

SECTION 1: Identification of the substance/mixture and of the supplier/undertaking

1.1. GHS product identifier

Product form : Mixture
Trade name : Sabuto
Type of product : Solvents
Product code : 2051
Product group : End product

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use : PAINT RELATED MATERIAL
Industrial uses

1.4. Supplier's details

Distributor

Rolfes Chemicals (Pty) Ltd.
Cnr Brammer and Strachan Street,
P.O. Box P.O. Box 14075, Wadeville
1422 Germiston – South Africa Gauteng
T 011 873 0157

1.5. Emergency phone number

Emergency number : 086 111 4753

SECTION 2: Hazard identification

2.1. GHS classification of the substance/mixture and any national or regional information

Classification according to the United Nations GHS

Flammable liquids, Category 3 H226

Specific target organ toxicity – Repeated exposure, Category 1 H372

Full text of H-statements: see section 16

Adverse physicochemical, human health and environmental effects : Flammable liquid and vapour, Causes damage to organs through prolonged or repeated exposure.

2.2. GHS label elements, including precautionary statements

Labelling according to the United Nations GHS

Hazard pictograms (GHS ZA) :



Signal word (GHS-ZA) :

Danger

Hazardous ingredients :

Propan-1-ol

Hazard statements (GHS ZA) :

H226 - Flammable liquid and vapour
H372 - Causes damage to organs (Respiratory tract, Skin) through prolonged or repeated exposure (Oral, Dermal)

Precautionary statements (GHS ZA) :

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 lighting, electrical equipment.

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According to Regulations for Hazardous Chemical Agents, 2021 and United Nations GHS revision 9

P242 - Use non-sparking tools.
P243 - Take action to prevent static discharges.
P260 - Do not breathe dusts or mists.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective clothing, eye protection, face protection, protective gloves, eye protection.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].
P319 - Get medical help if you feel unwell.
P370+P378 - In case of fire: Use dry extinguishing powder, extinguishing powder, foam to extinguish.
P403+P235 - Store in a well-ventilated place. Keep cool.
P501 - Dispose of contents and container to an approved waste disposal plant.

: 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 lighting, electrical equipment.; P242 - Use non-sparking tools.; P243 - Take action to prevent static discharges.; P260 - Do not breathe dusts or mists.; P264 - Wash hands, forearms and face thoroughly after handling.; P270 - Do not eat, drink or smoke when using this product.; P280 - Wear protective clothing, eye protection, face protection, protective gloves, eye protection.; IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].; P319 - Get medical help if you feel unwell.; P370+P378 - In case of fire: Use dry extinguishing powder, extinguishing powder, foam to extinguish.; P403+P235 - Store in a well-ventilated place. Keep cool.; P501 - Dispose of contents and container to an approved waste disposal plant.

P-statements for label (GHS-ZA)

2.3. Other hazards which do not result in classification or are not covered by the GHS

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to the United Nations GHS
Butan-1-ol	CAS-No.: 71-36-3	≥ 60	Flam. Liq. 3, H226
Pentan-2-ol	CAS-No.: 6032-29-7	< 25	Flam. Liq. 3, H226
2-methylpropan-1-ol	CAS-No.: 78-83-1	< 20	Flam. Liq. 3, H226
3-Methylbutan-2-ol	CAS-No.: 598-75-4	< 10	Flam. Liq. 3, H226 Aquatic Acute 3, H402 Aquatic Chronic 3, H412
Pentan-3-ol	CAS-No.: 584-02-1	< 10	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302
Propan-1-ol	CAS-No.: 71-23-8	< 5	Flam. Liq. 3, H226 STOT RE 1, H372
Butan-2-ol	CAS-No.: 78-92-2	< 5	Not classified

SECTION 4: First aid measures

4.1. Description of necessary first aid measures

First-aid measures general : Get medical advice/attention if you feel unwell.

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First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Rinse skin with water/shower. Take off immediately all contaminated clothing.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms/effect, acute and delayed

Symptoms/effects after inhalation	: Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact	: None under normal conditions.
Symptoms/effects after eye contact	: None under normal conditions.
Symptoms/effects after ingestion	: None under normal conditions.

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

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard	: Flammable liquid and vapour.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Special protective actions for fire-fighters

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.
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6.1.1. For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area. No open flames, no sparks, and no smoking. Do not breathe vapours, fume, spray.

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".
Emergency procedures	: Evacuate unnecessary personnel. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and materials for containment and cleaning up

For containment	: Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
Methods for cleaning up	: Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information	: Dispose of materials or solid residues at an authorized site.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Do not breathe vapours, mist.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
Additional hazards when processed	: Not expected to present a significant hazard under anticipated conditions of normal use.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Ground/bond container and receiving equipment.
Storage conditions	: Store in a well-ventilated place. Keep cool. Keep container tightly closed.
Packaging materials	: Store always product in container of same material as original container.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Butan-1-ol (71-36-3)	
South Africa - Occupational Exposure Limits (Airborne Pollutants)	
Local name	n-Butyl alcohol (Butan-1-ol)
OEL STEL	150 mg/m ³ 50 ppm
Remark	Sk (Danger of cutaneous absorption)
Regulatory reference	Government Notice No. R 904
2-methylpropan-1-ol (78-83-1)	
South Africa - Occupational Exposure Limits (Restricted Limits)	
Local name	Isobutanol [isobutyl alcohol]
RHCA - STEL/C	100 ppm
Regulatory reference	Government Notice No. R. 280, 2021
South Africa - Occupational Exposure Limits (Airborne Pollutants)	
Local name	Isobutyl alcohol (2-Methylpropan-1-ol)
OEL TWA	150 mg/m ³ 50 ppm
OEL STEL	225 mg/m ³ 75 ppm
Regulatory reference	Government Notice No. R 904
Propan-1-ol (71-23-8)	
South Africa - Occupational Exposure Limits (Restricted Limits)	
Local name	n-Propanol (Propan-1-ol)
OEL eight hour TWA	250 ppm 625 mg/m ³
RHCA - STEL/C	200 ppm

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Propan-1-ol (71-23-8)	
	500 mg/m ³
Remark	Sk
Regulatory reference	Government Notice. R: 1179
South Africa - Occupational Exposure Limits (Airborne Pollutants)	
Local name	n-Propanol (Propan-1-ol)
OEL TWA	500 mg/m ³
	200 ppm
OEL STEL	625 mg/m ³
	250 ppm
Remark	Sk (Danger of cutaneous absorption)
Regulatory reference	Government Notice No. R 904
Butan-2-ol (78-92-2)	
South Africa - Occupational Exposure Limits (Restricted Limits)	
Local name	2-Butanol [sec-butyl alcohol]
RHCA - STEL/C	200 ppm
Regulatory reference	Government Notice No. R. 280, 2021
South Africa - Occupational Exposure Limits (Airborne Pollutants)	
Local name	sec-Butyl alcohol (Butan-2-ol)
OEL TWA	300 mg/m ³
	100 ppm
OEL STEL	450 mg/m ³
	150 ppm
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

- Hand protection : Protective gloves
Eye protection : Safety glasses
Skin and body protection : Wear suitable protective clothing
Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s)



8.4. Exposure limit values for the other components

No additional information available

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SECTION 9: Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Colour	: Colourless
Odour	: alcohol
Odour threshold	: No data available
pH	: 7
pH solution	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Melting point	: -89 °C
Freezing point	: No data available
Boiling point	: 117 °C
Flash point	: 32 °C
Auto-ignition temperature	: 343 °C
Decomposition temperature	: No data available
Flammability	: Flammable liquid and vapour.
Vapour pressure	: 5.31 hPa
Vapour pressure at 50°C	: No data available
Relative vapour density at 20°C	: 3.04
Relative density	: No data available
Relative density of saturated gas/air mixture	: No data available
Density	: 0.808 g/cm ³
Relative gas density	: No data available
Solubility	: partly soluble. Water: Partly Soluble in water
Partition coefficient n-octanol/water (Log Pow)	: No data available
Partition coefficient n-octanol/water (Log Kow)	: No data available
Viscosity, kinematic	: 4.1 mm ² /s
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available
Lower explosion limit	: 1.4 vol %
Upper explosion limit	: 11.2 vol %
Physical state	: Liquid
Appearance	: Liquid.

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10: Stability and Reactivity

10.1. Reactivity

Flammable liquid and vapour.

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

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

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According to Regulations for Hazardous Chemical Agents, 2021 and United Nations GHS revision 9

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

Butan-1-ol (71-36-3)

LD50 oral rat	≈ 2292 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	≈ 3430 mg/kg bodyweight Animal: rabbit, Animal sex: male, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

Pentan-2-ol (6032-29-7)

LD50 oral rat	2821 mg/kg Source: Corporate Solution From Thomson Micromedex
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Pentan-3-ol (584-02-1)

LD50 oral rat	1870 mg/kg Source: National Library of Medicine
LD50 dermal rabbit	2420 mg/kg Source: National Library of Medicine

Propan-1-ol (71-23-8)

LD50 dermal rabbit	4032 mg/kg bodyweight Animal: rabbit, Animal sex: male, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), 95% CL: 2720 - 5968
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Butan-2-ol (78-92-2)

LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
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Skin corrosion/irritation : Not classified
pH: 7
Serious eye damage/irritation : Not classified
pH: 7
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Causes damage to organs (Respiratory tract, Skin) through prolonged or repeated exposure (Oral, Dermal).

2-methylpropan-1-ol (78-83-1)

NOAEL (oral, rat, 90 days)	> 1450 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
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Propan-1-ol (71-23-8)

LOAEL (oral, rat, 90 days)	≤ 0.8 mg/kg bodyweight Animal: rat, Animal sex: male
NOAEL (oral, rat, 90 days)	> 0.003 mg/kg bodyweight Animal: rat, Animal sex: male
NOAEC (inhalation, rat, vapour, 90 days)	8 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study), Guideline: other:, Guideline: other:

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Propan-1-ol (71-23-8)	
NOAEL (subchronic, oral, animal/male, 90 days)	> 4000 mg/kg bodyweight Animal: mouse, Animal sex: male
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

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Viscosity, kinematic	4.1 mm ² /s

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short-term (acute) : Not classified.

Hazardous to the aquatic environment, long-term (chronic) : Not classified.

Butan-1-ol (71-36-3)	
LC50 - Fish [1]	1376 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	1328 mg/l Test organisms (species): Daphnia magna
EC50 96h - Algae [1]	225 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
NOEC (chronic)	4.1 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

Pentan-2-ol (6032-29-7)	
LC50 - Fish [1]	324.1 mg/l Source: Ecological Structure Activity Relationships
EC50 96h - Algae [1]	197.8 mg/l Source: Ecological Structure Activity Relationships

2-methylpropan-1-ol (78-83-1)	
LC50 - Fish [1]	1430 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	1100 mg/l Test organisms (species): Daphnia pulex
NOEC (chronic)	20 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

3-Methylbutan-2-ol (598-75-4)	
LC50 - Fish [1]	58.415 mg/l Source: Ecological Structure Activity Relationships
EC50 96h - Algae [1]	228.074 mg/l Source: Ecological Structure Activity Relationships

Pentan-3-ol (584-02-1)	
LC50 - Fish [1]	324.21 mg/l Source: Ecological Structure Activity Relationships
EC50 96h - Algae [1]	197.735 mg/l Source: Ecological Structure Activity Relationships

Propan-1-ol (71-23-8)	
LC50 - Fish [1]	4555 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	3644 mg/l Test organisms (species): Daphnia magna

Butan-2-ol (78-92-2)	
LC50 - Fish [1]	2993 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	308 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	1972 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)

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According to Regulations for Hazardous Chemical Agents, 2021 and United Nations GHS revision 9

Butan-2-ol (78-92-2)

EC50 96h - Algae [1]

2029 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)

12.2. Persistence and degradability

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Persistence and degradability

Not rapidly degradable

Butan-1-ol (71-36-3)

Persistence and degradability

Pentan-2-ol (6032-29-7)

Persistence and degradability

2-methylpropan-1-ol (78-83-1)

Persistence and degradability

3-Methylbutan-2-ol (598-75-4)

Persistence and degradability

Pentan-3-ol (584-02-1)

Persistence and degradability

Propan-1-ol (71-23-8)

Persistence and degradability

Butan-2-ol (78-92-2)

Persistence and degradability

12.3. Bioaccumulative potential

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Bioaccumulative potential

No additional information available

Pentan-2-ol (6032-29-7)

Partition coefficient n-octanol/water (Log Kow)

1.25 Source: ICSC

3-Methylbutan-2-ol (598-75-4)

Partition coefficient n-octanol/water (Log Kow)

1.28 Source: National Library of Medicine

Pentan-3-ol (584-02-1)

Partition coefficient n-octanol/water (Log Kow)

1.21 Source: International Chemical Safety Cards

12.4. Mobility in soil

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Mobility in soil

No additional information available

Pentan-3-ol (584-02-1)

Mobility in soil

3.957 Source: Quantitative Structure Activity Relation

12.5. Other adverse effects

Ozone

: Not classified

Other adverse effects

: No additional information available

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According to Regulations for Hazardous Chemical Agents, 2021 and United Nations GHS revision 9




SECTION 13: Disposal Considerations

13.1. Disposal methods

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Flammable vapours may accumulate in the container. Do not re-use empty containers.

SECTION 14: Transport information

In accordance with SANS / IMDG / IATA

SANS	IMDG	IATA
14.1. UN number		
1987	1987	1987
14.2. UN Proper Shipping Name		
ALCOHOLS, N.O.S.	ALCOHOLS, N.O.S.	Alcohols, n.o.s.
14.3. Transport hazard class(es)		
3	3	3
		
14.4. Packing group, if applicable		
III	III	III
14.5. Environmental hazards		
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No
No supplementary information available		

14.6. Special precautions for user

SANS

Special provisions (SANS)	: 223, 274
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)	: T4
Portable tank and bulk container special provisions (SANS)	: TP1, TP29

IMDG

Special provisions (IMDG)	: 223, 274
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1, TP29
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

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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, A180
ERG code (IATA)	: 3L

14.7. Transport in bulk according to IMO instructions

Not applicable

SECTION 15: Regulatory information

15.1. National regulations

15.1.1. OCCUPATIONAL HEALTH AND SAFETY ACT, 1993

Prohibited Hazardous Chemical Agents

Not regulated

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

No additional information available

SECTION 16: Other information

Issue date	: 21/09/2022
Revision date	: 10/09/2024
Supersedes	: 09/09/2024

Full text of H-statements:

H226	Flammable liquid and vapour
H302	Harmful if swallowed
H372	Causes damage to organs through prolonged or repeated exposure
H402	Harmful to aquatic life
H412	Harmful to aquatic life with long lasting effects

Safety Data Sheet (SDS), South Africa (HCA)

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.