



# SAFETY DATA SHEET

The Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

## Lenns

Revision date 07-Aug-2022

Version 1 Supersedes Date: 07-Aug-2022

Product Code(s)

HRB05048-27

Print Date 07-Aug-2022

ADM.02256.H.1.A 9513515

## 1. Identification

### Product identifier

## Lenns

### Other means of identification

**Synonyms** Diflufenican 40 Glyphosate 250 SC  
**Formulation type** SC  
**Registration Number(s)** L10935  
**Pure substance/mixture** Mixture

### Recommended use of the chemical and restrictions on use

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

### Detailed information about the manufacturer, supplier, and/or importer

**Supplier** ADAMA SOUTH AFRICA (PTY) LTD  
Ground Floor, Simeka House  
The Vineyards Office Estate  
99 Jip de Jager Drive  
Bellville 7530

### Emergency telephone number

**Emergency Telephone** +27 82 446 8946 (Griffon Poison Centre)  
+27 86 155 5777 (Tygerberg Poison Information Centre)  
+27 86 100 6366 and +27 83 253 6618 (SPILL TECH)

**E-mail address** SDS@ADAMA.COM

## 2. Hazard(s) identification

### Classification of the substance or mixture

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

### Label elements

**Signal word** Warning

**Hazard pictograms****Hazard statements**

H410 - Very toxic to aquatic life with long lasting effects

**Precautionary statements**

P102 - Keep out of reach of children  
 P391 - Collect spillage  
 P273 - Avoid release to the environment  
 P501 - Dispose of contents/ container to an approved waste disposal plant

**Additional information**

This product is classified as hazardous according to the criteria in South Africa - GHS classification and labelling of chemicals – SANS10234 and the Regulations for Hazardous Chemical Agents - 2021.

**Other hazards**

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

### 3. Composition/information on ingredients

**Substance**

Not applicable

**Mixture****Synonyms**

Diflufenican 40 Glyphosate 250 SC

Chemical name	CAS No	Weight-%	EC No	INTERNATIONAL GHS CLASSIFICATION	M-Factor
Glyphosate	1071-83-6	19-24	213-997-4	Eye Dam. 1 (H318) Aquatic Chronic 2 (H411)	
Isopropylamine	75-31-0	6-10	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)	
Diflufenican	83164-33-4	2-5	617-446-2	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	M=10000 M=1000
Ethoxylated butanol, phosphate ester	50769-39-6	1-3		Skin corr. 1B (H314) Dam. 1 (H318)	
Ethoxylated alcohols phosphate ether	68130-47-2	1-3		Skin corr. 1B (H314) Dam. 1 (H318)	
orthophosphoric acid	7664-38-2	< 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

**Additional information**

Note: The other ingredients do not cause or contribute towards the correct GHS classification of Diflufenican 40 Glyphosate 250 SC and are therefore, in terms of the South African Regulations for Hazardous Chemical Agents - 2021. Regulation 14(b), not listed in the table above.

#### 4. First-aid measures

##### Description of necessary first aid measures

<b>General advice</b>	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). First aider: Pay attention to self-protection.
<b>Inhalation</b>	Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Consult a physician if necessary.
<b>Eye contact</b>	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.
<b>Ingestion</b>	Rinse mouth. Drink plenty of water. If symptoms persist, call a physician.

##### For emergency responders

**Self-protection of the first aider** Use personal protective equipment as required.

##### Most important symptoms/effects, acute and delayed

**Symptoms** None known.

##### Indication of immediate medical attention and special treatment needed, if necessary

**Note to physicians** Treat symptomatically.

#### 5. Fire-fighting measures

##### Suitable Extinguishing Media

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

**Unsuitable extinguishing media** Do not scatter spilled material with high pressure water streams.

##### Specific hazards arising from the chemical

**Specific hazards arising from the chemical** No information available.

**Explosive properties** Not an explosive.

##### Specific/special fire-fighting measures

**Specific/special fire-fighting measures** No information available.

##### Special protective equipment and precautions for fire-fighters

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Ensure adequate ventilation.

### Environmental precautions

**Environmental precautions** See Section 12 for additional Ecological Information.

### Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Pick up and transfer to properly labeled containers.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## 7. Handling and storage

### Preventive measures for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

### Precautions for safe handling

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

## 8. Exposure controls/personal protection

### Control parameters

#### Exposure guidelines

Chemical name	ACGIH TLV
Isopropylamine 75-31-0	STEL: 10 ppm TWA: 5 ppm
orthophosphoric acid 7664-38-2	STEL: 3 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>

### Appropriate engineering controls

**Engineering controls** Ensure adequate ventilation, especially in confined areas.

### Individual protection measures, such as personal protective equipment

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.

**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).

<b>Eye/face protection</b>	Tight sealing safety goggles.
<b>Skin and body protection</b>	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.
<b>General hygiene considerations</b>	Handle in accordance with good industrial hygiene and safety practice.
<b>Environmental exposure controls</b>	Local authorities should be advised if significant spillages cannot be contained.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

<u>Property</u>	<u>Values</u>	<u>Method</u>	<u>Remarks</u>
<b>Appearance</b>			
Physical state	: Liquid		
Color	: Grey		
Odor	: characteristic		
<b>Odor threshold</b>	: No data available		
<b>pH</b>	: 3.5-6.0	CIPAC MT 75.3	25°C
<b>Melting point / freezing point °C</b>	: ---		Not applicable
<b>Boiling point / boiling range °C</b>	: No data available		
<b>Flash point °C</b>	: > 110	ASTM D7094/D93	aqueous solution
<b>Evaporation rate</b>	: No data available		
<b>Flammability (solid, gas)</b>	: Not applicable for liquids		
<b>Upper/lower flammability or explosive limits</b>	: No data available		
<b>Vapor pressure kPa</b>	: ---		No data available
<b>Vapor density</b>	: No data available		
<b>Relative density</b>	: 1.12-1.16	CIPAC MT 3.3	20 °C
<b>Solubility(ies) mg/l</b>	: ---		Not applicable
<b>Partition coefficient Log Pow</b>	:		See Section 12 for additional Ecological Information
<b>Autoignition temperature °C</b>	: > 600	EEC A.15	Based on similar formulation
<b>Decomposition temperature °C</b>	: ---		No data available
<b>Kinematic viscosity mm<sup>2</sup>/s 40 °C</b>	: > 62	CIPAC MT 192	
<b>Explosive properties</b>	: Not an explosive	EEC A.14	Based on similar formulation
<b>Oxidizing properties</b>	: Not oxidizing	EEC A.21	Based on similar formulation
<b>Surface tension</b>	: 27.3 mN/m	EEC A.5	20°C
<b>Particle Size</b>	: Not applicable		
<b>Other information</b>			
<b>Bulk density g/ml</b>	: ---		

## 10. Stability and reactivity

### Reactivity

**Reactivity** No information available.

### Chemical stability

**Stability** Stable under normal conditions.

**Explosion data**

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

**Possibility of hazardous reactions****Possibility of hazardous reactions** None under normal processing.**Conditions to avoid****Conditions to avoid** None known based on information supplied.**Incompatible materials****Incompatible materials** None known based on information supplied.**Hazardous decomposition products****Hazardous decomposition products** None known based on information supplied.**11. Toxicological information****Information on toxicological effects****Acute toxicity**

	<b><u>Values</u></b>	<b><u>Species</u></b>	<b><u>Method</u></b>	<b><u>Remarks</u></b>
<b>Oral LD50 mg/kg</b>	: > 2000	Rat	OECD 423	Based on similar formulation
<b>Dermal LD50 mg/kg</b>	: > 2000	Rat	OECD 402	Based on similar formulation
<b>Inhalation LC50 LC50</b>	: > 5.02	Rat	OECD 403	Based on similar formulation
<b>Skin corrosion/irritation</b>	: Non-irritating to the skin	Rabbit	OECD 404	Based on similar formulation
<b>Serious eye damage/eye irritation</b>	: Not irritating to eyes	Rabbit	OECD 405	Based on similar formulation
<b>Sensitization</b>	: Not a skin sensitizer	Guinea pig	OECD 406	Based on similar formulation

**Chronic toxicity****Germ cell mutagenicity****Chemical name**

Glyphosate : Not classified

Diflufenican : Not classified

**Carcinogenicity****Chemical name**

Glyphosate : Not Carcinogenic

Diflufenican : Not Carcinogenic

**Reproductive toxicity****Chemical name**

Glyphosate : Not toxic for the reproductive system

Diflufenican : Not toxic for the reproductive system

**STOT - Single Exposure****Chemical name**

Glyphosate : No data available

Diflufenican : No data available

**STOT - Repeated Exposure****Chemical name**

Glyphosate : No data available  
Diflufenican : No data available

**Aspiration hazard****Chemical name**

Glyphosate : No data available  
Diflufenican : No data available

## 12. Ecological information

**Ecotoxicity****Aquatic toxicity****Acute toxicity**

	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
<b>Fish 96-hour LC50 mg/l</b>	: ----			Not available
<b>Crustacea 48-hour EC50 mg/l</b>	: > 18.1	Daphnia magna	OECD 202	
<b>Algae 72-hour EC50 mg/l</b>	: 0.068	D. Subspicatus	OECD 201	Based on similar formulation
<b>Other plants EC50 mg/l</b>	: 0.204	M. spicatum	OECD 239	14d

**Chronic aquatic toxicity****Fish NOEC mg/l**

: No data available

**Crustacea NOEC mg/l**

: No data available

	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
<b>Algae NOEC mg/l</b>	: 0.0305	D. Subspicatus	OECD 201	Based on similar formulation
<b>Other plants NOEC mg/l</b>	: 0.050	M. spicatum	OECD 239	

**Terrestrial Toxicity****Birds Oral LD50 mg/kg****Chemical name**

Glyphosate	: 4334	Bobwhite quail		EF 2.167
Diflufenican	: > 2150	Bobwhite quail		

**Bees Oral LD50 µg/bee****Chemical name**

Glyphosate	: 100			
Diflufenican	: > 100	Apis mellifera	EPPO 170	

**Abiotic Degradation****Water DT50 days****Chemical name**

Glyphosate	: 1 - 4			
Diflufenican	: 1-5		BBA IV: 5-1	

**Soil DT50 days****Chemical name**

Glyphosate	: 4 - 180			201 °C
Diflufenican	: 128		EPA / SETAC	

**Biodegradation****Chemical name**

Glyphosate : Not readily biodegradable  
Diflufenican : No information available

<b>Log Pow</b>	<b>Values</b>	<b>Method</b>	<b>Remarks</b>
<b>Chemical name</b>			
Glyphosate	: -3.2		
Diflufenican	: 4.2	OECD 117	
<b>Bioconcentration factor (BCF)</b>			
<b>Chemical name</b>			
Glyphosate	: 1.1 ± 0.61		
Diflufenican	: 1276 - 1596	OECD 305	
<b>Adsorption/Desorption</b>	<b>Values</b>	<b>Method</b>	<b>Remarks</b>
<b>Chemical name</b>			
Glyphosate	: 15844		KOC
Diflufenican	: 3417		KOC

### 13. Disposal considerations

#### Disposal methods

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Improper disposal or reuse of this container may be dangerous and illegal.

### 14. Transport information

#### ADR

14.1 UN number	UN3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diflufenican)
14.3 Transport hazard class(es)	9
Labels	9
14.4 Packing group	III
Description	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diflufenican), 9, III
14.5 Environmental hazard	Yes
14.6 Special Precautions for Users	
Special Provisions	274, 335, 601, 375
Classification code	M6

#### RID

14.1 UN number	UN3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diflufenican)
14.3 Transport hazard class(es)	9
Labels	9
14.4 Packing group	III
Description	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diflufenican), 9, III
14.5 Environmental hazard	Yes
14.6 Special Precautions for Users	
Special Provisions	274, 335, 375, 601
Classification code	M6

#### IMDG

14.1 UN number	UN3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diflufenican)
14.3 Hazard Class	9
14.4 Packing group	III



<b>Description</b>	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diflufenican), 9, III, Marine pollutant
<b>14.5 Marine pollutant</b>	P
<b>Environmental hazard</b>	Yes
<b>14.6 Special Precautions for Users</b>	
<b>Special Provisions</b>	274, 335, 969
<b>EmS-No</b>	F-A, S-F
<b>IMDG Stowage and segregation</b>	Category A
<b>14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code</b>	No information available

**IATA**

<b>14.1 UN number</b>	UN3082
<b>14.2 UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diflufenican)
<b>14.3 Transport hazard class(es)</b>	9
<b>14.4 Packing group</b>	III
<b>Description</b>	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diflufenican), 9, III
<b>14.5 Environmental hazard</b>	Yes
<b>14.6 Special Precautions for Users</b>	
<b>Special Provisions</b>	A97, A158, A197
<b>ERG Code</b>	9L



\* 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

## 15. Regulatory information

### Safety, health and environmental regulations specific for the product in question

Registration Requirements: Fertilizer, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act 36 of 1947). Pesticide Handling, Storage and Disposal Safety: SANS10206: 2020. Safety Data Sheet and Occupational Exposure Limit Requirements: Regulations for Hazardous Chemical Agents – 2021 – SA Occupational Health and Safety Act. SANS11014:2010. Control of and handling of poisonous/hazardous and non-poisonous/non-hazardous substances/chemicals in workplaces: Hazardous Substances Act, 1973 (Act No.15 of 1973). Occupational Health and Safety Act No. 85 of 1993.

## 16. Other information

### Full text of H-Statements referred to under section 3

H224 - Extremely flammable liquid and vapor  
H290 - May be corrosive to metals  
H301 - Toxic if swallowed  
H302 - Harmful 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  
 H400 - Very toxic to aquatic life  
 H410 - Very toxic to aquatic life with long lasting effects  
 H411 - Toxic to aquatic life with long lasting effects

**Date of preparation of the SDS** No data available

**Revision date** 07-Aug-2022

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

**Key or legend to abbreviations and acronyms used in the safety data sheet**

IMDG	International Maritime Dangerous Goods (IMDG)
IATA	International Air Transport Association (IATA)
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

**Abbreviations and 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

**The Globally Harmonized System of Classification and Labeling of Chemicals (GHS)**

<b>Classification of the mixture</b>	<b>Classification procedure</b>
H400 - Very toxic to aquatic life	Classification based on test data
H410 - Very toxic to aquatic life with long lasting effects	Classification based on test data

**Disclaimer**

The information provided in this 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**