SAFETY DATA SHEET

Lenns

Revision Date 12-Nov-2020 **Version** 3 **Product No** HRB00888-27
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Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Lenns

Synonyms Glyphosate 250 Diflufenican 40 SC
Pure substance/mixture Mixture
Formula SC

Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Herbicide; Professional use
Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Address ADAMA SOUTH AFRICA (PTY) LTD
Ground Floor, Simeka House
The Vineyards Office Estate
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Section 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

Acute aquatic toxicity Category 1 - (H400)
Chronic aquatic toxicity Category 1 - (H410)

Label Elements

Hazard pictograms

Signal word Warning

Hazard Statements H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements P102 - Keep out of reach of children
P501 - Dispose of contents/ container to an approved waste disposal plant

Other Hazards

No information available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical Name	Weight-%	CAS No	EC No	GHS Classification	M-Factor
Glyphosate, isopropylamine salt	45-50	38641-94-0	254-056-8	Aquatic Chronic 2 (H411)	
Diflufenican	2-5	83164-33-4	617-446-2	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	M=10000 M=1000
Ethoxylated alcohols phosphate ether	1-3	68130-47-2		Skin corr. 1B (H314) Eye Dam. 1 (H318)	
Ethoxylated butanol, phosphate ester	1-3	50769-39-6		Skin corr. 1B (H314) Eye Dam. 1 (H318)	
Isopropylamine	< 2	75-31-0	200-860-9	Flam. Liq. 1 (H224) Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335)	
orthophosphoric acid	< 2	7664-38-2	231-633-2	Skin corr. 1B (H314) Eye Dam. 1 (H318) Met. Corr. 1(H290)	

Full text of H- and EUH-phrases: see section 16

Section 4: FIRST AID MEASURES

First aid measures

General advice In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). First aider: Pay attention to self-protection!.

Inhalation Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician.

Skin Contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Consult a physician if necessary.

Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.
Ingestion	Rinse mouth. Drink plenty of water. If symptoms persist, call a physician.
Self-protection of the first aider	Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms	None known.

Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.

Section 5: FIRE-FIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media
No information available.

Special hazards arising from the substance or mixture

No specific hazard known.

Advice for firefighters

In the event of fire, wear self-contained breathing apparatus
In the event of fire and/or explosion do not breathe fumes.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions
Use personal protective equipment as required.

For emergency responders
Use personal protection recommended in Section 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up

Methods for cleaning up
Take up mechanically, placing in appropriate containers for disposal.

Reference to other sections

Other Information
See also section 8,13

Section 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling
Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Use only with adequate ventilation.

General Hygiene Considerations
When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Keep away from food, drink and animal feeding stuffs. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions
Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

Specific end use(s)

Risk Management Methods (RMM)
The information required is contained in this Material Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

National occupational exposure limits

Chemical Name	European Union	United Kingdom	France	Spain	Germany
Isopropylamine 75-31-0			TWA: 5 ppm TWA: 12 mg/m³	STEL: 10 ppm STEL: 24 mg/m³ TWA: 5 ppm TWA: 12 mg/m³	TWA: 5 ppm TWA: 12 mg/m³ Ceiling / Peak: 10 ppm Ceiling / Peak: 24 mg/m³
orthophosphoric acid 7664-38-2	TWA 1 mg/m³ STEL 2 mg/m³	STEL: 2 mg/m³ TWA: 1 mg/m³	TWA: 0.2 ppm TWA: 1 mg/m³ STEL: 0.5 ppm STEL: 2 mg/m³	STEL: 2 mg/m³ TWA: 1 mg/m³	TWA: 2 mg/m³ Ceiling / Peak: 4 mg/m³

Chemical Name	Italy	Portugal	Netherlands	Finland	Denmark
Isopropylamine 75-31-0		STEL: 10 ppm TWA: 5 ppm		STEL: 5 ppm STEL: 12 mg/m³	TWA: 5 ppm TWA: 12 mg/m³
orthophosphoric acid 7664-38-2	TWA: 1 mg/m³ STEL: 2 mg/m³	STEL: 3 mg/m³ TWA: 1 mg/m³	STEL: 2 mg/m³ TWA: 1 mg/m³	TWA: 1 mg/m³ STEL: 2 mg/m³	TWA: 1 mg/m³

Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
Isopropylamine 75-31-0	STEL 20 ppm STEL 48 mg/m³ TWA: 5 ppm TWA: 12 mg/m³	STEL: 10 ppm STEL: 24 mg/m³ TWA: 5 ppm TWA: 12 mg/m³	STEL: 24 mg/m³ TWA: 12 mg/m³	TWA: 5 ppm TWA: 12 mg/m³ STEL: 10 ppm STEL: 18 mg/m³	TWA: 5 ppm TWA: 12 mg/m³ STEL: 10 ppm STEL: 24 mg/m³
orthophosphoric acid 7664-38-2	STEL 2 mg/m³ TWA: 1 mg/m³	STEL: 2 mg/m³ TWA: 1 mg/m³	STEL: 2 mg/m³ TWA: 1 mg/m³	TWA: 1 mg/m³ STEL: 3 mg/m³	TWA: 1 mg/m³ STEL: 2 mg/m³

Exposure controls

Engineering Controls Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection Tight sealing safety goggles.

Hand Protection	Suitable chemical resistant gloves (EN 374) also with prolonged, direct contact (recommendation: protection index 6, corresponding > 480 minutes Permeability time (permeation) according to EN 374): e.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm).
Body Protection	Use suitable protective clothing and equipment if required, such as safety goggles certified to EN 166, gloves certified to EN 374, protective boots certified to EN 13832, and/or a water repellent woven coverall with 65% polyester and 35 % cotton.
Respiratory protection	Use only with adequate ventilation.
General Hygiene Considerations	When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Keep away from food, drink and animal feeding stuffs. Wash contaminated clothing before reuse.
Environmental exposure controls	Do not allow into any sewer, on the ground or into any body of water. Local authorities should be advised if significant spillages cannot be contained. Prevent product from entering drains.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Property		Values	Method	Remarks
Appearance				
Physical state	:	liquid		
Color	:	Grey		
Odor	:	characteristic		
Odor threshold	:	No data available		
pH	:	3.5 - 6.0	CIPAC MT 75.3	
Melting point/freezing point °C	:	----		Not Applicable
Boiling point/boiling range °C	:	No data available		
Flash point °C	:	> 100		
Evaporation rate	:	Not Applicable		
Flammability (solid, gas)	:	Not applicable for liquids		
Upper/lower flammability or explosive limits	:	No data available		
Vapor pressure kPa	:	----		Not Applicable
Vapor density	:	No data available		
Relative density	:	1.1 - 1.2	CIPAC MT 3.3	20 °C
Solubility(ies) mg/l	:	----		Not Applicable
Partition Coefficient (n-octanol/water) Log Pow	:			See Section 12 for more information
Autoignition temperature °C	:	> 600	EEC A.15	
Decomposition temperature °C	:	No data available		
Kinematic viscosity mm2/s 40 °C	:	> 80	OECD 114	
Explosive properties	:	Not an explosive	EEC A.14	
Oxidizing properties	:	Not oxidizing	EEC A.21	

Other Information

Bulk density g/ml	:	----		Not Applicable
Surface tension mN/m	:	----		

Section 10: STABILITY AND REACTIVITY

Reactivity

Not available.

Chemical stability

Stable under normal conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Heat, flames and sparks.

Incompatible Materials

No information available

Hazardous Decomposition Products

None under normal use conditions.

Section 11: TOXICOLOGY INFORMATION

Information on toxicological effects

Acute toxicity

		Values	Species	Method	Remarks
Oral LD50 mg/kg	:	> 2000	Rat	OECD 423	
Dermal LD50 mg/kg	:	> 2000	Rat	OECD 402	
Inhalation LC50 mg/l/4h	:	> 5.02	Rat	OECD 403	
Skin corrosion/irritation	:	Non-irritating to the skin	Rabbit	OECD 404	
Serious eye damage/eye irritation	:	Not irritating to eyes	Rabbit	OECD 405	
Respiratory/skin sensitization	:	Not a skin sensitizer	Guinea pig	OECD 406	

Chronic toxicity

Germ cell mutagenicity

Chemical Name		
Glyphosate, isopropylamine salt	:	Not classified
Diflufenican	:	Not classified

Carcinogenicity .

Chemical Name		
Glyphosate, isopropylamine salt	:	Not Carcinogenic
Diflufenican	:	Not Carcinogenic

Reproductive toxicity .

Chemical Name		
Glyphosate, isopropylamine salt	:	Not toxic for the reproductive system
Diflufenican	:	Not toxic for the reproductive system

STOT - single exposure

Chemical Name		
Glyphosate, isopropylamine salt	:	Not classified
Diflufenican	:	Not classified

STOT - repeated exposure

Chemical Name		
Glyphosate, isopropylamine salt	:	Not classified
Diflufenican	:	Not classified

Aspiration hazard

Chemical Name

Glyphosate, isopropylamine salt	:	Not classified
Diflufenican	:	Not classified

Section 12: ECOLOGICAL INFORMATION

Toxicity

Aquatic toxicity

Acute toxicity		**Values**	**Species**	**Method**	**Remarks**
Fish 96-hour LC50 mg/l	:	----			No data available
Crustacea 48-hour EC50 mg/l	:	> 18.1	Daphnia magna	OECD 202	
Algae 72-hour EC50 mg/l	:	0.068	D. Subspicatus	OECD 201	
Other plants EC50 mg/l	:	0.204	M. spicatum	OECD 239	14 days

Chronic aquatic toxicity		**Values**	**Species**	**Method**	**Remarks**
Fish NOEC mg/l	:	No data available			
Crustacea NOEC mg/l	:	No data available			
Algae NOEC mg/l	:	0.0305	D. Subspicatus	OECD 201	
Other plants NOEC mg/l	:	0.050	M. spicatum	OECD 239	

Terrestrial Toxicity

Birds Oral LD50 mg/kg

Chemical Name

Glyphosate, isopropylamine salt	:	4334	Bobwhite quail	
Diflufenican	:	> 2150	Bobwhite quail	

Bees Oral LD50 µg/bee

Chemical Name

Glyphosate, isopropylamine salt	:	100		
Diflufenican	:	> 100	Apis mellifera	EPPO 170

Persistence and degradability

Abiotic Degradation		**Values**	**Method**	**Remarks**
Water DT50 days				
Chemical Name				
Glyphosate, isopropylamine salt	:	1 - 4		
Diflufenican	:	1-5	BBA IV: 5-1	
Soil DT50 days				
Chemical Name				
Glyphosate, isopropylamine salt	:	4 - 180		20 °C
Diflufenican	:	128	EPA / SETAC	

Biodegradation

Chemical Name

Glyphosate, isopropylamine salt	:	Not readily biodegradable
Diflufenican	:	No information available

Bioaccumulative potential

Partition Coefficient (n-octanol/water) Partition Coefficient (n-octanol/water) Log Pow		**Values**	**Method**	**Remarks**
Chemical Name				
Glyphosate, isopropylamine salt	:	-3.2		pH 5-9, 25 ◦ C
Diflufenican	:	4.2	OECD 117	20 ◦ C

Bioconcentration factor (BCF)

Chemical Name			
Glyphosate, isopropylamine salt	:	1.1 ± 0.61	
Diflufenican	:	1276 - 1596	OECD 305

Mobility in soil

Adsorption/Desorption Chemical Name		Values	Method	Remarks
Glyphosate, isopropylamine salt	:	15844		KOC
Diflufenican	:	3417		KOC

Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB

Other adverse effects

No information available.

Section 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Improper disposal or reuse of this container may be dangerous and illegal.
Other Information	Waste codes should be assigned by the user based on the application for which the product was used.

Section 14: TRANSPORTATION INFORMATION

IMDG/IMO

UN/ID No *	3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diflufenican; Glyphosate Isopropylamine salt,)
Hazard Class	9
Packing Group	III
Marine pollutant	Yes
Special precautions for user	

RID/ADR

UN/ID No *	3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diflufenican; Glyphosate Isopropylamine salt,)
Hazard Class	9
Packing Group	III
Environmental hazard	Yes
Special precautions for user	

ICAO/IATA

UN/ID No *	3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diflufenican; Glyphosate Isopropylamine salt,)
Hazard Class	9
Packing Group	III
Environmental hazard	Yes

Special precautions for user

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not Applicable

* Note: UN3077 & UN3082 – These products may be transported as non-dangerous goods under the special provisions of IMDG Code 2.10.2.7; ADR SP375 and ICAO/IATA A197 when packed in single or inner packaging of up to 5L for liquids or 5 kg or less for solids.

Section 15: REGULATORY INFORMATION

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

Section 16: OTHER INFORMATION

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

H224 - Extremely flammable liquid and vapor
H290 - May be corrosive to metals
H301 - Toxic if swallowed
H310 - Fatal in contact with skin
H311 - Toxic in contact with skin
H314 - Causes severe skin burns and eye damage
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H319 - Causes serious eye irritation
H330 - Fatal if inhaled
H331 - Toxic if inhaled
H335 - May cause respiratory irritation
H410 - Very toxic to aquatic life with long lasting effects
H411 - Toxic to aquatic life with long lasting effects

Revision Note Changes made to the last version are labeled with this sign ***.

List of Acronyms

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
CAS Number - Chemical Abstracts Service number
EC Number - EINECS and ELINCS Number
EINECS - European Inventory of Existing Commercial Substances
ELINCS - European List of notified Chemical Substances
IATA - International Air Transport Association
ICAO-TI - Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG - International Maritime Dangerous Goods
LC50 - Lethal Concentration to 50 % of a test population
LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)
OECD - Organization for Economic Co-operation and Development
PBT - Persistent, Bioaccumulative and Toxic substance
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
STOT - Specific Target Organ Toxicity
vPvB - Very Persistent and Very Bioaccumulative

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief

at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet