



**SAFETY DATA SHEET**  
**GraminX**

**Section 1. Identification of the material and the supplier**

Product: **GraminX**  
Product Use: Herbicide  
Restriction of Use: Refer to Section 15

Supplier: **Agritech Bioscience (Pty) Ltd t/a Carabiner**  
PO Box 1224  
Isando, 1600  
South Africa  
[www.carabiner.co.za](http://www.carabiner.co.za)  
TEL: 071 546 5077

**Emergency No:** POISON CENTRE (UNITAS HOSPITAL) 012 664 1100  
TYGERBERG 021 931 6129  
RED CROSS 021 689 5227  
RAPID SPILL RESPONSE 0800 775 3305  
GRIFFON POISON CENTRE 082 446 8946

Date of SDS Preparation: 20 June 2024

**Section 2. Hazards Identification**

**Classification of the substance or mixture**

**Globally Harmonised System, EU (GHS) and according to regulation EC No 1272/2008 [CLP]**

Flammable liquid Cat. 4: H227  
Acute Toxicity Oral: Cat. 4: H302  
Acute Toxicity Inhalation: Cat. 4: H332  
Aspiration Hazard Cat. 1: H304  
Skin corrosion / irritation Cat. 3b: H316  
Skin sensitisation Cat. 1: H317  
Eye Irrit. Cat. 2A: H319  
Short-term (acute) aquatic hazard Category 3: H402  
Long-term (chronic) aquatic hazard Category 3: H412

For the full text of the H-Statements mentioned in this Section, see Section 16.

**Pictograms**



Signal Word: **Warning**

### **Hazard statement(s)**

H227 - Combustible liquid.  
H302 - Harmful if swallowed.  
H304 - May be fatal if swallowed and enters airways.  
H316 - Causes mild skin irritation.  
H317 - May cause an allergic skin reaction.  
H319 - Causes serious eye irritation.  
H332 - Harmful if inhaled.  
H412 - Harmful to aquatic life with long lasting effects.

### **Precautionary statement(s)**

#### **General:**

P101 - If medical advice is needed, have product container or label at hand.  
P102 - Keep out of reach of children.  
P103 - Read carefully and follow all instructions.

#### **Prevention:**

P210 - Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.  
P261 - Avoid breathing dust/fumes/gas/mist/vapours/spray.  
P264 + P265 - Wash hands thoroughly after handling. Do not touch eyes.  
P270 - Do not eat, drink, or smoke when using this product.  
P271 - Use only outdoors or in a well-ventilated area.  
P272 - Contaminated work clothing should not be allowed out of the workplace.  
P273 - Avoid release to the environment.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection / hearing protection.

#### **Response:**

P301 + P316 - IF SWALLOWED: Get emergency medical help immediately.  
P301 + P317 - IF SWALLOWED: Get medical help. P330 - Rinse mouth.  
P302 + P352 - IF ON SKIN: Wash with plenty of water and soap.  
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P317 - Get medical help.  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.  
P321 - Specific treatment (see First Aid Measures on this SDS).  
P331 - Do NOT induce vomiting.  
P333 + P317 - If skin irritation or a rash occurs: Get medical help.  
P337 + P317 - If eye irritation persists: Get medical help.  
P362 + P364 - Take off contaminated clothing and wash it before reuse.  
P370 + P378 - In case of fire: Use fine water spray, alcohol foam, carbon dioxide, or dry chemical to extinguish.

#### **Storage:**

P403 - Store in a well-ventilated place.  
P405 - Store locked up.

#### **Disposal:**

P501 - Dispose of contents/container in accordance with national regulations.

### Supplemental Hazard Statements

None

Supplemental Hazard Statements: none

### Other hazards

No other hazards known

## Section 3. Composition / Information on Hazardous Ingredients

Mixture

Emulsifiable Concentrate

Clethodim 240 g/L

Globally Harmonised System, EU (GHS) and according to regulation EC No 1272/2008 [CLP]

Chemical name	Concentration of hazardous ingredient	Classification
Clethodim	24%	Acute toxicity Oral: Cat. 4, H302 Acute inhalation toxicity: Cat. 3, H331 Skin Sens. 1. H317 Short-term (Acute) Aquatic hazard Cat. 3. H402 Long-term (Chronic) Aquatic hazard Cat. 3.H412
Calcium dodecylbenzene sulphonate	$\geq 1 - \leq 10\%$	Acute toxicity Oral: Cat. 4, H302 Acute toxicity Inhalation: Cat. 2, H330 Skin corrosion / irritation Cat. 2: H315 Eye Irrit. Cat. 2A: H319 Long-term (Chronic) Aquatic hazard Cat. 4. H413
Fatty alcohol polyoxyethylene ether	$\geq 1 - \leq 10\%$	Acute toxicity Oral: Cat. 4, H302 Skin corrosion / irritation Cat. 2: H315 Eye Irrit. Cat. 2: H319 Short-term (Acute) Aquatic hazard Cat. 2. H401
Solvent naphtha (petroleum) heavy aromatic	$\geq 1 - \leq 70\%$	Flammable liquid: Cat. 4.H227 Acute toxicity Inhalation: Cat. 4, H332 Aspiration Hazard Cat. 1.H304

For the full text of the H-Statements mentioned in this Section, see Section 16.

## Section 4. First Aid Measures

First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment. Remove patient from exposed area. Never give fluids or induce vomiting if the patient is unconscious or is having convulsions.

Routes of Exposure:

- If in Eyes Flush eyes with plenty of water for 15 minutes holding eyelids open if necessary. **Seek medical assistance immediately.**
- If on Skin Immediately flush body and clothes with large amounts of water and soap. Remove contaminated clothing and footwear. Wash affected areas with soap and water. Do not rub skin. Persons providing first aid must wear gloves to avoid self-contamination. Seek medical assistance if irritation occurs.
- If Swallowed Never give anything by mouth to an unconscious person. Do not induce vomiting as this product contains an aromatic solvent. For advice, contact the National Poisons Centre. If the patient is alert and able, rinse mouth thoroughly with water. **Seek medical assistance immediately.** Treat symptomatically and supportively.
- If Inhaled Remove patient to fresh air. Loosen clothing around neck. Lie down and keep warm and rested. If breathing is shallow or has stopped ensure airway is clear and apply resuscitation. **Seek medical assistance immediately.**

**Most important symptoms and effects, both acute and delayed**

No data available.

**Treatment:**

No specific antidote known. Treat symptomatically and supportively.

**Section 5. Fire Fighting Measures**

<b>Hazards from products</b>	Combustion products are toxic and/or irritant.
<b>Suitable Extinguishing media</b>	<p><b>Small fires:</b> Fine water spray, alcohol foam, carbon dioxide, or dry chemical. Do not use high volume water jet.</p> <p><b>Large fires:</b> Water spray or fog can be used to cool unaffected stock. Avoid the accumulation of polluted run-off from the site. Remove the container from the fire if possible and without risk.</p>
<b>Recommended protective clothing &amp; Precautions for firefighters</b>	<p>Remove spectators from surrounding area. Isolate the fire area and evacuate downwind. Use a recommended extinguishing agent for the type of surrounding fire.</p> <p>Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Contain fire control agents for later disposal. Avoid inhaling hazardous vapours and fumes from burning materials. Keep upwind. Remove container from fire area if possible and without risk. Water can be used to cool unaffected containers but must be contained for later disposal. Do not scatter the material. Avoid pollution of waterways.</p> <p>Eliminate all ignition sources in the immediate area.</p> <p>Full protective clothing and self-contained breathing apparatus and turnout gear.</p>

## Section 6. Accidental Release Measures

### Personal precautions:

Avoid contact with skin and eyes. Do not breathe in spray or fumes. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink, or smoke. Wash contaminated clothing before re-use.

For personal protection see Section 8.

### Environmental precautions:

Do not discharge into drains/surface waters/groundwater. Do not discharge into the subsoil/soil. Do not contaminate waterways, drains and groundwater. If contamination of waterways, drains, rivers or lakes is unavoidable, warn the local authorities (Police and Department of Water/Environmental affairs) immediately.

### Spill and Disposal procedures:

#### Cleaning procedure:

Wear protective clothing. Clear area of unprotected personnel. Contain and absorb liquid spills with inert material, remove by scoop or vacuum. Use approved industrial vacuum cleaner for removal and place in waste containers. Wash area with water and detergent and absorb with further inert material. Heavily contaminated soil layers have to be dug out down to clean soil. If spill does enter waterways, contact the local authority. Spilled product cannot be re-used and must be disposed of by incineration or disposal in a chemical waste disposal facility. If containers cannot be recycled, they should be disposed of together with the waste chemical.

#### Disposal:

Used absorbent material and washings should be stored in labelled, sealable containers until these can be disposed of according to local regulations. Open burning or dumping of this material is prohibited.

## Section 7. Handling and Storage

### Precautions for Handling:

Avoid skin and eye contact and inhalation of spray mist. Avoid inhalation of fog and vapours. Keep away from heat and sources of ignition. Spills may be slippery and should be cleaned up immediately. APPROVED HANDLER: This product must be under the control of an approved handler when applied in a wide dispersive manner; or used by a commercial contractor. BEWARE: Spray drift hazard. Apply this product carefully. Spray drift may cause serious damage to other desirable plants.

### Precautions for Storage:

#### Storage conditions

Store in original container tightly closed and in a locked, dry, cool area away from foodstuffs, fertilisers, and seeds. Keep away from children or uninformed persons. Avoid extreme temperatures.

## Section 8 Exposure Controls / Personal Protection

### Occupational exposure limits:

Component	Value type (Form of exposure)	Control parameters / permissible concentration	Basis
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Solvent naphtha: Naphthalene	STEL	75 mg/m <sup>3</sup>	South Africa OEL
Solvent naphtha: Naphthalene	TWA	50 mg/m <sup>3</sup>	South Africa OEL
Solvent naphtha: Naphthalene	TWA	10 ppm	ACGIH
Solvent naphtha: Naphthalene	RCP - TWA	100 mg/m <sup>3</sup>	ExxonMobil

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

### Engineering Controls / Industrial Hygiene

Comply with occupational safety, environmental, fire and other applicable regulations.

It is essential to provide adequate ventilation. The measures appropriate for a particular work site depend on how this material is used and on the extent of exposure. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

### Personal Protection Equipment

<b>Eyes</b>	The use of safety goggles with side-shields is recommended.
<b>Hands</b>	Suitable chemical resistant safety gloves (e.g., nitrile rubber (.4mm)). Contaminated gloves should be washed. Gloves should be disposed of when contaminated on the inside, perforated or contamination on the outside cannot be removed.
<b>Skin</b>	Body protection (chemical protection suit, boots) must be chosen depending on activity and possible exposure. Decontaminate contaminated clothing, remove, and dispose of in accordance with the manufacturer's instructions.
<b>Respiratory</b>	Wear respiratory protection if ventilation is inadequate. Particle filter with medium efficiency for solid and liquid particles. Respiratory protection is not normally required except during the formation of mists or aerosols or in the case of fire.
<b>General</b>	Where there is any possibility that an employee's eyes may be exposed to this substance, the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.  Females of childbearing age should not come into contact with the product. Keep away from food, drink, and animal feedstuffs. No eating, drinking, or smoking during use. Wash hands and face before breaks and after work. Potentially fatal if inhaled. When handling wear full protective clothing such as gloves, hat, coat, and trousers (worn outside rubber boots). Suitable or appropriate respiratory and eye protection should also be worn.  The use of a skin barrier cream is useful to give additional skin protection.

## Section 9 Physical and Chemical Properties

<b>Appearance</b>	Liquid, EC
<b>Colour</b>	Yellow to brown
<b>Odour</b>	Mild characteristic odour

<b>Odour Threshold</b>	No data available
<b>pH</b>	4 - 7
<b>Boiling/Melting Point</b>	No data available
<b>Freezing Point</b>	No data available
<b>Flash Point</b>	No data. Expected to be 60°C
<b>Flammability</b>	Flammable liquid Cat. 4
<b>Upper and Lower Explosive Limits</b>	No data available
<b>Vapour Pressure</b>	No data available
<b>Vapour Density</b>	No data available
<b>Relative Density</b>	No data available
<b>Solubility</b>	Emulsifies in water.
<b>Partition Coefficient n-octanol/water (log value):</b>	No data available
<b>Auto-ignition Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Kinematic Viscosity</b>	No data available
<b>Particle Characteristics</b>	No data available
<b>Surface tension</b>	No data available

#### Section 10. Stability and Reactivity

<b>Stability of Substance</b>	Stable under normal use and standard conditions. Stable for 24 months.
<b>Chemical stability</b>	When stored appropriately this product should show no significant degradation for 2 years from the date of manufacture. Avoid temperature extremes. Avoid strong basic, acidic, or oxidising materials.
<b>Possibility of hazardous reactions</b>	None known.
<b>Conditions to Avoid</b>	Protect from extreme temperatures, direct sunlight, open flames, and sources of ignition.
<b>Incompatible Materials</b>	Strong basic, acidic, or oxidising materials. Store only in the original container.
<b>Hazardous Decomposition Products</b>	No decomposition if stored and handled as indicated.

#### Section 11 Toxicological Information

##### Acute Effects:

<b>Acute oral toxicity [LD<sub>50</sub>]:</b>	<b>Clethodim:</b> Rat: 1133 mg/kg GHS: Category 4  <b>Formulated product: Based on available data of components:</b> GHS: Acute toxicity: oral category 4
<b>Acute dermal toxicity [LD<sub>50</sub>]:</b>	<b>Clethodim:</b> Rat: > 5000 mg/kg GHS: Not classified

	<p><b>Formulated product: Based on available data of components:</b> GHS: Acute toxicity: oral category 5 (Not classified in South Africa)</p>
<p><b>Acute inhalation toxicity [LC<sub>50</sub>]:</b></p>	<p><b>Clethodim:</b> Rat: 3.9 mg/L GHS: Category 3</p> <p><b>Formulated product: Based on available data of components:</b> GHS: Acute toxicity: Inhalation category 4</p>
<p><b>Serious eye damage/irritation</b></p>	<p><b>Clethodim:</b> GHS: Not classified</p> <p><b>Formulated product: Based on available data of components:</b> GHS: Eye Irrit. Cat. 2A</p>
<p><b>Skin irritation/corrosion</b></p>	<p><b>Clethodim:</b> GHS: Not classified</p> <p><b>Formulated product: Based on available data of components:</b> GHS: Skin corrosion / irritation Cat. 3b</p>

**Chronic Effects:**

<p><b>Carcinogenicity</b></p>	<p><b>Clethodim:</b> GHS: Not classified</p> <p><b>Formulated product: Based on available data of components.</b> GHS: Not classified</p>
<p><b>Reproductive Toxicity</b></p>	<p><b>Clethodim:</b> GHS: Not classified</p> <p><b>Formulated product: Based on available data of components.</b> GHS: Not classified</p>
<p><b>Respiratory/skin sensitisation</b></p>	<p><b>Clethodim:</b> GHS: Skin Sensitisation Cat. 1</p> <p><b>Formulated product: Based on available data of components.</b> GHS: Skin Sensitisation Cat. 1</p>
<p><b>Germ Cell Mutagenicity</b></p>	<p><b>Clethodim:</b> GHS: Not classified</p> <p><b>Formulated product: Based on available data of components.</b> GHS: Not classified</p>
<p><b>Aspiration</b></p>	<p><b>Clethodim:</b> GHS: Not classified</p> <p><b>Formulated product: Based on available data of components:</b> GHS: Aspiration Hazard Cat. 1</p>



Respiratory irritation	<p><b>Clethodim:</b> GHS: Not classified</p> <p><b>Formulated product: Based on available data of components:</b> GHS: Not classified</p>
STOT/SE	<p><b><u>Single exposure (STOT-SE)</u></b></p> <p><b>Clethodim:</b> GHS: Not classified</p> <p><b>Formulated product: Based on available data of components.</b> GHS: Not classified</p>
STOT/RE	<p><b>Clethodim:</b> GHS: Not classified</p> <p><b>Formulated product: Based on available data of components.</b> GHS: Not classified</p>

## Section 12. Ecotoxicological Information

Ecological effects information	<p><b><u>Aquatic acute toxicity:</u></b></p> <p><b>Clethodim:</b> Trout: 67 mg/kg, Bluegill sunfish: &gt;120 mg/kg; Daphnia: &gt;120 mg/L; Algae: EC<sub>50</sub> &gt;12 mg/L (Cat 3) GHS: Aquatic acute category 3</p> <p><b>Formulated product: Based on available data of components.</b> GHS: Aquatic Acute Cat. 2.</p> <p><b><u>Aquatic chronic toxicity:</u></b></p> <p><b>Clethodim:</b> GHS: Aquatic chronic category 3</p> <p><b>Formulated product: Based on available data of components.</b> GHS: Aquatic Chronic Cat. 3.</p> <p><b><i>Daphnia magna:</i></b> <b>Clethodim:</b> Daphnia: &gt;120 mg/L</p> <p><b>No data available for the formulated product</b></p> <p><b>Algae:</b> <b>Clethodim:</b> Algae: EC<sub>50</sub> &gt;12 mg/L (Cat 4)</p>
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	<p><b>No data available for the formulated product</b></p> <p><b>Birds:</b> <b>Clethodim:</b> Acute oral LD<sub>50</sub> for bobwhite quail &gt;2000 mg/kg. Dietary LC<sub>50</sub> for mallard ducks &gt;6000 mg/kg diet.</p> <p><b>No data available for the formulated product</b></p> <p><b>Toxicity for worms:</b> <b>Clethodim:</b> LC<sub>50</sub> for earthworms 454 mg/kg soil.</p> <p><b>No data available for the formulated product</b></p> <p><b>Bees:</b> <b>Clethodim:</b> &gt;100 (oral), &gt;100 (contact)</p> <p><b>No data available for the formulated product</b></p>
<b>Persistence and degradability</b>	<p><b>Information based on Clethodim active:</b> <b>Animals:</b> Metabolised to the sulfoxide and sulfone. <b>Plants:</b> Metabolised to the sulfoxide, sulfone, and S-methyl sulfoxide. <b>Soil/Environment:</b> Aerobic DT<sub>50</sub> in soil 1–3 d. Kd 0.08–1.6 (5 soil types).</p> <p>Not persistent.</p>
<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in Soil</b>	No data available.
<b>Other adverse effects</b>	This substance / mixture contains no ingredients that are on the Montreal Protocol list of substances that deplete the ozone layer.
<b>Precautions:</b>	Do not allow to enter waterways.

### Section 13. Disposal Considerations

#### Disposal Method:

If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling container, replace cap and return clean containers to recycler or designated collection point.

In accordance with local and national regulations. This product and its container must be disposed of by a waste treatment facility authorised to destroy waste in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) and the relevant waste management regulations. Do not dispose into, or allow contact with, municipal sewerage systems or open water bodies. Do not bury.

**Empty container precautions:**

Dispose of as unused product.

Contaminated packaging should be emptied as far as possible. Triple or pressure rinse containers before disposal. If recycling, close container and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and take to a waste treatment facility authorised to destroy waste in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) and the relevant waste management regulations for disposal.

**Precautions or methods to avoid:** Waste resulting from the use of this product cannot be reused or reprocessed. Never pour untreated waste or surplus products into public sewers or where there is any danger of run-off or seepage into water systems. Do not contaminate rivers, dams or any other water sources with the product or used containers. Triple rinse containers, add rinsate to the spray tank, then offer the container for recycling/reconditioning, or puncture top, sides and bottom and take to a waste treatment facility authorised to destroy waste in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) and the relevant waste management regulations for disposal.

If on-site container disposal is necessary, triple rinse empty container with water, add rinsate to the spray tank. Puncture top, sides and bottom, crush and store appropriately until it can be taken to a waste treatment facility authorised to destroy waste in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) and the relevant waste management regulations for disposal.

Empty containers and product should not be burnt.

<b>Section 14</b>	<b>Transport Information</b>
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**Rail/road (RID/ADR):**

<b>Proper shipping name</b>	Not regulated for transport
<b>UN number</b>	-
<b>Class</b>	-
<b>Packing group</b>	-
<b>Environm. Haz. Mark</b>	-

**Sea (IMDG code):**

<b>Proper shipping name</b>	Not regulated for transport
<b>UN number</b>	-
<b>Class</b>	-
<b>Packing group</b>	-
<b>Marine pollutant</b>	-
<b>Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC code</b>	

**Air (ICAO/IATA):**

<b>Proper shipping name</b>	Not regulated for transport
<b>UN number</b>	-
<b>Class</b>	-

**Packing group** -  
**Environm. Haz. Mark** -

## Section 15 Regulatory Information

### Safety, health and environmental regulations/legislation specific for the substance or mixture

This safety data sheet complies with the requirements of Regulation (EC) No.1907/2006.

### Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to the Australian Code for the Transport of Dangerous Goods (ADG). This applies when transported by road or rail in packaging's that do not incorporate a receptacle exceeding 500 kg(L) or IBCs per ADG Special Provision AU01.

Marine Pollutants in single or combination packaging containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 KG or less for solids may be transported as non-dangerous goods as provided in section 2.10.2.7 of IMDG code and IATA special provision A197.

This information is not intended to convey all specific regulatory or operational requirements/ information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

### Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

## Section 16 Other Information

### Full text of H-Statements referred to under sections 2 and 3.

H227 - Combustible liquid.  
H302 - Harmful if swallowed.  
H304 - May be fatal if swallowed and enters airways.  
H315 - Causes skin irritation.  
H316 - Causes mild skin irritation.  
H317 - May cause an allergic skin reaction.  
H319 - Causes serious eye irritation.  
H330 - Fatal if inhaled.  
H331 - Toxic if inhaled.  
H332 - Harmful if inhaled.  
H401- Toxic to aquatic life.  
H402- Harmful to aquatic life.  
H412- Harmful to aquatic life with long lasting effects.  
H413 - May cause long lasting harmful effects to aquatic life.

For proper and safe use of this product, please refer to the approval conditions laid down on the product label. The data contained in this safety data sheet is based on our current knowledge and describes the product only with regard to safety requirements. The data does not describe the products properties.

Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any existing laws and legislation are observed.

### **Abbreviations and acronyms**

ACGIH American Conference of Governmental Industrial Hygienists.  
ADR European Agreement concerning the International Carriage of Dangerous Goods by Road  
CAS-Nr. Chemical Abstracts Service number  
CLP Classification, Labelling and Packaging  
EC-No. European community number  
ECx Effective concentration to x %  
EEC European Union regulation  
EU European Union  
GHS Globally Harmonized System  
IARC International Agency for Research on Cancer  
IATA International Air Transport Association  
IBC International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)  
ICAO International Civil Aviation Organization  
IMDG International Maritime Dangerous Goods  
LCx Lethal concentration to x %  
LDx Lethal dose to x %  
MARPOL: International Convention for the prevention of marine pollution from ships  
PBT Persistence, Bioaccumulation and Toxic  
vPvB Very persistent and very bioaccumulative  
RID Regulations concerning the International Carriage of Dangerous Goods by Rail  
STEL Short term exposure limit  
STOT SE Specific target organ toxicity single exposure.  
STOT RE Specific target organ toxicity repeated exposure.  
TWA Time weighted average  
UN United Nations

**DISCLAIMER OF LIABILITY** The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

Issue Date: 20 June 2024      Review Date: 20 June 2029