SYLLIT 400 SC

Safety Data Sheet

according to the GHS Classification and labelling of chemicals – SANS 10234 and the Regulations for Hazardous agents 2021.

Issue date: 20/04/2025 Date of revision: 30/04/2028 Version. 2.0

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

1.1. Product identifier

Product form	: Mixture
Name	: Dodine 400 g/L SC
Trade name	: SYLLIT 400 SC
Product code	: UPL_L7423

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

1.2.1. Relevant identified uses

Main use category	: Professional use
Industrial/Professional use spec	: Plant protection products
Use of the substance/mixture	: Fungicide

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer

UPL South Africa (Pty) Ltd.
Sunbury Office Park (off Douglas Saunders
Drive) La Lucia Ridge, 7
P.O. Box 1726, Mount Edgecombe, 4300
4019 Durban – South Africa
South Africa
T +27 31 514 5600
www.upl-ltd.com/za

1.4. Emergency telephone number

Emergency number(s)	: Griffon Poison Information Centre: 082 446 8946, Poisons Information Helpline: 0861 555 777, In case of Spillage: Spill Tech: 086 100 0366 / 083 253 6618

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to UN GHS Purple Book (Rev. 9, 2021)

Acute toxicity (Oral, Dermal), Category 5	H303+H313
Acute toxicity (Inhalation (Dust/Mist), Category 3	H331
Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 1	H318
Hazardous to the aquatic environment – Acute Hazard, Category 1	H400
Hazardous to the aquatic environment – Chronic Hazard, Category 1	H410

Full text of H- statements: see section 16

Adverse physicochemical, human health and environmental effects

Toxic if inhaled, Causes skin irritation. Causes serious eye damage. Very toxic to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to UN GHS Classificiation (Purple Book, Rev.9, 2021)1272/2

Hazard pictograms

GHS05

GHS06

GHS09

Signal word	: Danger
Contains	: dodine(ISO); dodecylguanidinium acetate
Hazard statements	: H303 - May be harmful if swallowed. H313 - May be harmful in contact with skin. H331- Toxic if inhaled. H315 - Causes skin irritation. H318 - Causes serious eye damage. H400 - Very toxic to aquatic life H410 - Very toxic to aquatic life with long lasting effects.
Precautionary statements	: P261 – Avoid breathing dust/fume/gas/mist/vapour/spray. P280 - Wear eye protection, protective gloves. P302+P352 - IF ON SKIN: Wash with plenty of soap and water. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 - Immediately call a POISON CENTER or doctor/physician. P501 - Dispose of contents/container to Collection point.
EUH-statements	: EUH401 - To avoid risks to human health and the environment, comply with the instructions for use. EUH208 - Contains 1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one. May produce an allergic reaction.
Extra phrases	: SP 1 - Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads). SPe 03 - To protect aquatic organisms/non-target plants/non-target arthropods/insects respect an unsprayed buffer zone of (distance to be specified) to non-agricultural land/surface water bodies.

2.3. Other hazards

Other hazards which do not result in classification : This mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Component	
1,4-dioxane (123-91-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

Component	
1,4-dioxane(123-91-1)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to UN GHS Purple Book, Rev.9, 2021 .

dodine(ISO); dodecylguanidinium acetate	CAS-No.: 2439-10-3 EC-No.: 219-459-5 EC Index-No.: 607-076-00-X	41.5	Acute Tox. 4 (Oral), H302 (ATE=851 mg/kg bodyweight) Acute Tox. 2 (Inhalation:dust,mist), H330 (ATE=0.05 mg/l/4h) Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100) EUH401

Name	Product identifier	%	Classification according to UN GHS Purple Book, Rev.9, 2021 .
Ethoxylated oleyl amine, dodecylbenzenesulphonic salt	CAS-No.: 66467-20-7	1 – 10	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3one	CAS-No.: 2634-33-5 EC-No.: 220-120-9 EC Index-No.: 613-088-00-6	0.1 – 0.25	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400
1,4-dioxane substance listed as REACH Candidate substance with a Community workplace exposure limit	CAS-No.: 123-91-1 EC-No.: 204-661-8 EC Index-No.: 603-024-00-5	< 0.1	Flam. Liq. 2, H225 Carc. 1B, H350 STOT SE 3, H335 Eye Irrit. 2, H319 EUH019, EUH066

Specific concentration limits:		
Name	**Product identifier**	**Specific concentration limits**
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3one	CAS-No.: 2634-33-5 EC-No.: 220-120-9 EC Index-No.: 613-088-00-6	(0.05 ≤C ≤ 100) Skin Sens. 1, H317

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

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

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. Call a physician immediately.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after skin contact : Irritation.

Symptoms/effects after eye contact : Serious damage to eyes.

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.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

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

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. 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 : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. 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.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

1,4-dioxane (123-91-1)

EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	1,4 Dioxane
IOEL TWA	73 mg/m³
Regulatory reference	COMMISSION DIRECTIVE 2009/161/EU

8.1.2. Recommended monitoring procedures No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:
Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection: Safety glasses

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection:
Protective gloves **8.2.2.3. Respiratory protection**

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

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls: Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	white.
Appearance	:	Viscous. Opaque.
Odour	:	Slight.
Odour threshold	:	Not applicable Not applicable
Melting point	:	Not applicable
Freezing point	:	Not applicable
Boiling point	:	Not applicable
Flammability	:	Not applicable
Explosive properties	:	Product is not explosive.
Oxidising properties	:	Non oxidizing material according to EC criteria.
Explosive limits	:	Not applicable

Lower explosive limit (LEL)	:	Not available
Upper explosive limit (UEL)	:	Not available
Flash point	:	Not relevant
Auto-ignition temperature	:	430 °C
Decomposition temperature	:	Not applicable
pH	:	≈ 6.1
Viscosity, kinematic	:	788.177 mm²/s

Viscosity, dynamic	: 800 cP (20°C)
Solubility	: Not applicable.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not applicable
Vapour pressure at 50 °C	: Not available
Density	: 1.015 g/cm³ (20°C)
Relative density	: Not available
Relative vapour density at 20 °C	: Not available
Particle size	: Not applicable
Particle size distribution	: Not applicable
Particle shape	: Not applicable
Particle aspect ratio	: Not applicable
Particle aggregation state	: Not applicable
Particle agglomeration state	: Not applicable
Particle specific surface area	: Not applicable
Particle dustiness	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

Relative evaporation rate (butylacetate=1)	: Not applicable
Relative evaporation rate (ether=1)	: Not applicable
Bulk density	: Not applicable

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 hazard classes as defined in UN GHS Purple Book (Rev. 9, 2021)

Acute toxicity (oral) : May be harmful if swallowed.

Acute toxicity (dermal) : May be harmful in contact with skin.
Acute toxicity (inhalation) : Toxic if inhaled.

SYLLIT 400 SC	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rat	> 2000 mg/kg

SYLLIT 400 SC	
LC50 Inhalation - Rat (Dust/Mist)	0.65 mg/l/4h

1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5)	
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

dodine(ISO); dodecylguanidinium acetate (2439-10-3)	
LD50 oral rat	851 mg/kg
LD50 dermal rat	> 5000 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	> 0.45 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.
pH: ≈ 6.1

Serious eye damage/irritation : Causes serious eye damage.
pH: ≈ 6.1

Respiratory or skin sensitisation : Not classified.

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5)	
NOAEL (animal/female, F1)	56.6 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: EPA OPPTS 870.3800 (Reproduction and Fertility Effects)

STOT-single exposure : Not classified

1,4-dioxane (123-91-1)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

SYLLIT 400 SC	
Viscosity, kinematic	788.177 mm²/s

No additional information available

11.2. Information on other hazards

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Very toxic to aquatic life.

Hazardous to the aquatic environment, long–term : Very toxic to aquatic life with long lasting effects. (chronic)

SYLLIT 400 SC	
LC50 - Fish	3.4 mg/l (96h Cyprinus carpio)
EC50 - Crustacea	0.123 mg/l (48h Daphnia magna)
ErC50 algae	0.022 mg/l (72h Selenastrum capricornutum)

1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5)	
LC50 - Fish	≈ 16.7 mg/l Test organisms (species): Cyprinodon variegatus
LC50 fish	2.15 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)

1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5)	
EC50 - Crustacea	2.94 mg/l Test organisms (species): Daphnia magna
EC50 Daphnia	2.9 mg/l Test organisms (species): Daphnia magna

dodine(ISO); dodecylguanidinium acetate (2439-10-3)	
LC50 - Fish	0.312 mg/l 96 Hours flow-through test Cyprinus carpio (Common carp)
EC50 - Crustacea	0.018 mg/l 48 Hours flow-through test Daphnia magna (Water flea)
ErC50 algae	0.0055 mg/l 72 Hours static test Raphidocelis subcapitata
NOEC chronic fish	0.2 mg/l 30 days flow-through test Pimephales promelas
NOEC chronic crustacea	0.0044 mg/l 21 days flow-through test Daphnia magna (Water flea)
NOEC chronic algae	0.00015 mg/l 72 Hours static test Raphidocelis subcapitata

12.2. Persistence and degradability

dodine(ISO); dodecylguanidinium acetate (2439-10-3)	
Persistence and degradability	Not readily biodegradable.

12.3. Bioaccumulative potential

dodine(ISO); dodecylguanidinium acetate (2439-10-3)	
Partition coefficient n-octanol/water (Log Pow)	1.25 – 1.33 (20°C pH=4.9 - 9.1)

12.4. Mobility in soil

SYLLIT 400 SC	
Surface tension	27 mN/m (20°C)

dodine(ISO); dodecylguanidinium acetate (2439-10-3)	
Surface tension	50.6 mN/m (20°C)

12.5. Results of PBT and vPvB assessment

Component	
1,4-dioxane (123-91-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

European List of Waste (LoW) code : 02 01 08* - agrochemical waste containing dangerous substances

SECTION 14: Transport information

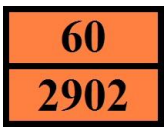
In accordance with ADR / IMDG / IATA

ADR	IMDG	IATA
14.1. UN number or ID number		
UN 2902	UN 2902	UN 2902
14.2. UN proper shipping name		
PESTICIDE, LIQUID, TOXIC, N.O.S. (Dodine)	PESTICIDE, LIQUID, TOXIC, N.O.S. (Dodine)	Pesticide, liquid, toxic, n.o.s. (Dodine)
Transport document description		
UN 2902 PESTICIDE, LIQUID, TOXIC, N.O.S. (Dodine), 6.1, III, (E), ENVIRONMENTALLY HAZARDOUS	UN 2902 PESTICIDE, LIQUID, TOXIC, N.O.S. (Dodine), 6.1, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 2902 Pesticide, liquid, toxic, n.o.s. (Dodine), 6.1, III, ENVIRONMENTALLY HAZARDOUS
14.3. Transport hazard class(es)		
6.1	6.1	6.1
		
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

Overland transport :

Hazard identification number (Kemler No.) : 60

Orange plates : 

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

Regulatory Information:

Relevant regulatory information regarding authorization, Safety Data Sheets, Occupational Exposure Limits, Hazardous Substances, Dangerous Goods Transport and Waste South Africa: Occupational Health and Safety Act 1993. Regulations for Hazardous Chemical Agents - 2021. Fertilizer, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act 36 of 1947). Hazardous Substances Act, 1973 (Act No.15 of 1973). Regulations for Hazardous Chemical Agents – 2021. SANS11014:2010. Safety Data Sheet for Chemical Products – Content and Order of Sections. SANS10206: 2020. The Handling, Storage and Disposal of Pesticides. 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.

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes

Section	Changed item	Change	Comments
1.1	Trade name	Modified	
2.2	Precautionary statements (CLP)	Added	

Full text of H- statements:

Acute Tox. 2 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 2
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Carc. 1B	Carcinogenicity, Category 1B
EUH019	May form explosive peroxides.
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH208	Contains 1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one. May produce an allergic reaction.
EUH401	To avoid risks to human health and the environment, comply with the instructions for use.
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
H225	Highly flammable liquid and vapour.

H302	Harmful if swallowed.
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.
H335	May cause respiratory irritation.
H350	May cause cancer.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

Classification and procedure used to derive the classification for the mixture according to the UN GHS Purple Book (Rev.9, 2021):

Skin Irrit. 2	H315	Calculation method
Eye Dam. 1	H318	Calculation method
Acute Tox. 3 (Inhalation)	H331	Calculation method
Acute Tox. 5 (Oral)	H303	Calculation method
Acute Tox. 5 (Dermal)	H313	Calculation method
Aquatic Acute 1	H400	Calculation method
Aquatic Chronic 1	H410	Calculation method

Safety Data Sheet (SDS), UN GHS

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.