



KYNOCH FERTILIZER

SAFETY DATA SHEET

Calcium Ammonium Nitrate, CAN27

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 GHS¹ product identification

Product Name : **Calcium Ammonium Nitrate**

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

1.2 Other means of identification

Description : **Calcium Ammonium Nitrate 27%**

Abbreviation : **CAN27**

Chemical name : **Mixture – N/A**

CAS Number² : **Mixture – N/A**

EC Number³ : **Mixture – N/A**

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**

SECTION 2: HAZARD IDENTIFICATION

2.1 Classification of substance or mixture

Product Defined : **Mixture**

Summarized Classification

Types of Hazards	Hazard Class	Category/subcategory	H-Statement
Physical Hazards	Not Classified		²
Health Hazards	Serious eye damage/eye irritation	Category 2A	H319 ²
Environmental Hazards	Not Classified		

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

Substance	CAS Number	Composition
Ammonium Nitrate	7464-52-2	>70% <80%
Ground calcium carbonate	1317-65-3	>20% <30%

Classification by Component

Substance	CAS Number	Classification
Ammonium Nitrate	7464-52-2	Ox. Sol. 3, Eye Irrit. 2
Ground calcium carbonate	1317-65-3	Not Classified
Limestone	215-279-6	Not Classified
Calcium Carbonate	471-34-1	Not Classified

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.) & (ChemSafetyPro, n.d.)

2.2 GHS Label elements, including precautionary statements

Pictogram



Pictogram Name

: **Exclamation mark**

Signal Word

: **Danger**

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/...**

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

2.3 Other hazards that do not result in classification

Composition : **Contains < than 80% Ammonium Nitrate, therefore not classified as a oxidizer.**

Hazards : **H272 - May intensify fire; oxidiser**

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

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substance

Substance : **Not Applicable**

3.2 Mixture

Components : **Ammonium nitrate and Calcium Carbonate or Limestone**

Component 1

Common name : **Ammonium Nitrate**
EC Name : **Ammonium Nitrate**
Chemical Formula : **NH₄NO₃**
Molecular Weight : **80.044 g/mol**
Nutrient Content : **34% Total Nitrogen (N)**
CAS Number : **6484-52-2**
EC Number : **229-347-8**
Impurities and stabilizers : **Not Available**

Component 2

Common name : **Calcium Carbonate**
EC Name : **Calcium carbonate**
Chemical Formula : **CaCO₃**
Molecular Weight : **100.09 g/mol**
Nutrient Content : **Not Applicable – Nutrient is not easily plant available**
CAS Number : **471-34-1**
EC Number : **207-439-9**
Impurities and stabilizers : **Not Available**

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

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General information : **Prevent dispersion of dust.**
After inhalation : **If inhaled, remove to fresh air. Obtain medical attention if symptoms occur.**
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). Obtain medical attention if symptoms occur.
- After swallowing : Rinse out mouth. Make victim drink water (maximum of 2 drinking glasses). Do NOT induce vomiting. If symptoms persist consult doctor.

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

4.2 Most important symptoms and effects, both acute and delayed

- Effects : The substance is irritating to the eyes, skin and respiratory tract. The substance may cause effects on the blood. This may result in the formation of methaemoglobin. The effects may be delayed.
- Symptoms : Inhalation - Cough.
- : Ingestion - Adverse symptoms may include the following:
Oxygen depletion, nausea or vomiting, abdominal cramps and pain.
- : Skin contact - Redness
- : Eye contact - Pain or irritation, watering, redness.

Reference: (International Labour organization [ILO]. (n.d.)

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 : Not combustible but enhances combustion of other substances. Gives off irritating or toxic fumes (or gases) in a fire. Risk of fire and explosion on confinement and exposure to high temperatures or when contaminated with other materials.
Toxic fumes may be formed in fire.
- Hazardous Combustion Products : Nitrous gases (Nox) oxides of nitrogen, 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
- : Fire fighters should use water to keep fire exposed containers cool and disperse vapour.
 - : Move container from fire area if it can be done without risk.
 - : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.
- 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.

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
- : Vacuum or sweep up material and place in a designated, labelled waste container. Clean up affected area with a large amount of water. Do not collect spilled material in sawdust or other combustible material.
- Large Spill
- : Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Recycle, if possible. Clean up affected area with a large amount of water. If spilled substance enters a watercourse, inform the local authority. Do not collect spilled material in sawdust or other combustible material.

6.4 Reference to other sections

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

Reference: (ECHA, n.d.)

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

- Handling : Use with adequate ventilation. Local exhaust ventilation should be provided. Avoid possible sources of ignition (spark or flame). Avoid contamination by any source including metals, dust and organic materials.
- : For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

- Storerooms and receptacles : Store in a dry place. Hygroscopic solid.
- One common storage facility : Keep away from heat and precaution to avoid mixing with combustible materials, reducing agents, alkalies and metals.
- : Incompatible products: Separate from reducing agents and combustible materials. Keep away from acids or bases.
- : Incompatible materials : Sources of ignition. Direct sunlight. On farm keep away from hay, grain, diesel, etc.
- 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	Ammonium Nitrate	6484-52-2		Not Listed	Not Listed
International Labour organization (ILO)	Ammonium Nitrate	6484-52-2		Not Listed	Not Listed
OCHA	Ammonium Nitrate	6484-52-2		Lot 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 and by ingestion.
Inhalation	: Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed, especially if powdered.
Skin	: No effect
Eye	: Redness
Indigestion	: Abdominal pain. Blue lips, fingernails and skin. Confusion. Convulsions. Dizziness. Headache. Nausea. Unconsciousness.
Effects of short-term exposure	: The substance is irritating to the eyes, skin and respiratory tract. The substance may cause effects on the blood. This may result in the formation of methaemoglobin. The effects may be delayed.
Effects of long-term or repeated exposure	: Hazard unknown but no further hazard information necessary as no exposure expected.

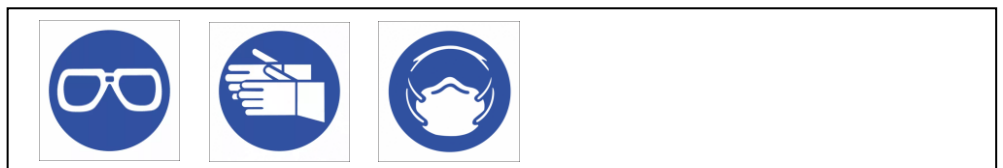
Reference: (European Chemical Agency [ECHA], n.d.) & (ILO, n.d.)

8.2 Appropriate engineering controls

Engineering controls	: Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations, and safety showers are close to the workstation location. See Section 7.
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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	: Respiratory protection is necessary. 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



SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Properties

Physical state	: Solid ¹
Composition	: Mixture ²
Colour	: White. Grey. Brown. Greyish-white.
Odour	: Odorless
Melting point/freezing point	: 169.6°C
Boiling point or initial boiling point and boiling range	: Above 210°C
Flammability	: Product is not flammable
Lower and upper explosion limit/flammability limit	: Not applicable. Inorganic salt.
Flash point	: Not applicable. Non-flammable.
Auto-ignition temperature	: Not applicable. Non-flammable.
Oxidizing Properties	: Yes (Classification: Oxidising, solid - Category 3)
Explosive properties	: Slightly explosive in the presence of the following materials or conditions: Incompatible materials, organic materials, heating under confinement.
Decomposition temperature	: Above 210°C
pH	: 5 to 8 [Conc. (% w/w): 10%]
Kinematic viscosity	: Not applicable – Solid
Solubility	: Partially soluble in the following materials: cold water, hot water
Partition coefficient: n-octanol/water (log value)	: The study does not need to be conducted because the substance is inorganic
Vapour pressure	: Not determined
Density and/or relative density	: 1.7 g/cm³ @ 20°C
Relative vapour density	: Not determined
Bulk Density (Volumetric)	: 900 – 1 100 kg/m³
Particle characteristics	: Not listed

¹ "Solid" – Is a substance that cannot be classified as a liquid or Gas.

² "Mixture" – A mixture is composed of two or more substances in which they do not react.

SECTION 10: STABILITY AND REACTIVITY

Reactivity	: Stable under recommended storage and handling conditions. An oxidizing agent. Noncombustible but accelerates the burning of combustible materials.
Chemical stability	: Stable under normal conditions.

- Hazardous Reactions : Hazardous reactions or instability may occur under certain conditions of storage or use. Conditions may include the following:
- Contact with incompatible substances.
 - Contact with combustible materials.
- Reactions may include the following:
- Risk of causing or intensifying fire
 - If mixed with chlorine or hypochlorites, it may form nitrogen trichloride which may explode spontaneously in air.
 - Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to Avoid : Decomposes on heating. Avoid confinement.
- Incompatible Materials : Moisture-sensitive material. Hygroscopic. Keep container tightly closed. Avoid contamination by any source including metals, dust and organic materials. Incompatible with copper alloys, copper, and zinc. May be incompatible with some materials of construction. Contact your sales representative or a metallurgical specialist to ensure compatibility with your equipment.
- Hazardous Decomposition Products : Under normal conditions of storage and use, hazardous decomposition products should not be produced. In a fire, decomposition may produce toxic gases/fumes.

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

SECTION 11: TOXICOLOGY

11.1 Acute Toxicity

- Classification : **Not Classified**
- Interpretation : **Category 5 based on GHS criteria**

Method	Compound	Cas Number	Measure	Value	Subject
Oral	Ammonium Nitrate	6484-52-2	LD50 ¹	2950 mg/kg bw ³	Rat
Inhalation	Ammonium Nitrate	6484-52-2	LC50 ²	88.8 mg/L	Rat
Dermal	Ammonium Nitrate	6484-52-2	LD50 ¹	>5000 mg/kg bw ³	Rat

¹ "LD50" – Lethal Doses. The dosage at which 50% mortality was observed.

² "LC50" – Lethal Concentration. The concentration at which 50% mortality was observed.

³ "bw" - body-weight/day

Reference: (ECHA, n.d.) & (Pubchem, search, 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	: Category 2A (irritating to eyes) based on GHS criteria
Description	: Based on the effects seen on the conjunctiva in all three animals tested (redness score: average 1, 2 and 3 days) the substance should be considered as being irritating to the eye (Category 2A).
Subjects	: Rabbits

Reference: (ECHA, n.d.)

11.4 Respiratory or skin sensitisation

Classification	: No classification
Description	: No adverse effect observed (not sensitising)
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
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Reference: (ECHA, n.d.)

11.7 Reproductive toxicity

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

Reference: (ECHA, n.d.)

11.8 STOT² - single exposure

Classification	: No data available
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² "STOT" - Specific target organ toxicity.

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

11.9 STOT² - repeated exposure

Classification	: No classification
Description	: No effects observed
Subjects	: Rat

² "STOT" - Specific target organ toxicity.

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

11.10 Aspiration hazard

Classification : **No data available**

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

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
Ammonium Nitrate	6484-52-2	Fish	Carp	48-h	LC50 ¹	447 mg/L
Ammonium Nitrate	6484-52-2	Aquatic invertebrates	Daphnia magna	96-h	EC50 ²	490 mg/L
Ammonium Nitrate	6484-52-2	Aquatic invertebrates	Bullia digitalis	7-d	EC50 ²	555 mg/L
Ammonium Nitrate	6484-52-2	Aquatic Algae and Cyanobacteria	Benthic Diatoms	10-d	EC50	> 1700 mg/L
Ammonium Nitrate	6484-52-2	Micro-organisms	Activated sludge of a predominantly domestic sewage	3-h	EC50 ²	>1000 mg/L

Terrestrial Toxicity

Compound	Cas Number	Organism	Species	Time	Measure	Value
Ammonium Nitrate	6484-52-2	Macro-organisms				Not Justified
Ammonium Nitrate	6484-52-2	Antropodes				Not Justified
Ammonium Nitrate	6484-52-2	Plant				Not Justified
Ammonium Nitrate	6484-52-2	Micro organisms				Not Justified
Ammonium Nitrate	6484-52-2	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 "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.)

12.2 Persistence and degradability

- Stability : **The substance does not hydrolyze nor is there evidence for photodegradation.**
- In aqueous solution, ammonium nitrate is completely dissociated into the ammonium ion (NH₄⁺) and the nitrate anion (NO₃⁻). Hydrolysis of ammonium nitrate does not occur.
- Biodegrastion : **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 : **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 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 NO₃ and NH₄⁺/NH₃.
- 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.

SECTION 14: TRANSPORT INFORMATION

12.1 UN Modelled regulations

Composition	:	Contain < than 80% Ammonium Nitrate, therefore not classified as a Oxidizer
UN Number	:	Not listed
UN proper shipping name	:	Not listed
Transport hazard class(es)	:	No classification
Packing group	:	No classification
Environmentally hazardous	:	No classification
Special precautions:	:	ADR/RID¹ - Not specified IMDG² - Not specified IATA³ - Not Specified
Transport in Bulk according to IMO instructions	:	Not specified

Reference: (ILO, n.d.) & (ECHA, n.d.) & (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 September 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

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	H272 - May intensify fire; oxidiser H302 - Harmful if swallowed H318 - Causes serious eye damage 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. P264 - Wash hands [and ...] thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P265 - Do not touch eyes. P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...
Precautionary Statements	H272 - May intensify fire; oxidiser H302 - Harmful if swallowed H318 - Causes serious eye damage 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. P264 - Wash hands [and ...] thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. 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
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<https://www.dgg.bam.de/quickinfo/en/show/c76pj2dnrxee5y4v2pbx2uv6iy/>

(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.)

ChemSafetyPro. (n.d.) GHS Classification of Mixture. Retrieved from http://www.chemsafetypro.com/Topics/GHS/GHS_classification_mixture.html

(ChemSafetyPro are a group of chemical regulatory experts developing original and free chemical safety and regulatory tutorials and references to help regulatory professionals and non-regulatory experts quickly find chemical compliance info and safety requirements for their products and businesses.)

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>

(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. <https://echa.europa.eu/registration-dossier/-/registered-dossier/15487/9>

(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. Their work also contributes to a well-functioning internal market, innovation and the competitiveness of Europe's chemicals industry.)

Hazmat Tool. (n.d.) Load, Transport and Storage of Hazardous Materials according U.S-Hazardous Materials Regulations (49 CFR). <https://www.hazmattool.com/info.php?language=en/>

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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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(OECD allow the search by chemical and provides a list and access to compiled SDS's)

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(The Minister of Employment and Labour has, under section 43 of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), after consultation with the Advisory Council for Occupational Health and Safety, made the regulations in the Schedule)

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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 health 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.