



SAFETY DATA SHEET

Prepared on Commission Regulation (EU) no. 453/2010

1. Identification of the substance/mixture and of the company/undertaking			
Product/substance name	Scrubber 240 SL		Revision Date: 23/05/2022 Publish Date: 23/05/2022
Product/substance name Herbicide	CAS Number 2545-60-0	EINECS Number 219-829-6	Index Number
Supplier	Future Farm & Forest Services & Supplies (Pty) Ltd P.O. BOX 98165 SLOANE PARK 2152 EMERGENCY CONTACT Tel: (+27) 11 463 5842		
Regd. Office:	Future Farm & Forest Services & Supplies (Pty) Ltd P.O. BOX 98165 SLOANE PARK 2152 EMERGENCY CONTACT Tel: (+27) 11 463 5842		
Emergency telephone number	Transport accident: 086 100 0366 Treatment for poisoning cases: 082 446 8946		

2. Hazards identification	
Classification of the substance or mixture	
Serious eye damage/eye irritation	Category 2A: (H319)
Skin sensitization	Category 1B: (H317)
Acute aquatic toxicity	Category 2: (H401)
Chronic aquatic toxicity	Category 2: (H411)
Label Elements	
Hazard pictograms	
 	
Signal word	WARNING
Hazard statements	H319 - Causes serious eye irritation.

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 Managing Director: R D Forsyth-Thompson
 Reg. 1998/014639/07

Material Name: Scrubber 240SL Issue date: 2022 Version 1 GHS SDS

Precautionary statements

H317 - May cause an allergic skin reaction.
 H401 - Toxic to aquatic life.
 H411 - Toxic to aquatic life with long lasting effects.

P261 - Avoid breathing dust/fume/gas/mist/ vapours/spray.
 P264+P265 - Wash hands and thoroughly after handling.
 Do not touch eyes.
 P272 - Contaminated work clothing should not be allowed out of the workplace.
 P273 - Avoid release to the environment. – *if this is not the intended use*.
 P280 - Wear protective gloves/ protective clothing. Wear eye protection/face protection.
 P302 + P352 - IF ON SKIN: Wash with plenty of water.
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P333 + P313 - If skin irritation or rash occurs: Get medical advice/ attention.
 P337 + P317 - If eye irritation persists: Get medical help.
 P362 + P364 - Take off contaminated clothing and wash it before reuse.
 P391 - Collect spillage.
 P501 - Dispose of contents/container in accordance with applicable regulations.

Supplemental information

EUH401 - To avoid risks to human health and the environment, comply with the instructions for use.

Other Hazards

No information available

3. Composition/information on ingredients

Mixture

Chemical Name	Weight (%)	CAS No	EC No
Picloram potassium salt	24	2545-60-0	219-829-6
Isopropanol	< 10	67-63-0	200-661-7
Potassium hydroxide	< 5	1310-58-3	215-181-3
Water	Balance to 1 l		

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Reg. 1998/014639/07

Material Name: Scrubber 240SL Issue date: 2022 Version 1 GHS SDS

4. First aid measures

Description of first aid measures

General advice	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.
Inhalation	Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration, if by mouth-to-mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.
Skin contact	Take off contaminated clothing. Wash skin with soap and plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Wash clothing before reuse. Shoes and other leather items which cannot be decontaminated should be disposed of properly. If skin irritation or rash occurs: Get medical help.
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical help.
Ingestion	Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed:

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Notes to physician

No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor or going for treatment.

5. Firefighting measures

Extinguishing media

Suitable extinguishing media

To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical or foam.

Unsuitable extinguishing media

No data available

Special hazards arising from the substance or mixture

Hazardous combustion products

Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds. Combustion products may include and are not limited to: Nitrogen oxides. Hydrogen chloride. Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards

This material will not burn until the water has evaporated. Residue can burn. If exposed to fire from another source and water is evaporated, exposure to high temperatures may cause toxic fumes.

Advice for firefighters

Fire Fighting Procedures

Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical, or foam. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this SDS.

Special protective equipment for firefighters

Wear positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

Email: info@futurefarmforest.co.za

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Reg. 1998/014639/07

Material Name: Scrubber 240SL Issue date: 2022 Version 1 GHS SDS

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Isolate area. Keep unnecessary and unprotected personnel from entering the area. Keep personnel out of low areas. Refer to section 7, Handling, for additional precautionary measures. No smoking in area. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions

Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up

Contain spilled material if possible.

Small spills Absorb with materials such as: Clay. Dirt. Sand. Sweep up. Collect in suitable and properly labeled containers.

Large spills Contact the company for clean-up assistance.

See Section 13, Disposal Considerations, for additional information.

7. Handling and storage

Precautions for safe handling

Advice on safe handling

Keep out of reach of children. Keep away from heat, sparks and flame. Do not swallow. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist. Avoid prolonged or repeated contact with skin. Wash thoroughly after handling. Use with adequate ventilation. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Conditions for safe storage, including any incompatibilities

Conditions for safe storage

Store in a dry place. Store in original container. Keep container tightly closed when not in use. Do not store near food, foodstuffs, drugs or potable water supplies.

8. Exposure controls/personal protection

Exposure controls

Engineering controls Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection Use chemical goggles. Chemical goggles should be consistent with EN 166 or equivalent.

Hand protection Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended. Glove thickness alone is not a good indicator of the level of protection a glove provides against a chemical substance as this level of protection is also highly dependent on the specific composition of the material that the glove is fabricated from. The thickness of the glove must, depending on model and type of material, generally be more than 0.35 mm to offer sufficient protection for prolonged and frequent contact with the substance. As an exception to this general rule, it is known that multilayer laminate gloves may offer prolonged protection at thicknesses less than 0.35 mm. Other glove materials with a thickness of less than 0.35 mm may offer sufficient protection when only brief contact is expected. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also consider all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection Respiratory protection should be worn when there is a potential to

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Managing Director: R D Forsyth-Thompson

Reg. 1998/014639/07

Material Name: Scrubber 240SL Issue date: 2022 Version 1 GHS SDS

exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or were indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator. Use the following CE approved air-purifying respirator: Organic vapor cartridge with a particulate pre-filter, type AP2 (meeting standard EN 14387).

9. Physical and chemical properties

Physical and Chemical Properties

Property	Values	Methods	Remarks
Appearance			
Physical state	: Liquid		
Color	: Brown		
Odor	: Mild, sweet		
Odor threshold	: No test data available		
pH	: 9.0 -11.2		
Melting point/freezing point (°C)	: Not applicable		
Boiling point/boiling range (°C)	: 100		760 mmHg
Flash point (°C)	: > 100	Setaflash Closed Cup ASTM D3828	
Evaporation rate (Butyl Acetate = 1)	: No test data available		
Flammability (solid, gas)	: Not Applicable		
Upper/lower flammability or explosive limits	: No test data available		
Vapor pressure (kPa)	: 22 mmHg at 20°C		
Vapor density (air = 1)	: 1.14		
Relative density (air = 1)	: 1.16 at 20°C/20°C	NAPM 2A.00	
Solubility(ies) (mg/l)	: Water solution		
Partition Coefficient (n-octanol/water) Log Pow:	: No data available		
Auto-ignition temperature (°C)	: No test data available		
Decomposition temperature (°C)	: No test data available		
Dynamic viscosity (mPa.s at 25.4 °C)	: < 5		
Kinematic viscosity (cSt at 20 °C)	: 3.88		
Explosive properties	: No	EEC A14	
Oxidizing properties	: >5C		No significant increase in temperature
Liquid Density (g/cm ³ at 20 °C)	1.163	Digital density meter	
Molecular weight	: No data available		

Email: info@futurefarmforest.co.za

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Reg. 1998/014639/07

Material Name: Scrubber 240SL Issue date: 2022 Version 1 GHS SDS

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. Stability and reactivity

Reactivity:	No dangerous reaction known under conditions of normal use.
Chemical stability:	Thermally stable at typical use temperatures.
<u>Possibility of Hazardous Reactions</u>	
Hazardous polymerization:	Hazardous polymerization does not occur. None under normal processing.
Conditions to avoid:	Active ingredient decomposes at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.
Incompatible Materials:	Avoid contact with: Oxidizers. Strong acids.
Hazardous Decomposition Products:	Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Carbon monoxide. Carbon dioxide. Hydrogen chloride. Nitrogen oxides. Toxic gases are released during decomposition.

11. Toxicological information

Information on toxicological effects

<u>Acute toxicity</u>	<u>Values</u>	<u>Species</u>	<u>Remarks</u>
Oral (LD50 mg/kg)	: > 5 000	Rat (Male and Female)	Very low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.
Dermal (LD50 mg/kg)	: > 2 000	Rabbit	Prolonged skin contact is unlikely to result in absorption of harmful amounts.
Inhalation (LC50 mg/l/4h)	: > 8.11	Rat (Male and Female)	No adverse effects are anticipated from single

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 Reg. 1998/014639/07

Material Name: Scrubber 240SL Issue date: 2022 Version 1 GHS SDS

			exposure to mist. Based on the available data, narcotic effects were not observed. Based on the available data, respiratory irritation was not observed.
Skin corrosion/irritation	:	-	Brief contact is essentially nonirritating to skin.
Serious eye damage/eye irritation	:	-	May cause severely eye irritation. Corneal injury is unlikely.
Respiratory/skin sensitization	:	-	Has caused allergic skin reactions when tested in guinea pigs. Did not cause allergic skin reactions when tested in humans.
Germ cell mutagenicity	:	-	In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.
Carcinogenicity	:	-	Did not cause cancer in laboratory animals.
Reproductive toxicity	:	-	Did not cause birth defects or any other fetal effects in laboratory animals.
STOT - single exposure	:	-	Evaluation of available data suggests that this material is not an STOT-SE toxicant.
STOT - repeated exposure	:	-	Repeated exposure did not produce systemic toxicity when applied to the skin of rabbits.
Aspiration hazard	:	-	Based on physical properties, not likely to be an aspiration hazard.

12. Ecological information

Toxicity

Aquatic toxicity

Acute toxicity

	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
Fish (96-hour LC50 mg/l)	: 26	<i>Oncorhynchus mykiss</i> (rainbow trout)		Material is toxic to aquatic organisms
Crustacea (48-hour EC50 mg/l)	: 18 - 37	<i>Crassostrea virginica</i> (eastern oyster)		(LC50/EC50/IC50 between 1 and 10 mg/L in the most
Algae (120-hour EC50 mg/l)	: 14	<i>Skeletonema costatum</i> (marine diatom)		

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Managing Director: R D Forsyth-Thompson

Reg. 1998/014639/07

Material Name: Scrubber 240SL Issue date: 2022 Version 1 GHS SDS

Other plants (EC50 mg/l)	: 3.9	<i>Navicula</i> sp.	sensitive species).
Terrestrial Toxicity			
Birds Oral LD50 (mg/kg)	: > 10 000	<i>Anas platyrhynchos</i> (Mallard duck)	Material is practically non-toxic to birds on a dietary basis
Bees Oral LD50 (µg/bee)	: > 20	<i>Apis mellifera</i> (bees)	
Soil-dwelling organisms (14 d mg/kg)	: > 2 388.89	<i>Eisenia fetida</i> (earthworms)	

Persistence and degradability

Picloram Potassium Salt

Biodegradability For similar active ingredient(s). Picloram. Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions. Biodegradation may occur under aerobic conditions (in the presence of oxygen). Surface photodegradation is expected with exposure to sunlight.

Theoretical Oxygen Demand: 0.86 mg/mg

Chemical Oxygen Demand: 0.64 mg/mg

Alkylphenol alkoxyate

Biodegradability Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

Potassium hydroxide

Biodegradability Biodegradation is not applicable.

Bioaccumulative potential

Picloram Potassium Salt

Bioaccumulation For similar active ingredient(s). Picloram. Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5). Potential for mobility in soil is very high (Koc between 0 and 50).

Email: info@futurefarmforest.co.za

Managing Director: R D Forsyth-Thompson

Reg. 1998/014639/07

Material Name: Scrubber 240SL Issue date: 2022 Version 1 GHS SDS

Alkylphenol alkoxylate

Bioaccumulation No bioconcentration is expected because of the relatively high water solubility. May foam in water.

Potassium hydroxide

Bioaccumulation Partitioning from water to n-octanol is not applicable.

Mobility in soil**Picloram Potassium Salt**

Mobility in soil is very high (Koc between 0 and 50).

Alkylphenol alkoxylate

No data available

Potassium hydroxide

No data available for assessment due to technical difficulties with testing.

Results of PBT and vPvB assessment**Picloram Potassium Salt**

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Alkylphenol alkoxylate

This substance has not been assessed for persistence, bioaccumulation, and toxicity (PBT).

Potassium hydroxide

This substance has not been assessed for persistence, bioaccumulation, and toxicity (PBT).

Other adverse effects**Picloram Potassium Salt**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Alkylphenol alkoxylate

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Potassium hydroxide

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Email: info@futurefarmforest.co.za

Managing Director: R D Forsyth-Thompson

Reg. 1998/014639/07

Material Name: Scrubber 240SL Issue date: 2022 Version 1 GHS SDS

13. Disposal considerations

Disposal methods	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.
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14. Transport information

IMDG/IMO

UN/ID No *	3082
Proper shipping name	Environmentally hazardous substance, liquid. N.O.S. (Picloram)
Hazard Class	9
Packing Group	III
Environmental hazards	Picloram

Classification for SEA transport (IMO-IMDG):

UN/ID No *	3082
Proper shipping name	Environmentally hazardous substance, liquid. N.O.S. (Picloram)
Hazard Class	9
Packing Group	III
Marine pollutant	Picloram

Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code

Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

UN/ID No *	3082
Proper shipping name	Environmentally hazardous substance, liquid. N.O.S. (Picloram)
Hazard Class	9
Packing Group	III

This information is not intended to convey all specific regulatory or operational

requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. 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.

15. Regulatory information

National legislation:

- Regulations For Hazardous Chemical Agents, 2021 as Amended by Notice R 11266 in GG 44366 of 31 March 2021 Republic Of South Africa.
- Occupational Health and Safety Act (Act No. 85 of 1993) as amended.
- Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act (Act No. 36 of 1947) as amended. Registration No. L6802 Department of Agriculture, Land Reform and Rural Development.

16. Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Contact:

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SLOANE PARK
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Abbreviations and acronyms:

ADR:	Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID:	Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG:	International Maritime Code for Dangerous Goods
IATA:	International Air Transport Association (IATA)
ICAO:	International Civil Aviation Organization
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS:	Globally Harmonized System of Classification and Labelling of Chemicals
EINECS:	European Inventory of Existing Commercial Chemical Substances
CAS:	Chemical Abstracts Service (division of the American Chemical Society)
LC50:	Lethal concentration, 50 percent
LD50:	Lethal dose, 50 percent

Email: info@futurefarmforest.co.za

Managing Director: R D Forsyth-Thompson

Reg. 1998/014639/07

Material Name: Scrubber 240SL Issue date: 2022 Version 1 GHS SDS

This Safety Data Sheet (SDS) complies with basic South African and EU regulatory requirements for SDS on the date of publication and is intended for translation and adaptation into European National documents. This document should NOT be relied upon for compliance with the laws and regulations of individual countries without the appropriate local translations and adaptations. It is your responsibility to ensure that any SDS taken or adapted from this system for re-distribution or use complies with all the laws and regulations which apply to any such use or re-distribution.

Email: info@futurefarmforest.co.za

Managing Director: R D Forsyth-Thompson

Reg. 1998/014639/07

Material Name: Scrubber 240SL Issue date: 2022 Version 1 GHS SDS