



# KYNOCH FERTILIZER

## SAFETY DATA SHEET

### Di Ammonium Phosphate

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<sup>1</sup> product identification

Product Name : **Diammonium Phosphate**

<sup>1</sup> GHS - Globally Harmonized System of Classification and Labelling of Chemicals

### 1.2 Other means of identification

Description : **Diammonium hydrogen orthophosphate, DAP, Di Ammonium Phosphate**  
Chemical name : **Diammonium hydrogen orthophosphate**  
CAS Number<sup>2</sup> : **7783-28-0**  
EC Number<sup>3</sup> : **231-987-8**

<sup>2</sup> "CAS Number" - CAS Number is a numerical designation for chemicals that is maintained by the Chemical Abstracts Service (CAS) of the American Chemical Society.

<sup>3</sup> "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 : **Substance**

#### Summarized Classification

Types of Hazards	Hazard Class	Category/subcategory	H-Statement
Physical Hazards	Not Classified <sup>1</sup>		
Health Hazards	Not Classified		
Environmental Hazards	Not Classified		

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

<sup>1</sup> "Not Classified" – Data conclusive but not at sufficient levels for classification.

<sup>2</sup> "H-Statement" – Hazard Statement. Full decryption in Section16

#### Classification by Organization

Organization	Substance	CAS Number	Classification
EPA-NZ			Not Listed
ECHA			No Classification
ILO (WHO)			No Classification
AICIS			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 : **No Classification**  
Pictogram Name : **No Classification**  
Signal Word : **No Signalling words**  
Hazard Statements : **No Classification**  
Precautionary Statements : **No Classification**

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

### 2.3 Other hazards that do not result in classification

Hazards : **Non-Specified**

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

## SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

### 3.1 Substance

Common name	: Di Ammonium Phosphate
EC Name	: Diammonium hydrogen orthophosphate
Chemical Formula	: $(\text{NH}_4)_2\text{HPO}_4$
Molecular Weight	: 132.1 g/mol
Nutrient Content	: 18% N 20% P
CAS Number	: 7783-28-0
EC Number	: 231-987-8
Impurities and stabilizers	: N/A

<sup>1</sup> "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
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## SECTION 4: FIRST AID MEASURES

### 4.1 Description of first aid measures

General information	: In some cases, medical attention necessary (see below).
After inhalation	: Remove from source of exposure to dusts. Obtain medical attention if ill effects occur.
After skin contact	: Wash skin thoroughly with mild soap and water. Remove contaminated clothing and shoes. Wash clothing before re-using.
After eye contact	: Flush/irrigate eyes with copious amounts of water for at least 10 minutes. Obtain medical attention if eye irritation persists.
After swallowing	: Do not induce vomiting. Rinse mouth and then give water or milk to drink. Obtain medical attention if more than a small quantity has been swallowed.

### 4.2 Most important symptoms and effects, both acute and delayed

Effects	: Inhalation	- Not Listed
	Ingestion	- Not Listed
	Skin contact	- Not Listed
	Eye contact	- Irritation
Symptoms	: Inhalation	- Not Listed
	Ingestion	- Not Listed
	Skin contact	- Not Listed
	Eye contact	- Redness. Pain.

### 4.3 Indication of any immediate medical attention and special treatment needed

Note to physician	: <b>Inhalation of fire and thermal decomposition gases, containing ammonia, can cause irritation and corrosive effects on the respiratory system. Some lung effects may be delayed.</b>
Specific treatment	: <b>Not Specified</b>

## SECTION 5: FIRE-FIGHTING MEASURES

### 5.1 Suitable extinguishing medium

Suitable extinguishing agents	: <b>f fertilizer is involved in the Fire. Use plenty of water, foam or dry chemical</b>
Inappropriate extinguishing media	: <b>None identified</b>
Notes	: <b>Use fire extinguishing methods suitable to surrounding conditions.</b>

### 5.2 Specific hazards arise from chemical

Warning	: <b>Heating to decomposition gives toxic fumes</b>
Hazardous Combustion Products	: <b>Ammonia and possibly oxides of phosphorus</b>
Fire hazard	: <b>Non-flammable substance</b>
Explosion hazard	: <b>Not applicable</b>
Reactivity	: <b>None</b>

### 5.3 Special protective action for Fire-Fighters

Special protective actions for fire-fighters	: <b>Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.</b>
	: <b>No action shall be taken involving any personal risk or without suitable training.</b>
	: <b>Open doors and windows of the store to give maximum ventilation.</b>
Special protective equipment for fire-fighters	: <b>Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.</b>
	: <b>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.</b>

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment, and emergency procedures

Percussions	: <b>No action shall be taken involving any personal risk or without suitable training.</b>
Equipment	: <b>Wear protective clothing and safety glasses</b>
Procedure	: <b>Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Provide adequate ventilation.</b>

<sup>1</sup> 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
- : **Any spillage of fertilizer should be cleaned up promptly, swept up and placed in a clean labelled open container for safe disposal, avoiding dusty conditions.**
- Large Spill
- : **Any spillage of fertilizer should be cleaned up promptly, swept up and placed in a clean labelled open container for safe disposal, avoiding dusty conditions.**

## 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 dust formation. Avoid breathing dust.**
  - : **Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Remove contaminated clothing and shoes. Wash clothing before re-using. Avoid contact with skin and eyes.**
  - : **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
- : **Locate away from the sources of heat or fire.**  
**On farm, ensure that the fertilizer is not stored near hay, straw, grain, diesel oil, etc.**  
**When stored loose, take particular care to avoid mixing with other fertilizers.**
- Incompatible Material
- : **Keep away from combustible materials and substances mentioned under Section10.**

- Handling of product : **Avoid contamination by combustible (e.g., diesel oil, grease, etc.) and/or other incompatible materials.**  
**Avoid unnecessary exposure to the atmosphere to prevent moisture pick-up.**  
**When handling the product over long periods use appropriate personal protective equipment, e.g., gloves.**  
**Carefully clean all equipment prior to maintenance and repair.**  
**It is recommended to restrict the stack size and to keep at least 1 m distance around the stacks of bagged products.**
- Room conditions : **Any building used for the storage should be dry and well ventilated.**
- 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 <sup>1</sup>	STEL <sup>2</sup>
South African Labour Department				Not Listed	Not Listed
International Labour organization (ILO)				Not Listed	Not Listed
OCHA				10 mg/m <sup>3</sup>	Not Listed

<sup>1</sup> TWA – Long term exposure: Time Weighted Average (8-hour period)

<sup>2</sup> 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.**
- Inhalation risk : **Evaporation at 20°C is negligible; a nuisance-causing concentration of airborne particles can, however, be reached quickly when dispersed, especially if powdered.**
- Effects of short-term exposure : **The substance is irritating to the eyes.**
- Effects of long-term or repeated exposure : **Not Listed**

Reference: (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.**

## 8.2 Individual protection measures

Eye/face protection	: <b>Wear safety glasses.</b> 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	: <b>Gloves is recommended.</b> 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	: <b>Use dust mask.</b> 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	: <b>No special environmental precautions required</b>



## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Properties

Physical state	: <b>Solid</b> <sup>1</sup>
Composition	: <b>Substance</b> <sup>2</sup>
Colour	: <b>White</b>
Odour	: <b>Odourless</b>
Melting point/freezing point	: <b>155 °C</b>
Boiling point or initial boiling point and boiling range	: <b>No Justification</b>
Flammability	: <b>Not flammable</b>
Lower and upper explosion limit/flammability limit	: <b>Not determined</b>
Flash point	: <b>Not applicable</b>
Auto-ignition temperature	: <b>Based on structure, use and transport information, diammonium hydrogen orthophosphate is not expected to be a self-heating substance.</b>
Oxidizing Properties	: <b>Non oxidizer</b>
Decomposition temperature	: <b>≥150 °C</b>

pH	: 8
Kinematic viscosity	: Not applicable
Solubility	: 100 g/L water @ 20°C
Partition coefficient: n-octanol/water (log value)	: No data available
Vapour pressure	: 0.076 Pa @ 20 °C
Density and/or relative density	: 1.62 g/cm <sup>3</sup> @ 20°C
Relative vapour density	:
Bulk Density (Volumetric)	: 900 kg/m <sup>3</sup>
Particle characteristics	: 10% is < 9 µm, 11.27% is < 10 µm, 50% is < 58 µm, 90% is < 229 µm.
Molecular Formula	: (NH <sub>4</sub> ) <sub>2</sub> HPO <sub>4</sub>
Molecular Weight	: 132.1 g/mol

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

<sup>2</sup> "Substance" – Is chemical elements and their compounds in their natural state or obtained by production process)

Reference: (ECHA, n.d.)

## SECTION 10: STABILITY AND REACTIVITY

Reactivity	: Non-Reactive
Chemical stability	: Stable under normal conditions.
Hazardous Reactions	: Not under normal conditions
Conditions to Avoid	: Heating above 155 degrees Celsius (decomposes). Contamination by incompatible materials. Closeness to sources of heat or fire. Heating under confinement. Welding or hot work on equipment or plant which may have contained fertilizer without first washing thoroughly to remove all fertilizer
Incompatible Materials	: Alkalies, strong acids, copper and its alloys. Separated from strong oxidants, strong bases and strong acids.
Hazardous Decomposition Products	: Ammonia is released upon reaction with strong bases or when heated.

## SECTION 11: TOXICOLOGY

### 11.1 Acute Toxicity

Classification	: No Classification
Description	: Based on the data available, ammonium dihydrogen orthophosphate does not have to be classified for acute oral, dermal and inhalation toxicity



Method	Compound	Cas Number	Measure	Value	Subject
Oral			LD50 <sup>1</sup>	>2000 mg/kg bw <sup>2</sup>	Rat
Inhalation			LC50	>5 mg/L	Rat
Dermal			LD50	>5000 mg/kg bw	Rat

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

<sup>2</sup> "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 : **Not irritating**

Subjects : **Rabbit**

Reference: (ECHA, n.d.)

## 11.3 Serious eye damage/irritation

Classification : **No Classification**

Description : **Because reversibility of the findings is expected due to the trend obvious in the individual data, the substance is considered a non-irritant.**

Subjects : **Rabbits**

Reference: (ECHA, n.d.)

## 11.4 Respiratory or skin sensitisation

Classification : **No Classification**

Description : **Since there was no indication that the test substance elicits an SI  $\geq$  3 when tested up to 50%, Diammonium hydrogen orthophosphate was considered not to be a skin sensitizer.**

Subjects : **Mouse**

Reference: (ECHA, n.d.)

## 11.5 Germ cell mutagenicity

Classification : **No classification**

Description : **Based on reliable in vitro studies with diammonium hydrogen orthophosphate, the Ames test and the chromosome aberration study were negative in the presence and absence of metabolic activation.**

Subjects : **S. typhimurium**

Reference: (ECHA, n.d.)

## 11.6 Carcinogenicity

Classification : **N/A**

Description : **N/A**

Subject : **N/A**

Reference: (ECHA, n.d.)

## 11.7 Reproductive toxicity

Classification	: No classification
Description	: NOAEL: 1500 mg/kg/day for reproduction/developmental toxicity.
Subjects	: Rat

Reference: (ECHA, n.d.)

## 11.8 STOT<sup>2</sup> - single exposure

**Not available**

<sup>2</sup> "STOT" - Specific target organ toxicity.

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

## 11.9 STOT<sup>2</sup> - repeated exposure

Classification	: No Classification
Description	: Based on a reliable oral OECD 422 study with diammonium hydrogen orthophosphate in rats, local effects were observed in the stomach at the lowest dose tested (250 mg/kg bw/day). However, the systemic NOAEL is determined to be 250 mg/kg bw/day based on horizontal banding of dental surface at mid dose (LOAEL), with effects on haematological and clinical chemistry parameters at highest dose level.
Subject	: N/A

<sup>2</sup> "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.)

## 11.11 Route of Exposure and potential effects

Swallowing	: Not listed
Inhalation	: Not Listed
Eye exposure	: Irritation
Skin exposure	: Not Listed

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.**
- Description : **The substance does not need to be classified with regard to the environment, based on the fact that no adverse effects were observed at the highest recommended test concentrations/doses (nominal concentration of 100 mg/L) in the aquatic toxicity studies.**

#### Aquatic Toxicity

Compound	Cas Number	Organism	Species	Time	Measure	Value
		Fish	Oncorhynchus mykiss	96-h	LC50 <sup>1</sup>	>100 mg/L
		Aquatic invertebrates	Daphnia magna	48-h	EC50 <sub>1</sub>	>100 mg/L
		Aquatic Algae and Cyanobacteria	Selenastrum Capricornutum	72-h	EC50 <sup>1</sup>	>100 mg/L
		Micro-organisms	Activated sludge of a predominantly domestic sewage	3-h	EC50	>100 mg/L

#### Terrestrial Toxicity

Compound	Cas Number	Organism	Species	Time	Measure	Value
		Macro-organisms				Not specified
		Arthropods				Not specified
		Plant				Not specified
		Micro organisms				Not specified
		Birds				Not specified

<sup>1</sup> "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.

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

### 12.2 Persistence and degradability

- Stability : **In aqueous solution, diammonium hydrogen orthophosphate is completely dissociated into the ammonium ion (NH<sub>4</sub><sup>+</sup>) and the phosphate anion (PO<sub>4</sub><sup>3-</sup>). Hydrolysis of the substance does not occur, and it is also not susceptible to photodegradation.**
- Biodegradation : **Readily biodegradation study does not need to be conducted since the substance is inorganic (Annex VII REACH). In addition, in the anaerobic transformation of ammonium, one group of bacteria oxidizes ammonium to nitrite while another group oxidizes nitrite into nitrate.**

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 : **No Data**

Volatilization : **No Data**

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

GHS Classification : **Not regulated**

UN Number : **Not listed**

UN proper shipping name : **No classification**

Transport hazard class(es) : **No classification**

Label : **No classification**

Packing group : **Not regulated**

Environmentally hazardous : **Not regulated**

Special precautions: : **ADR/RID<sup>1</sup> - Not Specified**

**IMDG<sup>2</sup> - Not Specified**

**IATA<sup>3</sup> - Not Specified**

Transport in Bulk according to IMO instructions : **Not specified**

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

<sup>1</sup> ADR/RID - International Carriage of Dangerous Goods by Rail (RID) and by Road (ADR)

<sup>2</sup> IMDG - The International Maritime Dangerous Goods (IMDG)

<sup>3</sup> 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=7783-28-0>

(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/15555/1/1>

(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. 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/index.php>

(Hazmat Tool is a free to search database with information regarding the 49CRF 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=0217&p\\_version=2](https://www.ilo.org/dyn/icsc/showcard.display?p_lang=en&p_card_id=0217&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.)

**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/516951>

(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](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=7783-28-0>

(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.