



KYNOCH FERTILIZER

SAFETY DATA SHEET

Zn 15 EDTA

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 : **Zinc 15 EDTA**

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

1.2 Other means of identification

Description : **Zinc EDTA**
Chemical name : **Disodium zinc EDTA**
CAS Number² : **14025-21-9**
EC Number³ : **237-865-0**

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**
: **Kynoch - 086 092 7272**

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	Not Classified ¹		
Health Hazards	Not Classified		
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

Classification by Organization

Organization	Substance	CAS Number	Classification
EPA-NZ	Disodium zinc EDTA	14025-21-9	Not Listed
ECHA	Disodium zinc EDTA	14025-21-9	No Classification
ILO (WHO)	Disodium zinc EDTA	14025-21-9	Not Listed
AICIS	Disodium zinc EDTA	14025-21-9	Not Listed

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 : **No classification**
Pictogram Name : **No classification**
Signal Word : **No Signal word.**
Hazard Statements : **N/A**
Precautionary Statements : **N/A**

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

2.3 Other hazards that do not result in classification

: **Non specified**

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

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substance

Common name : **Zn EDTA**
EC Name : **Disodium [[N,N'-ethylenediylbis[N-(carboxylatomethyl)glycinato]](4)-N,N',O,O'.ON.ON']zincate(2-)**

Chemical Formula	: C₁₀H₁₂N₂O₈Zn.2Na
Molecular Weight	: 522.667 g/mol
Nutrient Content	: 15% Zinc (Zn)
CAS Number	: 14025-21-9
EC Number	: 237-865-0
Impurities and stabilizers	: N/A¹

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 : **N/A**

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General information	: In all cases of doubt, or when symptoms persist, seek medical attention.
After inhalation	: Dust may be irritating to the respiratory tract and cause symptoms of bronchitis. Move to fresh air. If symptoms persist, seek medical advice.
After skin contact	: Take off contaminated clothing immediately. Wash immediately with soap and water. Launder clothes before reuse.
After eye contact	: Rinse thoroughly with plenty of water. Eyelids should be held away from the eyeball to ensure thorough rinsing. Seek medical advice if irritation develops.
After swallowing	: Rinse mouth, give water to drink.

4.2 Most important symptoms and effects, both acute and delayed

Effects	: No typical effects known.
Symptoms	: No typical symptoms known.

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 spray, foam, carbon dioxide, dry chemical powder.
Inappropriate extinguishing media	: None known.
Notes	: Use fire extinguishing methods suitable to surrounding conditions.

5.2 Specific hazards arise from chemical

Warning	: Not applicable.
Hazardous Combustion Products	: Not applicable.
Fire hazard	: Non-flammable substance
Explosion hazard	: Not applicable
Reactivity	: Keep away from: Aluminium and humidity / water.

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.

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.
	: For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storerooms and receptacles	: No special requirements.
One common storage facility	: Protect from moisture and wet air.
Handling of product	: Keep container tightly closed and dry.
Room conditions	: Protect from moisture and wet air.
Storage Class Reference: (BAUA, 2016)	: (TRGS 510): 10 - 13 Other liquids and solids: Non-Combustible Solids

7.3 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	Zn EDTA	14025-21-9		Not Listed	Not Listed
International Labour organization (ILO)	Zn EDTA	14025-21-9		Not Listed	Not Listed
OCHA	Zn EDTA	14025-21-9		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 dust.**
- Inhalation risk : **Not Specified**
- Effects of short-term exposure : **Not Specified**
- Effects of long-term or repeated exposure : **Not Specified**

Reference: (ILO, n.d.)

8.2 Appropriate engineering controls

- Engineering : **No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants.**

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 only necessary if risk assessment indicates this.**
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 : **Solid¹**
- Composition : **Mono-constituent substance**
- Colour : **White to pale-grey**
- Odour : **Odourless**

Melting point/freezing point	: >240°C
Boiling point or initial boiling point and boiling range	: The study does not need to be conducted because the substance is a solid which decomposes before boiling.
Flammability	: Product is 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. The study does not need to be conducted because the flash point is only relevant to liquids and low melting point solids
Auto-ignition temperature	: 315°C
Oxidizing Properties	: Non oxidising
Decomposition temperature	: 263°C
pH	: 4 to 6 @ 20 °C
Kinematic viscosity	: Not applicable
Solubility	: 534 g/l water @ 0°C
Partition coefficient: n-octanol/water (log value)	: The study does not need to be conducted because the substance is inorganic.
Vapour pressure	: N/A
Density and/or relative density	: 1.72 g/cm³ @ 20°C
Relative vapour density	: Not determined
Bulk Density (Volumetric)	: 625 kg/m³
Particle characteristics	: <100 µm was <32.7% <10 µm was 1.5% <5 µm was 0.7%
Molecular Formula	: C₁₀H₁₂N₂O₈Zn.2Na
Molecular Weight	: 522.667 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.)

SECTION 10: STABILITY AND REACTIVITY

Reactivity	: Not specified.
Chemical stability	: Stable under normal conditions.
Hazardous Reactions	: A dangerous reaction will not occur.
Conditions to Avoid	: Avoid humidity and water.
Incompatible Materials	: Aluminium.
Hazardous Decomposition Products	: Not specified.

Reference: Minema Chemicals (2022)

SECTION 11: TOXICOLOGY

11.1 Acute Toxicity

- Classification : **Not classified.**
- Description : **Based on the very low toxicity of Zn EDTA via the oral route, and the expected very low toxicity via the inhalation route and taking into account low dermal absorption of ADTA-compounds, no classification is needed for acute toxicity.**

Method	Compound	Cas Number	Measure	Value	Subject
Oral	Zn EDTA	14025-21-9	LD50 ¹	2000 mg/kg bw	Rat
Inhalation	Zn EDTA	No study available			
Dermal	Zn EDTA	No study available			

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

² "LDLo" - The 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.

³ "LC0" – The lethal concentration 0 represents the concentration at which no individuals are expected to die.

⁴ "bw" - body-weight/day

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

No Classification

- Classification : **Data conclusive but not sufficient for classification.**
- Description : **Very slight erythema was noted for one animal at 1 hour after patch removal. No other skin effects or systemic effects were noted during the observation period of 72h.**
- Subject : **Rabbit**

Reference: (ECHA, n.d.)

11.3 Serious eye damage/irritation

- Classification : **Data conclusive but not sufficient for classification.**
- Description : **Although the test item induced slight irritation, no classification is needed according to OECD-GHS.**
- Subject : **Rabbit**

Reference: (ECHA, n.d.)

11.4 Respiratory or skin sensitisation

- Classification : **No Classification**
- Description : **Treatment with FeNaEDTA at concentrations of 10%, 25% or 50% (w/w) did not reveal any statistically significant increased values ($p \leq 0.01$) for the lymph node cell counts and ear weights.**
- Subject : **Mouse**

Reference: (ECHA, n.d.)

11.5 Germ cell mutagenicity

Classification	: No Classification
Description	: Although no genotoxicity studies have been carried out with EDTA-ZnNa₂, several genotoxicity studies are available for other EDTA-compounds such as EDTA-Na₂H₂, EDTA-Na₃H and several metal-chelates. None of these showed genotoxic activity.
Subject	: N/A

Reference: (ECHA, n.d.)

11.6 Carcinogenicity

Classification	: No Classification
Description	: No treatment-related tumours were observed following chronic exposure to either EDTA-CaNa₂ or EDTA-Na₃H
Subject	: Rats

Reference: (ECHA, n.d.)

11.7 Reproductive toxicity

Classification	: No Classification
Description	: There was no evidence for an influence of EDTA-CaNa₂ on the fertility of rats.
Subject	: Rats

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.
	Based on the results no classification is needed for EDTA-ZnNa₂ following repeated exposure.

² "STOT" - Specific target organ toxicity.

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

11.10 Aspiration hazard

Classification	: Data conclusive but not sufficient for classification.
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Reference: (ECHA, n.d.) & (Pubchem, search, n.d.)

11.11 Route of Exposure and potential effects

Swallowing	: Not specified.
Inhalation	: Not specified.
Eye exposure	: Not specified.
Skin exposure	: Not specified.

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
Zn EDTA	14025-21-9	Fish	Rainbow trout, zebrafish, bluegill	Unknown	LC50 ¹ ₃	685 mg/L
Zn EDTA	14025-21-9	Aquatic invertebrates	Daphnids	48-h	EC50	110 mg/L
Zn EDTA	14025-21-9	Aquatic Algae and Cyanobacteria	Pseudokirchneriella subcapitata	Unknown	EC10	>44 mg/L
Zn EDTA	14025-21-9	Micro-organisms	Activated sludge	3-h	EC50	>658 mg/L

Terrestrial Toxicity

Compound	Cas Number	Organism	Species	Time	Measure	Value
Zn EDTA	14025-21-9	Macro-organisms	Eisenia fetida	14 days	EC10	430 mg/kg
Zn EDTA	14025-21-9	Arthropods				Not Justified
Zn EDTA	14025-21-9	Plant	Rape and soybean	21 days	EC50	491 mg/kg
Zn EDTA	14025-21-9	Micro organisms				Not Justified
Zn EDTA	14025-21-9	Birds	Bobwhite quail	14 days	LC50	965 mg/kg bw/d

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.)

12.2 Persistence and degradability

Stability : **EDTA is resistant to hydrolysis.**

Further abiotic degradation processes as reaction with OH-radicals or single oxygen have (compared to the direct photolysis) very low reaction constants and are of no environmental significance.

Biodegradation : **EDTA is not found to be readily biodegradable according to OECD criteria.**

Reference: (ECHA, n.d.)

12.3 Bioaccumulate potential

Description : **Based on the estimated logKow (<3) and available BCF study in fish with radiolabelled EDTA (BCF range 1.1-1.8) it can be concluded there is low potential for bioaccumulation for EDTA-ZnNa2.**

Reference: (ECHA, n.d.)

12.4 Mobility in soil

Adsorption : **Key information was obtained from the EU RAR (2004), with the addition of the study by Wen et al (2009). EDTA will slowly be degraded in soil depending on complexation, soil type and pH.**

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

UN Number : **Not regulated**

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: (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

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/#list/>

(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?SiteDatabaseSearchFilters=0&Search=>

(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/>

(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). Retrieved from <https://www.hazmattool.com/info.php?language=en/>

(Hazmat Tool is a free to search database with information regarding the 49CFR classification and transport)

International Labour organization [ILO]. (n.d.) ICSC database. *International Chemical Safety Cards (ICSCs)*. Retrieved from https://www.ilo.org/dyn/icsc/showcard.display?p_lang=en&p_card_id=&p_version=2

(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.)

Minema Chemicals (2022) Search for MSDS or Specification Documents. Retrieved from <http://www.minema.co.za/msds/>

(MINEMA Chemicals provide MSDS information and documentation on a variety of chemicals)

OECD. (n.d.) The Global Portal to Information on Chemical Substances. Classification Search. Retrieved from <https://www.echemportal.org/echemportal/ghs-search/>

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

Pubchem, search. (n.d.) Explore Chemistry. *Quickly find chemical information from authoritative sources*. Retrieved from <https://pubchem.ncbi.nlm.nih.gov/compound/>

(PubChem is an open chemistry database at the National Institutes of Health (NIH). Pubchem may reference some of the same sources as listed in this document)

Pubchem, GHS. (n.d.) Explore Chemistry. *GHS Classification*. Retrieved from <https://pubchem.ncbi.nlm.nih.gov/ghs/>

(PubChem is an open chemistry database at the National Institutes of Health (NIH). Pubchem may reference some of the same sources as listed in this document)

South African Labour Department. (2021) Regulations for Hazardous Chemical Agents. Retrieved from https://www.gov.za/sites/default/files/gcis_document/202103/44348rg11263gon280.pdf

(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)

The Australian Industrial Chemicals Introduction Scheme [AICIS]. (n.d.) Chemical information. *Search assessments*. Retrieved from <https://www.industrialchemicals.gov.au/chemical-information/search-assessments?assessmentcasnumber=>

(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.