



SAFETY DATA SHEET

ARBOREX

Reg No: L 8777 (Act 36 of 1947)

N-AR 1786

Section 1. Identification of the material and the supplier

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

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

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: 19 April 2023

Section 2. Hazards Identification

Classification of the substance or mixture

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

Skin irrit. Cat. 3
Eye Irrit. Cat. 2

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

Label elements

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



Pictograms

Signal Word: **WARNING**

Hazard statement(s)

H316 - Causes mild skin irritation

H319 - Causes serious eye irritation

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 instruction.

Prevention:

P264 + P265 - Wash hands thoroughly after handling. Do not touch eyes

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

Response:

P332+317 - If skin irritation occurs - 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.

P337 + P317 - If eye irritation persists: Get medical help.

Storage:

-

Disposal:

-

Supplemental Hazard Statements: none

2.3 Other

Other hazards

No other hazards known

Section 3. Composition / Information on Hazardous Ingredients

Soluble Concentrate

Imazapyr 100 g/L

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

Ingredients	Concentration of hazardous ingredient in composition	CAS NUMBER.	Globally Harmonised System, EU (GHS) and according to regulation EC No 1272/2008 [CLP]
Imazapyr monoisopropylamine salt	>9.9%	81334-34-1	Eye Irrit. Cat. 2 Aquatic Chronic. Cat. 3 Skin Irrit. Cat. 2
Monoethylene glycol	≤5.5%	107-21-1	Acute Tox. Inhalation: Cat 4
Isotridecanol, ethoxylated	≤3%	78330-21-9	Eye dam. Cat. 1
Other non-hazardous ingredients	To balance	-	-

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

Section 4. First Aid Measures

Remove patient from exposed area. Never give fluids or induce vomiting if patient is unconscious or is having convulsions.

Routes of Exposure:

If in Eyes Flush eyes with plenty of water for at least 15 minutes holding eyelids open. Remove contact lenses if present, after first 5 minutes, and then continue rinsing. **Seek medical assistance immediately.**

If on Skin Immediately remove contaminated clothing and flush body and clothes with large amounts of soap and water. Rinse skin immediately with plenty of water for 15-20 minutes. Wash contaminated clothing before re-use. **Seek medical assistance immediately.**

If Swallowed Immediately remove contaminated clothing and flush body and clothes with large amounts of soap and water. Rinse skin immediately with plenty of water for 15-20 minutes. Wash contaminated clothing before re-use. **Seek medical assistance immediately.**

If Inhaled Remove patient to fresh air. Loosen clothing around neck. Lie down and keep patient calm, 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 available data.

Treatment:

No specific antidote. Supportive care. Treatment based on judgement of physician in response to symptoms of patient.

Section 5. Fire Fighting Measures

Hazards from products	None known
Suitable Extinguishing media	Water spray, water fog, carbon dioxide, alcohol foam, dry extinguishing media.
Recommended protective clothing & Precautions for firefighters	Full protective clothing and self-contained breathing apparatus and turnout gear. Remove spectators from surrounding area. Isolate the fire area and evacuate downwind. Use a recommended extinguishing agent for the type of surrounding fire. 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. Bund area with sand or earth to avoid pollution of waterways. Water can be used to cool containers. Dispose of extinguishing agent and spillage in a safe way at a later stage in accordance with official regulations. This product consists of combustible organic components that may burn and decompose during a fire and produce a dense black smoke with hazardous combustion products such as carbon monoxide, carbon dioxide, nitrogen oxides. These products are toxic and/or irritant. Exposure to decomposition products may be a health hazard.

Section 6. Accidental Release Measures

Personal precautions:

Avoid contact with skin and eyes and clothing. For personal protection see Section 8. Remove contaminated clothes, undergarments and shoes immediately. Chemical goggles when respirator does not provide eye protection. Air respirators should be worn if large quantities of mist/dust are generated or during prolonged exposure.

Environmental precautions:

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:

Do not eat, drink or smoke during the clean-up process. Clear area of unprotected personnel. Wear protective gear: goggles, full length clothing and suitable chemical resistant safety gloves. Keep people and animals away. Reposition leaking containers to minimize further leakage.

Small spills: Contain spill and collect using a suitable absorbent material such as sand, sawdust, general purpose binder, kieselguhr. Store in properly labelled drums for safe disposal.

Large spills: Dike the spillage. Pump off the product. Contact the emergency contact number for clean-up assistance Collect in suitable, labelled, and sealable containers for later disposals according to regulations.

Deal with spillages immediately. If contamination of drains, streams, watercourses etc. is unavoidable, then warn the local authorities. 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.

Waste Disposal: Dispose of absorbed materials according to local regulations.

Collect waste into suitable containers, which can be labelled and sealed.

Clean contaminated floors and objects thoroughly with water and a detergent, while observing environmental regulations. Incinerate or take to a special waste disposal site according to local regulations.

Container Disposal: Refer to the product label for instructions. DO NOT REUSE THE CONTAINER FOR ANY OTHER PURPOSE. Do not transport if this container is damaged or leaking.

Reference to other sections

Information regarding safe handling, see section 7.

Information regarding personal protective equipment, see section 8.

Information regarding waste disposal, see section 13.

Section 7. Handling and Storage

Precautions for Handling:

No special measures necessary if stored and handled correctly. Protection against fire and explosion: Vapours may form ignitable mixture with air. Prevent electrostatic charge-sources of ignition should be kept well clear-fire extinguishers should be kept handy.

KEEP OUT OF REACH OF CHILDREN and animals.

Precautions for Storage:

Segregate from foods and animal feeds. Segregate from oxidants. Segregate from reducing agents. Further information on storage conditions: Keep container dry. Keep container in a well-ventilated area. Avoid all sources of ignition: heat, sparks, open flame. Storage duration: 24 months. Protect from temperatures above: 40 °C. Do not store below -12.2°C

Specific end use(s): Use only according to the label.

Section 8 Exposure Controls / Personal Protection

Occupational exposure limits:

Component	Value type (Form of exposure)	Control parameters / permissible concentration	Basis
Ethylene glycol (vapour)	8 hr TWA	52 mg/m ³ (20 ppm)	Safe Work Australia Workplace Exposure Standards for Airborne Contaminants
Ethylene glycol (vapour)	15 min STEL	104 mg/m ³	Safe Work Australia Workplace Exposure

			Standards for Airborne Contaminants
Ethylene glycol (particulate)	SK 8hr TWA	10 mg/m ³	Safe Work Australia Workplace Exposure Standards for Airborne Contaminants

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

Eyes	Tight fitting safety goggles (splash goggles) (EN 166)
Hands	Suitable chemical resistant gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g., nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm) polyvinylchloride (0.7 mm) and other.
Skin	Consult supplier to confirm that the equipment is suitable. Must be chosen depending on activity and possible exposure, e.g., apron, protecting boots, chemical-protection suit (according to DIN-EN 465).
Respiratory	Supplied air respirators should be worn if large quantities of mist/dust are generated or prolonged exposure possible.
General	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.

Section 9 Physical and Chemical Properties

Appearance	Liquid
Colour	Red
Odour	Characteristic
Odour Threshold	No data available
pH	6 – 7.5
Boiling/Melting Point	No data available
Freezing Point	No data available

Flash Point	No data. Expected to be >93°C
Flammability	Not flammable
Upper and Lower Explosive Limits	No data available
Vapour Pressure	No data available
Vapour Density	No data available
Density	Approximately 1.02
Water Solubility	Soluble in water
Partition Coefficient:	No data available
Ignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Particle Characteristics	No data available
Surface tension	No data available

Section 10. Stability and Reactivity

Stability of Substance	Stable under normal use and standard conditions. Stable for 24 months. Thermally and chemically stable.
Possibility of hazardous reactions	None known
Conditions to Avoid	Protect from extreme temperatures, direct sunlight, open flames and sources of ignition.
Incompatible Materials	Oxidising agents and reducing agents.
Hazardous Decomposition Products	Including but not limited to oxides of carbon and nitrogen when heated.

Section 11 Toxicological Information

Acute Effects:

Oral	GHS: Not classified
Dermal	GHS: Not classified
Inhalation	GHS: Not classified
Eye	GHS: Eye Irritation Cat. 2
Skin	GHS: Skin Irritation Cat. 2

Chronic Effects:

Carcinogenicity	GHS: Not classified
Reproductive Toxicity	GHS: Not classified
Germ Cell Mutagenicity	GHS: Not classified
Aspiration	GHS: Not classified
STOT/SE	GHS: Not classified
STOT/RE	GHS: Not classified

Section 12. Ecotoxicological Information

Ecological effects information	No data available for the formulated product
---------------------------------------	--

Persistence and degradability	<p>Information based on Imazapyr active: Imazapyr: In field dissipation studies, first order DT50 24-143d. Aerobic soil degradation laboratory studies were generally longer, DT50 117 (biphasic) to 313 d. Degradation is primarily due to microbial activity.</p> <p>Bioaccumulation: No data available. Bioaccumulation in the environment is highly unlikely.</p> <p>This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.</p> <p>Biodegradability: No data available.</p>
Bioaccumulation	No data available. Bioaccumulation in the environment is highly unlikely.
Mobility in Soil	No data available
Other adverse effects	<p>This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.</p> <p>This substance / mixture contains no ingredients that are on the Montreal Protocol list of substances that deplete the ozone layer.</p>
Precautions:	Do not allow to enter waterways.

Section 13. Disposal Considerations

Disposal Method:

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.

Contaminated packaging:

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.

Special precautions during disposal:

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.

Section 14 Transport Information

Rail/road (RID/ADR):

Proper shipping name	Not regulated
UN number	-
Class	-
Packing group	-
Environm. Haz. Mark	-

Sea (IMDG code):

Proper shipping name	Not regulated
UN number	-
Class	-
Packing group	-
Marine pollutant	-

Air (ICAO/IATA):

Proper shipping name	Not regulated
UN number	-
Class	-
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.

Transport in bulk according to Annex II of MARPOL and the IBC Code: Not available.

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.

H316 - Causes mild skin irritation
H319 - Causes serious eye irritation

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.

The information herein is given in good faith, but no warranty, express or implied is made.

Issue Date: 19 April 2023 Review Date: 19 April 2028