

Safety Data Sheet (SDS) KYN SL/03

According to UN GHS 9th edition

Revision Date: 2022/08/02

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First print date: 2016/02/03

Version: 4.6

SECTION 1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY/UNDERTAKING

Product identifier:

Identification as on the label/Trade name: **KNERSUS[®] 200 SL**

Additional information: Product code KYN SL/03

Relevant identification uses of the substance and uses advised against:

Identified uses: A herbicide.

Uses advised against: Use only as directed.

Details of the supplier of the Safety Data Sheet:

AECI Limited

14 Field Road, LILANTON

Emergency telephone numbers:

Griffon Poison information centre: 082 446 8946

Poisons Information Helpline: 0861 555 777

AECI Limited: (011) 823 8000 (o/h) Spill Tech: 086 100 0366 (a/h)

SECTION 2. HAZARD IDENTIFICATION

Classification of the substances or mixture

The mixture is classified according to

SANS 10234:2019, Regulation EC 1272/2008 [EU-GHS/CLP]	
Hazard classes/Hazard categories	Hazard statement
Serious eye damage (Category 1)	H318
Reproductive Toxicity (Category 1B)	H360Fd
STOT RE 2	H373

For full text of H statements see section 16

The most important adverse effects

The most important adverse physiochemical effects: None.

The most important adverse human health effects: Causes serious eye damage.

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Label elements

Hazard pictograms:



Signal Word: Danger

Hazard Statements: H318 Causes serious eye damage. H360Fd May damage fertility. May damage the unborn child. H373 May cause damage to organs (nervous system) through prolonged or repeated exposure.

Precautionary Statements: P260 Do not breathe mist/spray. P264 Wash thoroughly after handling. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 Call a POISON CENTRE/doctor if you feel unwell.

Special labelling of certain mixture: None

Other hazards: None

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture

Ingredients:

Substance name (IUPAC/EC)	CAS –No.	Concentration % by weight	Classification
	EC-No.		EC1272/2008
Glufosinate ammonium	77182-82-2	10-20%	Acute toxicity oral, dermal, inhalation (Category 4) H302+H312 +H332. Reproductive toxicity (Category 1B) H360. STOT RE 2 H373.
	278-636-5		
Sodium laureth sulfate	9004-82-4	1-5%	Skin irritation (Category 2) H315. Eye irritation (Category 2) H319.
	618-493-1		
Glucamide in aqueous / glycolic solution	1591782-62-5	1-5%	Acute toxicity inhalation (Category 4) H332. Serious eye damage (Category 1) H318.
	940-284-1		

For full text of H statements see section 16

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4. FIRST AID MEASURES

Description of first aid measures:

In case of inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms occur.

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In case of skin contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation occurs.

In case of eye contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

In case of ingestion Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention.

Most important symptoms of exposure, effects, both acute and delayed:

Information from the active glufosinate ammonium; vomiting, diarrhoea, abdominal pain, tremors, hypotension, muscular weakness, unconsciousness, coma, convulsions, respiratory failure, nausea, tachycardia. Symptoms may be delayed.

Inhalation: Maybe harmful if inhaled.

Ingestions: May be harmful if swallowed.

Skin contact: May cause skin irritations.

Eye contact: Causes serious eye damage.

Indication of any immediate medical attention and special treatment needed:

Based on the active glufosinate ammonium; Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. Forced alkaline diuresis and haemodialysis may be considered. There is no specific antidote. In case of convulsions, a benzodiazepine (e.g., diazepam) should be given according to standard regimens. If not effective, phenobarbital may be used. Contraindication: atropine. Oxygen or artificial respiration if needed. Keep respiratory tract clear. ECG – monitoring (Electrocardiogram). EEG - monitoring (Electroencephalogram). Monitor: respiratory, cardiac and central nervous system. Keep under medical supervision for at least 48 hours.

SECTION 5. FIRE -FIGHTING MEASURE

Extinguisher media:

Suitable extinguisher media: Use an extinguishing agent suitable for the surrounding fire: use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media: High pressure water jet due to contamination risk.

Special hazards arising from the mixture:

No information available.

Advice for fire-fighters:

Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear. Be sure to use an approved/certified respirator or equivalent.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Follow safe handling advice and personal protective equipment. Prevent formation of mist/aerosols.

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For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Isolate area. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk-through spilt material. Provide adequate ventilation.

For emergency responders: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to Section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions:

Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapours. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

Methods for containment and cleaning up:

For small spills Contain spilled material if possible. Collect in suitable and properly labelled containers. Absorb with materials such as: sand, earth, vermiculite or diatomaceous earth.

For large spills Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g., sand, earth, vermiculite or diatomaceous earth and place in well labelled container for disposal according to local regulations.

Reference to other sections:

See section 7 for information on safe handling.

See section 8 for information on personal protection equipment.

See section 13 for information on disposal.

Additional information:

None.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling:

Avoid prolonged contact with concentrate. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not get in eyes or on skin or clothing.

Protective measures: Observe directions on label and instructions for use.

Advice on general occupational hygiene: Do not eat drink or smoke when handling this product.

Conditions for safe storage, including incompatibilities:

Store product in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Incompatible materials; combustible materials, reducing agents, acids, alkalis.

Specific end uses:

Use as directed. Use original container.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

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Occupational exposure limits (OEL): None.

Biological exposure indices (BEI): None.

Additional exposure limits under the conditions of use: None.

Exposure control: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. A Risk Assessment should be conducted before handling is to commence to determine specific exposure control.

Appropriate engineering controls: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective OEL's if applicable. Ensure that eyewash stations and safety showers are proximal to the workstation location.

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection: Use chemical safety goggles.

Hand protection: Use chemical resistant gloves. Examples of preferred glove barrier materials include Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, Polyvinyl alcohol, Polyvinyl chloride.

Body protection: Wear appropriate clothing for task or operation. Keep working clothes separately.

Respiratory protection: Respiratory protection is required when ventilation is inadequate, or discomfort is experienced; use an approved air-purifying respirator. Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines.

Environmental exposure controls: Prevent product from entry into sewers and water courses.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance (form): Homogeneous liquid.

Colour: Blue.

Odour: Faint chemical.

Odour threshold: No information available.

pH (at concentration): 6.5-6.8 (100%)

Melting point/range (°C): No information available

Boiling point/range (°C): No information available

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Flash point (°C): No information available.

Evaporation rate: No information available.

Flammability (solid, gas): No information available

Ignition temperature (°C): No information available.

Upper/lower flammability/explosive limits: No information available.

Vapour pressure (20°C): No information available.

Vapour density: No information available.

Density (20°C): 1.08 g/cm³

Water solubility (g/l) at 20°C: Miscible in water.

n-Octanol/Water partition coefficient: No information available

Auto-ignition temperature: No information available.

Decomposition temperature: No information available.

Viscosity: No information available.

Physical hazards:

None.

Other information:

Fat solubility (solvent-oil to be specified): No information available.

Bulk density: No information available.

Dissociation constant in water (p Ka): No information available.

Oxidation-reduction potential: No information available.

SECTION 10. STABILITY AND REACTIVITY

Reactivity:

The product is stable under normal conditions.

Chemical stability:

Stable under normal storage conditions for 2 years.

Possibility of hazardous reactions:

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Hazardous polymerization will not occur.

Conditions to avoid:

Do not store near strong acids, bases, strong oxidisers or reducing agents. Do not expose to extreme temperatures.

Incompatible materials:

Combustible materials, reducing agents, acids and alkalis.

Hazardous decomposition products:

No information available.

SECTION 11. TOXICOLOGICAL INFORMATION

Toxicokinetics, metabolism and distribution:

Non-human toxicological data: No Information available.

Excretion:

Glufosinate ammonium.

Animals Rapidly excreted, predominantly via faeces (90%). The principal metabolite is 3-(methyl) phosphinoylpropionic acid. A further faecal metabolite is N-acetylglufosinate, formed by intestinal microorganisms.

Information on toxicological effects:

Acute toxicity: KNERSUS[®] 200 SL

Acute oral LD₅₀ for rats 2265 mg/kg (based on calculation).

Dermal LD₅₀ for rats 5780 mg/kg (based on calculation).

Inhalation: LC₅₀ (4 h) for rats 7.1 mg/ℓ aerosol (based on calculation).

Glufosinate ammonium

Acute toxicity oral LD₅₀ for male rats 2000 mg/kg, female rats 1620 mg/kg.

Dermal LD₅₀ for male rats >4000 mg/kg.

Inhalation LC₅₀ (4 h) for rats >0.62 mg/ℓ (air).

Chronic toxicity: No information available.

Skin corrosion/irritation:

KNERSUS[®] 200 SL: No product information.

Glufosinate ammonium:

Not a skin irritant.

Serious eye damage/irritation:

KNERSUS[®] 200 SL: No product information.

Glufosinate ammonium:

Not an eye irritant.

Respiratory or skin sensitization: No information available.

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Germ cell mutagenicity: Glufosinate ammonium, no teratogenic, carcinogenic, mutagenic or neurotoxic effects have been observed.

Carcinogenicity: Glufosinate ammonium, see above.

Reproductive toxicity: Glufosinate ammonium, see above,

STOT-single exposure: No information available.

STOT-repeated exposure: No information available.

Aspiration hazard: No information available.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity:

Glufosinate ammonium

Birds: Dietary LD₅₀ (8 d) for Japanese quail >5000 mg/kg.

Fish: LC₅₀ (96 h) for Bluegill sunfish, golden orfe and carp >1000 mg/ ℓ for Rainbow trout 710 mg/ ℓ.

Daphnia: LC₅₀ (48 h) 560-100 mg/ ℓ.

Algae: LD₅₀ for *Scenedesmus subspicatus* ≥ 1000 mg/ ℓ, *Selenastrum capricornutum* 37 mg/ ℓ.

Bees: Not hazardous to bees; LD₅₀ >100µg/bee.

Worms: LD₅₀ for earthworms >1000 mg/kg soil.

Other beneficial species: Not toxic to beneficial arthropods.

Persistence and degradability:

Glufosinate ammonium

Rapidly degraded in surface levels of soil, and in water. Because of polarity, it and its metabolites do not bioaccumulate.

Bioaccumulative potential:

No information available.

Mobility in soil

No information available.

Results of PBT& vPvB assessment:

No information available.

Other adverse effects:

No information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods:

Consider suitable waste recycling, re-use or recovery options. Dispose of in accordance with municipal, provincial and national regulations. Waste Classification and Management Regulations (GN 634 of 2013). Dispose and or manage in accordance with the requirements contained in R634 Waste Classification & Management Regulations, R635 National

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Norms & Standards for the Assessment of Waste for Landfill Disposal and R636 National Norms & Standards for Disposal of Waste to Landfill.

Product/ packaging disposal:

Treat as hazardous waste and dispose of in accordance with municipal, provincial and national regulations.

SECTION 14. TRANSPORT INFORMATION

	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN-Number	Not required	Not required	Not required
UN Proper shipping name:	Not required	Not required	Not required
Transport hazard class:	Not required	Not required	Not required
Packaging group:	Not required	Not required	Not required
Marine pollutant:	No	No	No
Special precautions for user:	Not required	Not required	Not required
Transport in bulk according to MARPOL 73/78 Annex II and the IBC code	Not required	Not required	Not required

Inland waterways: Not required.

Emergency response information: No information.

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation for the mixture:

Relevant information regarding authorization: Occupational Health and Safety Act 1993. Regulation for Hazardous Chemical Agents, 2021. UN Recommendations on the Transport of Dangerous Goods Model Regulations Rev. 21 (2019), Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Rev 9, 2019.

ACGIH: American Conference of Governmental Industrial Hygienists (ACGIH).

Relevant information regarding restrictions: None.

EU regulations: Regulation EC 1272/2008 [EU-GHS/CLP] and EU directives 67/548/EEC or EC 1999/45/EC

Other National regulations: National Road Traffic Act, 1996 (ACT NO. 93 of 1996).

SANS 10228:2012- The identification and classification of dangerous goods for transport by road and rail modes.

National Environmental Management: Waste Act 59 of 2008.

Chemical Safety Assessment carried out? No

SECTION 16. OTHER INFORMATION

Indication of changes:

Formulation changes and classification, section 1,2,3 &13.

Relevant Classification and Hazard Statements:

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Aquatic chronic 3: Hazardous to the aquatic environment (Chronic 3)

STOT RE 2- Specific target organ toxicity repeated exposure (Category 2).

H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled. H302 Harmful if swallowed. H315 Causes skin irritation. H332 Harmful if inhaled. H318 Causes serious eye damage. H360Fd May damage fertility. May damage the unborn child. H373 May cause damage to organs through prolonged or repeated exposure. H412 Harmful to aquatic life with long lasting effects.

Training instructions:

Use as indicated on the label, special training may be required for application.

Further information:

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

Notice to readers:

Employers should use this information only as a supplement to other information gathered by them and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees.

This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.