: May be harmful if swallowed. Since magnesium salts are slowly absorbed, abdominal pain, vomiting and diarrhoea may be the only symptoms. However, if elimination is blocked by bowel blockage or other reasons, CNS depression, lack of reflexes, hypocalcaemia (deficiency of calcium in the blood) may occur.

Skin contact: May cause minor skin irritations.

Eye contact: Dust may cause mechanical irritation.

Indication of any immediate medical attention and special treatment needed:

Treat symptomatically.

Absorption into the body leads to the formation of methaemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer. Prolonged or repeated inhalation may be harmful, may cause local irritation. Effects due to ingestion may include nausea, vomiting, exposure to large amounts can cause tiredness, methemoglobinemia, headaches, cardiac dysrhythmias, drop in blood pressure, spasmic reactions. May cause cyanosis.

Note to Physician:

IV administration of calcium gluconate will partially reverse the effects of acute magnesium toxicity. Ventricular support with calcium chloride infusion and mannitol forced diuresis has also been successful.

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:

May produce nitrous gases.

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.

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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. Use water spray to reduce vapours, if any. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

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:

Avoid breathing dust, avoid contact with skin and eyes. 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 away from food stuff and animal feed. 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): No information available.

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Biological exposure indices (BEI): No information available.

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

Exposure control:

Appropriate engineering controls: Use local exhaust ventilation, or other engineering controls to maintain dust, if available maintain airborne levels below exposure limit requirements or guidelines.

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 safety glasses. If there is a potential for exposure to dust which could cause eye discomfort, wear chemical goggles.

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: Wear appropriate clothing for task or operation. Keep working clothes separately.

Respiratory protection: Dust mask may be required in high dust areas. In addition, respiratory protection may be required when ventilation is inadequate, or discomfort is experienced; use an approved air-purifying respirator. Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines.

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): Solid.

Colour: White.

Odour: Odourless.

Odour threshold: None.

pH (at concentration): 5-7 at 50 g/l (20°C)

Melting point/range (°C): 89°C.

Boiling point/range (°C): 330 °C

Flash point (°C): No information available.

Evaporation rate: No information available.

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Flammability (solid, gas): No information available.

Ignition temperature (°C): No information available.

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

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

Vapour density: No information available.

Relative density (20°C): 1.636 g/cm³

Water solubility (g/l) at 20°C: 420 g/ℓ

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: No information available.

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:

No information available.

Possibility of hazardous reactions:

Thermal decomposition can lead to the escape of irritating gases and vapours (oxides of nitrogen). Decontamination with reducing agents or strong acids can cause formation of toxic gases (oxides of nitrogen). It can enhance combustion of other substances.

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Conditions to avoid:

Avoid high temperatures and heat.

Incompatible materials:

Dimethyl formamide, combustible, organic and oxidizable materials.

Hazardous decomposition products:

On heating/burning release of toxic and corrosive nitrous gases/vapours.

SECTION 11. TOXICOLOGICAL INFORMATION

Toxicokinetics, metabolism and distribution:

Non-human toxicological data: No Information available.

Information on toxicological effects:

Acute toxicity:

Acute toxicity oral LD₅₀ for rat 5440 mg/kg.

Chronic toxicity: No information available.

Skin corrosion/irritation:

Skin mild irritation (24 h) for rabbit.

Serious eye damage/irritation:

For eyes mild irritation (24 h) for rabbit.

Respiratory or skin sensitization: No information available.

Germ cell mutagenicity: No information available.

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity: No information available.

STOT-single exposure: No information available.

Aspiration hazard: No information available.

Other information: No information available.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity:

No information available.

Persistence and degradability:

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No information available.

Bioaccumulative potential:

No information available.

Mobility in soil

No information available.

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	1474	1474	1474
UN Proper shipping name:	MAGNESIUM NITRATE	MAGNESIUM NITRATE	MAGNESIUM NITRATE
Transport hazard class:	5.1	5.1	5.1
			
Packaging group:	III	III	III
Marine pollutant:	No	No	No
Special precautions for user:	None	None	None
Transport in bulk according to MARPOL 73/78 Annex II and the IBC code	Not required	Not required	Not required

Inland waterways:

Emergency response information:

Additional information: Transport separately. Make sure the containers are not leaking, collapsed, dropped or damaged. Transport vehicles should be equipped with the appropriate variety and quantity of fire-fighting equipment

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and emergency treatment equipment for leakage. Prohibit mixed transporting with the following: acids, combustible goods, organics, reductant, spontaneously combustible reactive, flammable objects when wet. Wash and clean the transport vehicles completely before and after loading.

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 8, 2019.

ACGIH: American Conference of Governmental Industrial Hygienists (ACGIH).

Relevant information regarding restrictions: None.

EU regulations: Regulation EC 1272/2008 [EU-GHS/CLP] and EU directives 67/548/EEC or EC 1999/45/EC

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):

H272 May intensify fire; oxidizer.

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.