KYNOCH FERTILIZER

SAFETY DATA SHEET

Magnesium Nitrate Hexahydrate

Date Issued / Revised Date	:	*25 September 2022*
New version	:	*3.0*
Date previously revised	:	*1 February 2021*
Replaced version	:	*2.0*

Prepared according to: United Nations GHS (Rev 9E) (2021) and SANS 10234:2019
(This Safety Data Sheet conforms to the requirements set by the Department of Agriculture, Land reform and Rural development of the Republic of South Africa on the 29 March 2022)

SECTION 1: IDENTIFICATION

1.1 GHS[1] product identification

Product Name : **Magnesium Nitrate**

[1] GHS - Globally Harmonized System of Classification and Labelling of Chemicals

1.2 Other means of identification

Description	:	**Magnesium Nitrate Hexahydrate, Nitric acid, magnesium salt**
Chemical name	:	**Magnesium Nitrate Hexahydrate**
CAS Number [2]	:	**10377-60-3**
EC Number [3]	:	**233-826-7**

[2] "CAS Number" - CAS Number is a numerical designation for chemicals that is maintained by the Chemical Abstracts Service (CAS) of the American Chemical Society.
[3] "EC Number" - The European Community number (EC number) is a unique identifier that was assigned to substances for regulatory purposes within the European Union by the European Commission.

1.3 Recommended use of materials and restrictions on use

Recommended use of material	:	**Intended to be used as a fertilizer and in fertilizer blends**
Description	:	**Source of plant nutrients**
Restrictions on use	:	**None Identified**

1.4 Supplier's details

Supplier's details : **1st Floor, ETG House**
62 Weirda Road East
Sandton
2196
Tel no: (011) 317-2000

1.5 Emergency phone number

Emergency phone number : **Dial Triple Zero (000) and ask for fire**
: **Ambulance or the Fire department – 10177**
: **Spilltech - 086 100 0366**

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SECTION 2: HAZARD IDENTIFICATION

2.1 Classification of substance or mixture

Product Defined : **Substance**

Summarized Classification

Types of Hazards	Hazard Class	Category/subcategory	H-Statement
Physical Hazards	Oxidizing Solid	Category 3	H272 [2]
Health Hazards	Not Classified [1]		
Environmental Hazards	Not Classified [1]		

Classification according to the United Nations GHS (Rev 9E) (2021) and SANS 10234:2019

[1] "Not Classified" – Data conclusive but not at sufficient levels for classification.
[2] "H-Statement" – Hazard Statement. Full decryption in Section16

Classification by Organization

Organization	Substance	CAS Number	Classification
EPA-NZ	Magnesium Nitrate	10377-60-3	Not Listed
ECHA	Magnesium Nitrate	10377-60-3	Oxid. Solid 3
ILO (WHO)	Magnesium Nitrate	10377-60-3	No Classification
AICIS	Magnesium Nitrate	10377-60-3	No Classification

Reference: (European Chemical Agency [ECHA], n.d.) & (Environmental protection agency [EPA]. New Zealand Government, n.d.) & (The Australian Industrial Chemicals Introduction Scheme [AICIS], n.d.) & (International Labour organization [ILO], n.d.)

2.2 GHS Label elements, including precautionary statements

Pictogram :

Pictogram Name : **Flame over circle**

Signal Word : **Danger**

Hazard Statements : **H272 - May intensify fire; oxidiser.**

Precautionary Statements : **P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.**

: **P220 - Keep away from clothing or other combustible materials.**

P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

Reference: (Pubchem, GHS, n.d.)

2.3 Other hazards that do not result in classification

Hazards : **Causes serious eye irritation**

: **May cause respiratory irritation**

Reference: (European Chemical Agency [ECHA], n.d.) & (Pubchem, search, n.d.)

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SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substance

Common name	:	**Magnesium Nitrate Hexahydrate**
EC Name	:	**Magnesium nitrate**
Chemical Formula	:	**$Mg(NO_3)_2 . 6H_2O$**
Molecular Weight	:	**256.41 g/mol**
Nutrient Content	:	**11% Total Nitrogen (N), 11% Nitric Nitrogen (NO_3), 9.5% Magnesium (Mg)**
CAS Number	:	**10377-60-3**
EC Number	:	**233-826-7**
Impurities and stabilizers	:	**N/A**[1]

[1] *"N/A" – Not available*

Reference: (European Chemical Agency [ECHA], n.d.) & (The Australian Industrial Chemicals Introduction Scheme [AICIS], n.d.)

3.2 Mixture

Mixture	:	**Not Applicable**

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General information	:	**No special measures required.**
After inhalation	:	**Supply fresh air. Consult doctor in case of complaints.**
After skin contact	:	**Remove affected clothing. Immediately rinse with water (can use mild soap). If skin irritation continues, consult a doctor.**
After eye contact	:	**Rinse opened eye for several minutes under running water (remove contact lenses if easily possible). Seek medical treatment.**
After swallowing	:	**Rinse out mouth. Make victim drink water (maximum of 2 drinking glasses). Do NOT induce vomiting. If symptoms persist consult doctor.**

4.2 Most important symptoms and effects, both acute and delayed

Effects	:	**May cause mechanical irritation to the eyes and respiratory tract. Ingestion could cause effects on the blood. This may result in the formation of methaemoglobin. The effects may be delayed. Medical observation is indicated.**		
Symptoms	:	**Inhalation**	-	**Cough. Sore throat.**
	:	**Ingestion**	-	**Abdominal pain. Blue lips, fingernails, and skin. Confusion. Convulsions. Dizziness. Headache. Nausea. Unconsciousness.**
	:	**Skin contact**	-	**No effect**
	:	**Eye contact**	-	**Redness, pain.**

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4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Suitable extinguishing medium

Suitable extinguishing agents	:	**Water - Use flooding quantities of water for extinction.**
Inappropriate extinguishing media	:	**Do NOT use chemical extinguisher or foam or attempt to smother the fire with steam or sand.** • **Sand** • **Foam** • **Carbon dioxide (CO2)** • **Dry chemical**
Notes	:	**Use fire extinguishing methods suitable to surrounding conditions.**

5.2 Specific hazards arise from chemical

Warning	:	**In case of fire, there is a potential option of explosion, especially if fertilizers are contaminated by inappropriate (incompatible) chemical substances (e.g., oils, see section 10).** **Toxic fumes may be formed in fire.**
Hazardous Combustion Products	:	**Nitrogen oxides, metal oxide/oxides, ammonia**
Fire hazard	:	**Non-flammable substance**
Explosion hazard	:	**Not applicable**
Reactivity	:	**None**

5.3 Special protective action for Fire-Fighters

Special protective actions for fire-fighters	:	**Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.**
	:	**No action shall be taken involving any personal risk or without suitable training.**
Special protective equipment for fire-fighters	:	**Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.**
	:	**Clothing for fire-fighters (including helmets, protective boots, and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.**

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SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures

Percussions	:	**No action shall be taken involving any personal risk or without suitable training.**
Equipment	:	**Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.**
Procedure	:	**Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Provide adequate ventilation.**

[1] *PPE – Personal precautions, protective equipment.*

6.2 Environmental precautions

Environmental	:	**Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.**
	:	**Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil, or air).**
	:	**Discharge into the environment must be avoided.**

6.3 Methods and material for containment and cleaning up

Small Spill	:	**Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.**
Large Spill	:	**Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements, or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.**

6.4 Reference to other sections

Section 7	:	**Information on safe handling.**
Section 8	:	**Information on personal protection equipment.**
Section 13	:	**For disposal information.**

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Handling	:	**Ensure adequate ventilation. Avoid ingestion and inhalation. Avoid dust formation. Wear protective gloves/eye protection/face protection/. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling.**
	:	**Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed.**
	:	**For precautions see section 2.2.**

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7.2 Conditions for safe storage, including any incompatibilities

Storerooms and receptacles	:	**No special requirements.**
One common storage facility	:	**Avoid contamination, particularly with incompatible substances: flammable materials and lubricants, oxidising agents, acids, bases, sulphides, chlorates, chlorines, chromates, nitrates, permanganates; Metal powders, e.g., copper, nickel, cobalt, zinc, and their alloys).**
	:	**Incompatible products: Separate from reducing agents and combustible materials. Keep away from acids or bases. On farm keep away from hay, grain, diesel, etc.**
	:	**Incompatible materials : Sources of ignition. Direct sunlight.**
Handling of product	:	**Keep container tightly closed.**
Room conditions	:	**Keep in a dry, well-ventilated place. Recommended storage temperature at < 30°C. (Room temperature). DO NOT expose the substance to temperatures above 50 ˚C.**
	:	**Protect against humidity (product is hygroscopic and tends to cake or disintegrate)**
Storage Class	:	**(TRGS 510): 10 - 13 Other liquids and solids: Non-Combustible Solids**

Reference: (BAUA, 2016)

7.3 Specific end use(s)

Specific end use(s)	:	**Apart from the uses mentioned in section 1.3 no other specific uses are stipulated**

SECTION 8: EXPOSURE CONTROL AND PERSONNEL PROTECTION

8.1 Control Parameters

	Compound	Cas Number		TWA [1]	STEL [2]
South African Labour Department	Magnesium Nitrate	10377-60-3		Not Listed	Not Listed
International Labour organization (ILO)	Magnesium Nitrate	10377-60-3		Not Listed	Not Listed
OCHA	Magnesium Nitrate	10377-60-3		Not Listed	Not Listed

[1] *TWA – Long term exposure: Time Weighted Average (8-hour period)*
[2] *STEL – Short term exposure: Short term exposure limit (15 min period)*

Reference: (South African Labour Department, 2021) & (ILO, n.d.) & (OSHA, n.d.)

Routes of exposure	:	**The substance can be absorbed into the body by inhalation of its aerosol and by ingestion.**
Inhalation risk	:	**A nuisance-causing concentration of airborne particles can be reached quickly when dispersed.**
Effects of short-term exposure	:	**May cause mechanical irritation to the eyes and respiratory tract. Ingestion could cause effects on the blood. This may result in the formation of methaemoglobin. The effects may be delayed. Medical observation is indicated.**
Effects of long-term or repeated exposure	:	**Not Listed**

Reference: (ILO, n.d.)

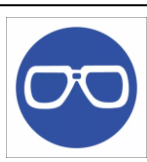
8.2 Appropriate engineering controls

: **Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations, and safety showers are close to the workstation location.**

See Section7.

8.2 Individual protection measures

Eye/face protection	:	**Wear safety glasses.** Use equipment for eye protection tested and approved under appropriate government standards. SABS adoption: SANS 50166:2018(SA), EN 166(EU) or NIOSH (US).
Skin Protection	:	**Handle with gloves.** Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Body Protection	:	Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection	:	**Not required under normal conditions of use.** Where protection from nuisance levels of dusts is desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of environmental exposure		**No special environmental precautions required**

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Properties

Physical state	:	**Solid** [1]
Composition	:	**Substance** [2]
Colour	:	**Colourless or White**
Odour	:	**Odourless**
Melting point/freezing point	:	**89°C**
Boiling point or initial boiling point and boiling range	:	**330 °C. Decomposes before boiling.**
Flammability	:	**Not flammable**
Lower and upper explosion limit/flammability limit	:	**Not determined**
Flash point	:	**The study does not need to be conducted because the substance is inorganic. (330 °C)**
Auto-ignition temperature	:	**Based on structure, use and transport information, magnesium nitrate (anhydrous and hexahydrate) is not expected to be a self-heating substance.**
Oxidizing Properties	:	**Yes (Oxidizing solid, Category 3)**
Decomposition temperature	:	**160°C**
pH	:	**5 – 7 @ 20 °C**
Kinematic viscosity	:	**The study does not need to be conducted because the substance is a solid.**
Solubility	:	**420 g/l water @ 25°C**
Partition coefficient: n-octanol/water (log value)	:	**The study does not need to be conducted because the substance is inorganic.**
Vapour pressure	:	**The study does not need to be conducted because the melting point is above 300°C.**
Density and/or relative density	:	**1.46 g/cm³ @ 20°C 1.46 g/cm3 (20 °C)**
Relative vapour density	:	**Not determined**
Bulk Density (Volumetric)	:	**Not Listed**
Particle characteristics	:	**0.94% is < 10.00 µm;** **10% is < 210.25 µm;** **50% is < 505.54 µm and** **90% is < 1143.71 µm** **MMAD= 452.17 µm**
Molecular Formula	:	**$Mg(NO_3)_2 . 6H_2O$**
Molecular Weight	:	**256.41 g/mol**

[1] *"Solid" – Is a substance that cannot be classified as a liquid or Gas.*
[2] *"Substance" – Is chemical elements and their compounds in their natural state or obtained by production process)*

Reference: (ECHA, n.d.) & (Pubchem, search, n.d.)

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SECTION 10: STABILITY AND REACTIVITY

Reactivity	:	**Contact with combustible materials may cause fire.** **Hygroscopic: absorbs moisture or water from the air.**
Chemical stability	:	**Stable under normal conditions.**
Hazardous Reactions	:	**A dangerous reaction will not occur.**
Conditions to Avoid	:	**Avoid contact with incompatible materials. Avoid heat, flame, and sparks.**
Incompatible Materials	:	**Combustible materials, reducing agents, acids, and alkalis.**
Hazardous Decomposition Products	:	**These products are nitrogen oxides, oxide/oxides of magnesium.**

SECTION 11: TOXICOLOGY

11.1 Acute Toxicity

Classification	:	**No Classification**
Description	:	**Based on the available data, magnesium nitrate does not have to be classified according to the CLP Regulation with regard to acute toxicity.**

Method	Compound	Cas Number	Measure	Value	Subject
Oral	Magnesium Nitrate	10377-60-3	LD50[1]	>2000 mg/kg bw[2]	Rat
Inhalation	Magnesium Nitrate	10377-60-3		Not justified	
Dermal	Magnesium Nitrate	10377-60-3	LD50[1]	>5000 mg/kg bw[2]	Rat

[1] *"LD50" – Lethal Doses. The dosage at which 50% mortality was observed.*
[2] *"bw" - body-weight/day*

Reference: (ECHA, n.d.) & (Pubchem, search, n.d.) & (EPA. New Zealand Government, n.d.)

11.2 Skin corrosion/irritation

Classification	:	**No classification**
Description	:	**No skin irritation was seen.**
Subjects	:	**Rabbits**

Reference: (ECHA, n.d.)

11.3 Serious eye damage/irritation

Classification	:	**No Classification**
Description	:	**Based on these results Magnesium nitrate hexahydrate does not have to be classified and has no obligatory labelling requirement for eye irritation.** **Instillation of the test substance resulted in effects on the cornea, iris, and conjunctivae. The corneal injury consisted of slight dulling of the normal lustre of the cornea and no epithelial damage was observed. The corneal injury resolved within 24 hours. Iridial irritation grade 1 was observed and resolved within 24 hours.** **The irritation of the conjunctivae consisted of redness, chemosis and discharge and completely resolved within 14 days.**
Subjects	:	**Rabbits**

Reference: (ECHA, n.d.)

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11.4 Respiratory or skin sensitisation

Classification	:	**No classification**
Description	:	**Since there was no indication that the test substance elicits an SI ≥ 3 when tested up to 50%, Magnesium nitrate hexahydrate was considered not to be a skin sensitizer.**
Subjects	:	**Mouse**

Reference: (ECHA, n.d.)

11.5 Germ cell mutagenicity

Classification	:	**No classification**
Description	:	**No adverse effect observed (negative)**
Subjects	:	**Salmonella typhimurium strains**

Reference: (ECHA, n.d.)

11.6 Carcinogenicity

Classification	:	**No data available**

Reference: (ECHA, n.d.)

11.7 Reproductive toxicity

Classification	:	**No classification**
Description	:	**No adverse effect observed**
Subjects	:	**Rat**

Reference: (ECHA, n.d.)

11.8 STOT [2] - single exposure

No data available

[2] *"STOT" - Specific target organ toxicity.*

Reference: (ECHA, n.d.) & (Pubchem, search, n.d.)

11.9 STOT [2] - repeated exposure

No data available

[2] *"STOT" - Specific target organ toxicity.*
Reference: (ECHA, n.d.) & (Pubchem, search, n.d.)

11.10 Aspiration hazard

No data available

Reference: (ECHA, n.d.) & (Pubchem, search, n.d.)

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11.11 Route of Exposure and potential effects

Swallowing	:	**Convulsions. Headache. Nausea. Vomiting.**
Inhalation	:	**Cough. Shortness of breath. Sore throat.**
Eye exposure	:	**Redness**
Skin exposure	:	**No symptoms**

Reference: (ECHA, n.d.)

11.12 Long- and short-term effects

No data available

Reference: (ECHA, n.d.)

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Classification : **Triggers for classification are not met.**

Aquatic Toxicity :

Compound	Cas Number	Organism	Species	Time	Measure	Value
Magnesium Nitrate	10377-60-3	Fish	Oncorhynchus Mykiss	96-h	LC50[1]	> 100 mg/L
Magnesium Nitrate	10377-60-3	Fish	Pimephales Promelas	32-d	NOEC[2]	157 mg/L
Magnesium Nitrate	10377-60-3	Aquatic invertebrates	Daphnia magna	96-h	EC50[1]	490 mg/L
Magnesium Nitrate	10377-60-3	Aquatic Algae and Cyanobacteria	benthic diatoms	10-d	EC50[1]	>1700 mg/L
Magnesium Nitrate	10377-60-3	Micro-organisms	Activated sludge of a predominantly domestic sewage	3-h	EC50[1]	>1000 mg/L

Terrestrial Toxicity :

Compound	Cas Number	Organism	Species	Time	Measure	Value
Magnesium Nitrate	10377-60-3	Macro-organisms				Not Tested
Magnesium Nitrate	10377-60-3	Arthropods				Not Tested
Magnesium Nitrate	10377-60-3	Plant				Not Tested
Magnesium Nitrate	10377-60-3	Micro organisms				Not Tested
Magnesium Nitrate	10377-60-3	Birds				Not Justified

[1] *"LC50 /EC50" - (Median Lethal Concentration/Median Effective Concentration) They are the concentrations at which 50% mortality or inhibition of a function (e.g., growth or growth rate) was observed.*
[2] *"NOEC" - No Observed Effect Concentration. NOEC is the highest tested concentration for which there are no statistically significant difference of effect when compared to the control group.*
[3] *"ECx" - It is the concentrations at which x % (10% for EC10) effect was observed or derived statistically when compared to the control group.*

Reference: (ECHA, n.d.) & (Pubchem, search, n.d.)

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12.2 Persistence and degradability

Stability	:	**The substance does not hydrolyze nor is there evidence for photodegradation.** **In aqueous solution, magnesium nitrate is completely dissociated into the magnesium ion (Mg^{2+}) and the nitrate anion (NO_3^-). Hydrolysis of magnesium nitrate does not occur.**
Biodegradation		**Readily biodegradation study does not need to be conducted since the substance is inorganic.**

Reference: (ECHA, n.d.)

12.3 Bioaccumulate potential

Description	:	**Simple inorganic salts with high aqueous solubility will exist in a dissociated form in an aqueous solution. Such a substance has a low potential for bioaccumulation.**

Reference: (ECHA, n.d.)

12.4 Mobility in soil

Adsorption	:	**The study does not need to be conducted because the physicochemical properties of the substance indicate that it can be expected to have a low potential for adsorption.** **Nitrate is not bound to the soil and will follow water movements. Nitrate can therefore leach when the soil receives more water than it can take up. This happens (in) mainly in the late autumn, winter, and early spring. There exist a lot of studies on the environmental impact of NO_3 and NH_4^+/NH_3.**
Volatilization	:	**Volatilization is unlikely due to the properties of the substance.**

Reference: (ECHA, n.d.)

12.5 Other adverse effects

Classification	:	**No data available**

SECTION 13: DISPOSAL CONSIDERATIONS

The generation of waste should be avoided or minimized wherever possible. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

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SECTION 14: TRANSPORT INFORMATION

12.1 UN Modelled regulations

UN Number	:	**1474**
UN proper shipping name	:	**Magnesium Nitrate**
Transport hazard class(es)	:	**5.1 – Oxidizer**
Label	:	
Packing group	:	**III - Substances presenting low danger**
Environmentally hazardous	:	**No classification**
Special precautions:	:	**ADR/RID[1] - 34, B120, IB8, IP3, T1, TP33**
		IMDG[2] - 208, 967
		IATA[3] - A83
Transport in Bulk according to IMO instructions	:	**Not specified**

Reference: (Hazmat Tool. n.d.) & (BAM. 2021)

[1] ADR/RID - International Carriage of Dangerous Goods by Rail (RID) and by Road (ADR)
[2] IMDG - The International Maritime Dangerous Goods (IMDG)
[3] IATA - International Air Transport Association (IATA)

SECTION 15: REGULATORY INFORMATION

15.1 Safety, Health, and environmental regulations specific for the substance or mixture

Regulations	:	**This Safety Data Sheet conforms to the requirements set by the Department of Agriculture, Land reform and Rural development of the Republic of South Africa, United Nations GHS (Rev 9E) (2021) and SANS 10234:2019, on the 29 March 2022.**
Restrictions	:	**The substance is not subjected to any prohibitions or restriction in South Africa.**
Chemical Safety Assessment:	:	**For this product a chemical safety assessment was not carried out.**

SECTION 16: OTHER INFORMATION

16.1 Preparation and revision

Latest Version

Version Number	:	**Ver. 3**
Preparation Date	:	**25 August 2022**
Where the changes as made	:	**Complete overall of all data to comply with GHS regulations**

Previous Version

Version Number	:	**Ver. 2**
Preparation date	:	**February 2021**

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16.2 Abbreviations and Acronyms

GHS	:	*Globally Harmonized System of Classification and Labelling of Chemicals*
ECHA	:	*European Chemical agency*
AICIS	:	*The Australian Industrial Chemicals Introduction Scheme*
EPA-NZ	:	*Environmental protection agency New Zealand*
ILO (WHO)	:	*International labour organization (World health organization)*
CAS Number	:	*CAS Number is a numerical designation for chemicals that is maintained by the Chemical Abstracts Service (CAS) of the American Chemical Society.*
EC Number	:	*The European Community number (EC number) is a unique identifier that was assigned to substances for regulatory purposes within the European Union by the European Commission.*
H-Statement	:	*Hazard Statement*
P-Statement	:	*Precautionary Statements*
Hazard Statements	:	*H319 - Causes serious eye irritation*
Precautionary Statements	:	*P264 - Wash hands [and …] thoroughly after handling.*
	:	*P265 - Do not touch eyes.*
	:	*P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...*
N/A	:	*Not Applicable*
Not Classified	:	*Data conclusive but not at sufficient levels for classification*
PPE	:	*Personal precautions, protective equipment.*
TWA	:	*Time Weighted Average*
OEL	:	*Occupational Exposure Limits*
STOT	:	*Specific target organ toxicity*
LC50 / EC50	:	*(Median Lethal Concentration/Median Effective Concentration): They are the concentrations at which 50% mortality or inhibition of a function (e.g., growth or growth rate) was observed.*
NOEC	:	*(No Observed Effect Concentration) NOEC is the highest tested concentration for which there are no statistically significant difference of effect when compared to the control group*
ECx	:	*It is the concentrations at which x % (10% for EC10) effect was observed or derived statistically when compared to the control group*
LD0	:	*Lethal Dose 0, represents the dose at which no individuals are expected to die.*
LC0		*Lethal concentration 0, represents the concentration at which no individuals are expected to die.*
LDLo	:	*Lethal dose low, is the lowest dosage of a compound that is introduced to the human body or that of an animal by any means apart from inhalation that will cause the death of the individual.*

16.3 References

BAM. (2021) Dangerous Goods Database. Retrieved From *https://www.dgg.bam.de/quickinfo/en/show/q3dqamgyon62sdvxmoz2nhhc3m*

(The BAM offers with the expert portal TES information and service concerning the transport and packaging of dangerous substances and goods as well as explosives act)

BAUA. (2016). Technical Rule for Hazardous Substances. TRGS 510 Storage of hazardous substances in non-stationary containers. Retrieved from *https://www.baua.de/EN/Service/Legislative-texts-and-technical-rules/Rules/TRGS/TRGS-510.html*

(The German Federal Institute for Occupational Safety and Health offers selected publications in English. Baua's research aims to ensure a safe and healthy working environment that is adapted to the needs of humans.)

Environmental protection agency [EPA]. New Zealand Government. (n.d.) Database search. *Chemical Classification and Information Database (CCID).* Retrieved from *https://www.epa.govt.nz/search/SearchForm?Search=10377-60-3*

(EPA-Environmental protection agency. EPA is the government agency responsible for regulating activities that affect Aotearoa New Zealand's environment.)

European Chemicals Agency [ECHA]. (n.d.) Information on Chemicals. Retrieved from *https://echa.europa.eu/registration-dossier/-/registered-dossier/16076/1/1*

(ECHA - European Chemicals Agency. The European Chemicals Agency, is an agency of the EU. They implement the EU's chemicals legislation to protect your health and the environment. There work also contributes to a well-functioning internal market, innovation, and the competitiveness of Europe's chemicals industry.)

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(ILO-International Labour organization. ILO is a specialized agency of the United Nations. The database data was prepared by an international group of experts on behalf of ILO and WHO, with the financial assistance of the European Commission. © ILO and WHO 2021.)

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(The Australian Industrial Chemicals Introduction Scheme (AICIS) helps protect Australians and the environment by assessing the risks of industrial chemicals and providing information to promote their safe use. Focus mainly on heath aspects.)

16.4 Disclaimer

The information contained in this SDS does not constitute a risk assessment, and should not replace the user's own assessment of risks as required by other health and safety legislation.

This SDS summarises at the date of issue our best knowledge of the health, safety and environmental hazard information related to the product and in particular how to safely handle, use, store and transport the product. Since Kynoch cannot anticipate or control the conditions under which the product may be handled, used, stored, or transported, each user must, prior to usage, review this SDS in the context of how the user intends to handle, use, store or transport the product and beyond, and communicate such information to all relevant parties.

We shall not assume any liability for the accuracy or completeness of the information contained herein or any advice given unless there has been gross negligence on our part.