

SECTION 1: Identification

1.1. Product identifier

Product form	: Substance
Trade name	: Ransom 240 SL (Hexazinone 240 g/l)
Type of product	: Herbicide
CAS-No.	: 51235-04-2
Product group	: End product

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

Use of the substance/mixture	: A soluble liquid concentrate herbicide for the control of various annual grasses and broadleaf weeds in sugarcane.
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1.3. Supplier's details

Supplier

Farm-Ag International (Pty) Ltd
Old Mill Industrial Park
61, Marshall Drive
P.O. Box 1523
4300 Mount Edgecombe – Durban KwaZulu Natal
South Africa
T 031 003 3486

1.4. Emergency telephone number

Emergency number	: 24 Hr Emergency Number: In case of Poisoning: Poison Information Helpline : 0861 555 777
	In case of Spillage: HAZMAT:0800 147 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture


Classification according to the United Nations GHS

Flammable liquids, Category 3	H226
Acute toxicity (oral), Category 4	H302
Skin corrosion/irritation, Category 3	H316
Serious eye damage/eye irritation, Category 2A	H319
Hazardous to the aquatic environment – Acute Hazard, Category 1	H400
Hazardous to the aquatic environment – Chronic Hazard, Category 2	H411

Full text of H-statements: see section 16

2.2. Label elements

Labelling according to the United Nations GHS

Hazard pictograms (GHS ZA)	: 
Signal word (GHS-ZA)	: Warning
Hazard statements (GHS ZA)	: H226 - Flammable liquid and vapour. H316 - Causes mild skin irritation H319 - Causes serious eye irritation. H400 - Very toxic to aquatic life.

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according to SANS 10234:2019 and SANS 11014:2010

Precautionary statements (GHS ZA)

H411 - Toxic to aquatic life with long lasting effects.
: P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read label before use.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P240 - Ground and bond container and receiving equipment.
P241 - Use explosion-proof equipment.
P242 - Use non-sparking tools.
P243 - Take action to prevent static discharges.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P330 - Rinse mouth.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P370+P378 - In case of fire: Use D-powder, carbon dioxide (CO₂), foam to extinguish.
P391 - Collect spillage.
P403+P235 - Store in a well-ventilated place. Keep cool.
P501 - Dispose of contents and container to an approved waste disposal plant.

2.3. Other hazards

Adverse physicochemical, human health and environmental effects

: Causes mild skin irritation, Causes serious eye irritation, Very toxic to aquatic life, Toxic to aquatic life with long lasting effects.

SECTION 3: Composition/information on ingredients

3.1. Substances

Name : Ransom 240 SL (Hexazinone 240 g/l)
CAS-No. : 51235-04-2
Product identifiers: See section 1.1

Name	Product identifier	%	Classification according to the United Nations GHS
Water	CAS-No.: 7732-18-5	≥ 45 – < 50	Acute Tox. Not classified (Oral)
Ethanol	CAS-No.: 64-17-5	≥ 25 – < 30	Flam. Liq. 2, H225 Acute Tox. Not classified (Oral) STOT RE Not classified Aquatic Acute Not classified
Hexazinone TC	CAS-No.: 51235-04-2	≥ 20 – < 25	Acute Tox. 4 (Oral), H302 Acute Tox. Not classified (Dermal) Acute Tox. Not classified (Inhalation:dust,mist) Eye Irrit. 2A, H319 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410
Ethoxylated fatty alcohol	CAS-No.: 78330-20-8	≥ 1 – < 5	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400

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Name	Product identifier	%	Classification according to the United Nations GHS
5-Chloro-2-Methyl-4-isothiazolin-3-one	CAS-No.: [26172-55-4]	< 0.1	Acute Tox. 1 (Oral), H300 Acute Tox. 2 (Dermal), H310 Acute Tox. 2 (Inhalation:dust,mist), H330 Skin Corr. 1, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400 (M=10)
Humectant	CAS-No.: 56-81-5	< 0.1	Flam. Liq. Not classified Acute Tox. Not classified (Oral) Acute Tox. Not classified (Dermal) Acute Tox. 3 (Inhalation:vapour), H331 Aquatic Acute Not classified

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Call poison control centre 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 centre or doctor. Do not give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Water spray as a fog can be used for cooling of unaffected stock, but avoid water coming in contact with the product. Do not use direct jet of water. Contain water used for fire-fighting for later disposal. Avoid the accumulation of polluted run-off from the site.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: Toxic fumes may be released.
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according to SANS 10234:2019 and SANS 11014:2010

5.3. Advice for firefighters

- Firefighting instructions : Wear self-contained breathing apparatus. Use water spray. Cool tank/container with water spray. If area is exposed to fire and conditions permit, let fire burn itself out. Burning chemicals may produce by-products more toxic than the original material. If product is on fire, wear self-contained breathing apparatus and full protective equipment. Use water spray. Control runoff.
- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
- Personal protection (Emergency response) : Wear respiratory protection, Wear protective gloves, Wear protective clothing, Wear eye protection



SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No additional information available

6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. Avoid breathing vapours. Avoid contact with skin and eyes.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- For containment : Collect spillage.
- Methods for cleaning up : Dike spill. Prevent material from entering sewers, waterways, or low areas. Spill Clean Up. Soak up with sawdust, sand, oil dry or other absorbent material. Shovel or sweep up.
- Other information : Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Use only outdoors or in a well-ventilated area. Avoid breathing vapours. Avoid contact with skin and eyes. Wear personal protective equipment.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a well-ventilated place. Keep cool.
- Storage area : Store out of reach of unauthorised persons, children and animals.
- Information on mixed storage : KEEP SUBSTANCE AWAY FROM: Food supplies. Water supplies.
- Maximum storage period : 2 years
- Storage temperature : > 0 °C

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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according to SANS 10234:2019 and SANS 11014:2010

Ethanol (64-17-5)	
South Africa - Occupational Exposure Limits (Recommended Limits)	
Local name	Ethanol [ethyl alcohol]
OEL STEL [ppm]	2000 ppm
Regulatory reference	Government Notice No. R. 280, 2021
South Africa - Occupational Exposure Limits (Airborne Pollutants)	
Local name	Ethanol (Ethyl alcohol)
OEL TWA	1900 mg/m ³
OEL TWA [ppm]	1000 ppm
Regulatory reference	Government Notice No. R 904
Humectant (56-81-5)	
South Africa - Occupational Exposure Limits (Airborne Pollutants)	
Local name	Glycerol
OEL TWA	10 mg/m ³ mist
Regulatory reference	Government Notice No. R 904

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Hand protection : Protective gloves
Eye protection : Safety glasses
Skin and body protection : Wear suitable protective clothing
Respiratory protection : In case of inadequate ventilation wear respiratory protection.

Personal protective equipment symbol(s):



8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Appearance : No data available
Colour : Green. Brown.
Odour : Alcohol odour.
Odour threshold : No data available
pH : 8.5 – 9
pH solution : No data available
Relative evaporation rate (butylacetate=1) : No data available
Relative evaporation rate (ether=1) : No data available
Melting point : Not applicable
Freezing point : No data available
Boiling point : No data available
Flash point : 23 °C

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according to SANS 10234:2019 and SANS 11014:2010

Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Flammable
Vapour pressure	: No data available
Vapour pressure at 50 °C	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 0.9776
Relative density of saturated gas/air mixture	: No data available
Density	: No data available
Relative gas density	: No data available
Solubility	: Dispersible.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Partition coefficient n-octanol/water (Log Kow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available
Lower explosion limit	: No data available
Upper explosion limit	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Ransom 240 SL (Hexazinone 240 g/l) (51235-04-2)

Unknown acute toxicity (GHS ZA)Unknown acute toxicity (GHS ZA)	99.97% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 99.97% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Vapours))
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Ransom 240 SL (Hexazinone 240 g/l)

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010

Hexazinone TC (51235-04-2)	
LD50 oral rat	1690 mg/kg Source: National Library of Medicine
LD50 dermal rabbit	> 5000 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	> 7.48 mg/l/4h

Ethanol (64-17-5)	
LD50 oral rat	10470 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 9720 - 11380

Humectant (56-81-5)	
LD50 oral rat	27200 mg/kg (OECD 401: Acute Oral Toxicity, Rat, Female, Experimental value, Oral, 10 day(s))
LD50 dermal	56750 mg/kg (4 day(s), Guinea pig, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat (Vapours)	> 2.75 mg/l/4h

5-Chloro-2-Methyl-4-isothiazolin-3-one ([26172-55-4])	
LD50 oral rat	66 – 105 mg/kg
LD50 dermal rabbit	200 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	0.33 mg/l

Water (7732-18-5)	
LD50 oral rat	90000 mg/kg

Skin corrosion/irritation	: Causes mild skin irritation. pH: 8.5 – 9
Serious eye damage/irritation	: Causes serious eye irritation. pH: 8.5 – 9
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified

Ethanol (64-17-5)	
LOAEL (oral, rat, 90 days)	3200 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (oral, rat, 90 days)	1730 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents), Remarks on results: other:

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute)	: Very toxic to aquatic life.
Hazardous to the aquatic environment, long-term (chronic)	: Toxic to aquatic life with long lasting effects.

Hexazinone TC (51235-04-2)	
LC50 - Fish [1]	> 320 mg/l Rainbow trout
LC50 - Fish [2]	> 370 mg/l Bluegill sunfish
EC50 - Crustacea [1]	85 mg/l Source: The ECOTOXicology database

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Hexazinone TC (51235-04-2)	
EC50 - Other aquatic organisms [1]	0.043 mg/l
Partition coefficient n-octanol/water (Log Kow)	1.2
Additional ecotoxicological information	Birds: Acute oral LD50 for bobwhite quail 1201 mg/kg. Dietary LC50 (8d) for bobwhite quail >5620, mallard ducks > 10000 mg/kg diet. Bees: (LD50, µg/bee) >60
Ethanol (64-17-5)	
EC50 - Crustacea [1]	> 10000 mg/l Test organisms (species): Daphnia magna
Humectant (56-81-5)	
LC50 - Fish [1]	54000 mg/l (96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, Lethal)
EC50 - Crustacea [1]	> 10000 mg/l (24 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
Partition coefficient n-octanol/water (Log Pow)	-1.75 (Experimental value, Equivalent or similar to OECD 107, 25 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0 (log Koc, Calculated value)
Ethoxylated fatty alcohol (78330-20-8)	
LC50 - Fish [1]	0.7 – 0.8 mg/l Source: SIDS
5-Chloro-2-Methyl-4-isothiazolin-3-one ([26172-55-4])	
LC50 - Fish [1]	0.19 mg/l
EC50 - Crustacea [1]	0.18 mg/l
Partition coefficient n-octanol/water (Log Pow)	0.4
Water (7732-18-5)	
Partition coefficient n-octanol/water (Log Pow)	-1.38
12.2. Persistence and degradability	
Ransom 240 SL (Hexazinone 240 g/l) (51235-04-2)	
Persistence and degradability	No additional information available
Humectant (56-81-5)	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.87 g O ₂ /g substance
Chemical oxygen demand (COD)	1.16 g O ₂ /g substance
ThOD	1.217 g O ₂ /g substance
12.3. Bioaccumulative potential	
Ransom 240 SL (Hexazinone 240 g/l) (51235-04-2)	
Bioaccumulative potential	No additional information available
Hexazinone TC (51235-04-2)	
Partition coefficient n-octanol/water (Log Kow)	1.2
Humectant (56-81-5)	
Partition coefficient n-octanol/water (Log Pow)	-1.75 (Experimental value, Equivalent or similar to OECD 107, 25 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0 (log Koc, Calculated value)

Ransom 240 SL (Hexazinone 240 g/l)

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010

Humectant (56-81-5)

Bioaccumulative potential	Not bioaccumulative.
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5-Chloro-2-Methyl-4-isothiazolin-3-one ([26172-55-4])

Partition coefficient n-octanol/water (Log Pow)	0.4
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Water (7732-18-5)

Partition coefficient n-octanol/water (Log Pow)	-1.38
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12.4. Mobility in soil

Ransom 240 SL (Hexazinone 240 g/l) (51235-04-2)

Mobility in soil	No additional information available
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Hexazinone TC (51235-04-2)

Mobility in soil	10 Source: National Library of Medicine/Hazardous Substances Data Bank
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Partition coefficient n-octanol/water (Log Kow)	1.2
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Humectant (56-81-5)

Surface tension	63.4 mN/m (20 °C, 1000 g/l)
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Partition coefficient n-octanol/water (Log Pow)	-1.75 (Experimental value, Equivalent or similar to OECD 107, 25 °C)
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Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0 (log Koc, Calculated value)
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Ecology - soil	Highly mobile in soil.
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Ethoxylated fatty alcohol (78330-20-8)

Mobility in soil	3207
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5-Chloro-2-Methyl-4-isothiazolin-3-one ([26172-55-4])

Partition coefficient n-octanol/water (Log Pow)	0.4
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Water (7732-18-5)

Partition coefficient n-octanol/water (Log Pow)	-1.38
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12.5. Other adverse effects

Ozone	: Not classified
Other adverse effects	: No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
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SECTION 14: Transport information

In accordance with SANS / IMDG / IATA

SANS	IMDG	IATA
14.1. UN number		
1170	1170	1170

Ransom 240 SL (Hexazinone 240 g/l)

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010

SANS	IMDG	IATA
14.2. Proper Shipping Name		
ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION) (contains hexazinone 240 g/l)	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION) (contains hexazinone 240 g/l)	Ethanol solution (contains hexazinone 240 g/l)
14.3. Transport hazard class(es)		
3	3	3
14.4. Packing group		
III	III	III
14.5. Environmental hazards		
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes
No supplementary information available		

14.6. Special precautions for user

SANS

Special provisions (SANS)	: 144, 223
Limited quantities (SANS)	: 5 L
Limited quantities (SANS)	: 5 L
Packagings, large packagings and IBCs Packing instructions (SANS)	: P001, IBC03, LP01
Portable tank and bulk containers instructions (SANS)	: T2
Portable tank and bulk container special provisions (SANS)	: TP1

IMDG

Special provisions (IMDG)	: 144, 223
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T2
Tank special provisions (IMDG)	: TP1
EmS-No. (Fire)	: F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS
EmS-No. (Spillage)	: S-D - SPILLAGE SCHEDULE Delta - FLAMMABLE LIQUIDS
Stowage category (IMDG)	: A
Properties and observations (IMDG)	: Colourless, volatile liquids. Pure ETHANOL: flashpoint 13°C c.c. Explosive limits: 3.3% to 19% Miscible with water.

IATA

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y344
PCA limited quantity max net quantity (IATA)	: 10L
PCA packing instructions (IATA)	: 355
PCA max net quantity (IATA)	: 60L
CAO packing instructions (IATA)	: 366
CAO max net quantity (IATA)	: 220L
Special provisions (IATA)	: A3, A58, A180
ERG code (IATA)	: 3L

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

Ransom 240 SL (Hexazinone 240 g/l)

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010

SECTION 15: Regulatory information

15.1. Safety, health, and environmental national regulations specific for the product

No additional information available

SECTION 16: Other information

Issue date : 11/09/2022

Safety Data Sheet (SDS), South Africa

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.