



SAFETY DATA SHEET

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH) Annex II

SORATEL

Revision date 08-Feb-2021

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

1.1. Product identifier

SORATEL

Other means of identification

Synonyms

Prothioconazole 250 EC

Pure substance/mixture

Mixture

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

Recommended use

Fungicide; Professional use

Uses advised against

No information available

1.3. Details of the supplier of the safety data sheet

Supplier

ADAMA Agricultural Solutions UK Ltd
Third Floor East
1410 Arlington Business Park
Theale
READING
RG7 4SA
Tel: 01635 860555
Fax: 01635 861555

For further information, please contact

E-mail address

ukenquiries@adama.com

1.4. Emergency telephone number

Emergency Telephone

National Chemical Emergency Centre (UK):
Tel: 01865 407333 (24 hours)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Acute toxicity - Oral	Category 4 - (H302)
Skin corrosion/irritation	Category 1 - (H314)
Serious eye damage/eye irritation	Category 1 - (H318)

Skin sensitization	Category 1 - (H317)
Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 2 - (H411)

2.2. Label elements

Contains: 1-Octyl-2-pyrrolidinone, Prothioconazole, Acetophenone



Signal word

Warning

Hazard statements

H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage
H317 - May cause an allergic skin reaction
H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)

P102 - Keep out of reach of children
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P270 - Do not eat, drink or smoke when using this product
P272 - Contaminated work clothing should not be allowed out of the workplace
P280 - Wear protective gloves and eye/face protection
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P363 - Wash contaminated clothing before reuse
P391 - Collect spillage
P501 - Dispose of contents/ container to an approved waste disposal plant

EU Specific Hazard Statements

EUH401 - To avoid risks to human health and the environment, comply with the instructions for use

Additional phrases for PPP

SP1 - 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).

Additional information

This product requires tactile warnings if supplied to the general public.

2.3. Other hazards

PBT & vPvB

The product does not contain any substance(s) classified as PBT or vPvB.

None known.

Persistent Organic Pollutants

Not applicable.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	CAS No	EC No	Index No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	REACH Registration Number
Prothioconazole	178928-70-6	605-841-2		20-24	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)		M = 10= 1	No data available
Acetophenone	98-86-2	202-708-7	606-042-00-1	31-35	Acute Tox. 4 (H302) Eye Irrit. 2 (H319)			01-21195331 69-37-0002
Poly(oxy-1,2-ethanediyl), .alpha.-phenyl-omega-hydroxy-, styrenated	104376-75-2	-		14-18	Aquatic Chronic 3 (H412)			No data available
1-Octyl-2-pyrrolidone	2687-94-7	403-700-8	613-098-00-0	12-16	Skin Corr. 1B (H314) Eye Dam. 1 (H318) Aquatic Chronic 2 (H411)			01-00000153 35-74-0000

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

SECTION 4: First aid measures**4.1. Description of first aid measures**

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

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

Symptoms Itching. Rashes. Hives. May cause redness and tearing of the eyes. Burning sensation.

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

Note to physicians May cause sensitization in susceptible persons. Treat symptomatically.

SECTION 5: Firefighting measures

5.1. 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.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical Product is or contains a sensitizer. May cause sensitization by skin contact.

5.3. Advice for firefighters

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Other information Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

6.3. 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 Take up mechanically, placing in appropriate containers for disposal.

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

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Store locked up.

7.3. Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Derived No Effect Level (DNEL) No information available.
Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering controls

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment Eye/face protection

Wear safety glasses with side shields (or goggles).

Hand protection

Wear suitable gloves.

Skin and body protection

Wear suitable protective clothing.

Respiratory protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

Environmental exposure controls Local authorities should be advised if significant spillages cannot be contained.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<u>Property</u>	<u>Values</u>	<u>Method</u>	<u>Remarks</u>
Appearance			
Physical state	: Liquid		
Color	: Yellowish		
Odor	: No information available		
Odor threshold	: No data available		

pH	: 6.5 - 7.5		
Melting point / freezing point °C	: ----		Not applicable
Boiling point / boiling range °C	: ----		No data available
Flash point °C	: 94.4	EEC A.9	
Evaporation rate	: No data available		
Flammability (solid, gas)	: Not applicable		
Upper/lower flammability or explosive limits	: No data available		
Vapor pressure kPa	: ----		Not applicable
Vapor density	: No data available		
Relative density	: 1.03 - 1.13	EEC A.3	
Solubility(ies) mg/l	: No data available		
Partition coefficient Log Pow	:		See Section 12 for additional Ecological Information
Autoignition temperature °C	: ----		No data available
Decomposition temperature °C	: ----		No data available
Kinematic viscosity mm ² /s 40 °C	: 24.1	OECD 114	
Surface tension	: No data available		
Particle Size	: Not applicable		

9.2. Other information

Bulk density g/ml : Not applicable

9.2.1. Information with regard to physical hazard classes

Explosive properties : Not an explosive
 Oxidizing properties : Not oxidizing

9.2.2. Other safety characteristics

No information available

SECTION 10: Stability and reactivity**10.1. Reactivity**

Reactivity : No information available.

10.2. Chemical stability

Stability : Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact : None.

Sensitivity to static discharge : None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions : None under normal processing.

10.4. Conditions to avoid

Conditions to avoid : None known based on information supplied.

10.5. Incompatible materials

Incompatible materials : None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products : Thermal decomposition can lead to release of irritating and toxic gases and vapors.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
Oral LD50 mg/kg	: 1030	Rat	OECD 425	female
Dermal LD50 mg/kg	: > 2000	Rat	OECD 402	female
Inhalation LC50 mg/l	: 5.02	Rat	OECD 403	
Skin corrosion/irritation	: Non-irritating to the skin	Rabbit	OECD 404	
Serious eye damage/eye irritation	: Irritating to eyes	Rabbit	OECD 405	
Sensitization	: Skin sensitizer	Mouse	OECD 429	

Chronic toxicity

Germ cell mutagenicity

Chemical name

Prothioconazole : Not classified

Carcinogenicity

Chemical name

Prothioconazole : Not Carcinogenic

Reproductive toxicity

Chemical name

Prothioconazole : Not toxic for the reproductive system

STOT - Single Exposure

Chemical name

Prothioconazole : Not classified

STOT - Repeated Exposure

Chemical name

Prothioconazole : Not classified

Aspiration hazard

Chemical name

Prothioconazole : Not classified

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties No information available.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

<u>Acute toxicity</u>	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
Fish 96-hour LC50 mg/l	: 2.49	Rainbow trout	OECD 203	
Crustacea 48-hour EC50 mg/l	: 8.53	Daphnia magna	OECD 202	
Algae 72-hour EC50 mg/l	: 3.27	P. subcapitata	OECD 201	
Other plants EC50 mg/l	: 0.152	Lemna gibba	OECD 221	

<u>Chronic aquatic toxicity</u>	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
Fish NOEC mg/l	: No data available			
Crustacea NOEC mg/l	: No data available			
Algae NOEC mg/l	: No data available			
Other plants NOEC mg/l	: No data available			

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

Prothioconazole : > 2000 Bobwhite quail

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

Prothioconazole : > 71 Apis mellifera OECD 213

12.2. Persistence and degradability**Abiotic Degradation****Water DT50 days****Chemical name**

Prothioconazole : 0.8 - 1.0

Soil DT50 days**Chemical name**

Prothioconazole : 2.8

Biodegradation**12.3. Bioaccumulative potential****Partition Coefficient
(n-octanol/water) Log Pow****Chemical name**

Prothioconazole : 3.04

Bioconcentration factor (BCF)**Chemical name**

Prothioconazole : 19.7

12.4. Mobility in soil**Adsorption/Desorption****Chemical name**

Prothioconazole : ---- No data available

12.5. Results of PBT and vPvB assessment

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

12.6. Endocrine disrupting properties**Endocrine disrupting properties** No information available.**12.7. Other adverse effects**

No information available.

SECTION 13: Disposal considerations**13.1. Waste treatment 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.

Other information

Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information**ADR**

14.1 UN number	UN1760
14.2 UN proper shipping name	CORROSIVE LIQUID, N.O.S.(1-Octyl-2-pyrrolidinone)
14.3 Transport hazard class(es)	8
Labels	8
14.4 Packing group	III
Description	UN1760, CORROSIVE LIQUID, N.O.S. (1-Octyl-2-pyrrolidinone), 8, III, (E), Environmentally Hazardous
14.5 Environmental hazard	Yes
14.6 Special Precautions for Users	
Special Provisions	274
Classification code	C9
Tunnel restriction code	(E)

RID

14.1 UN number	UN1760
14.2 UN proper shipping name	CORROSIVE LIQUID, N.O.S.(1-Octyl-2-pyrrolidinone)
14.3 Transport hazard class(es)	8
Labels	8
14.4 Packing group	III
Description	UN1760, CORROSIVE LIQUID, N.O.S. (1-Octyl-2-pyrrolidinone), 8, III, Environmentally Hazardous
14.5 Environmental hazard	Yes
14.6 Special Precautions for Users	
Special Provisions	274
Classification code	C9

IMDG

14.1 UN/ID No *	UN1760
14.2 UN proper shipping name	CORROSIVE LIQUID, N.O.S. (1-Octyl-2-pyrrolidinone), Marine pollutant
14.3 Hazard Class	8
14.4 Packing group	III
Description	UN1760, CORROSIVE LIQUID, N.O.S. (1-Octyl-2-pyrrolidinone), 8, III, Marine pollutant
14.5 Marine pollutant	P
Environmental hazard	Yes
14.6 Special Precautions for Users	
Special Provisions	274, 223
EmS-No	F-A, S-B
IMDG Stowage and segregation	Category A SW2 No information available
14.7 Maritime transport in bulk according to IMO instruments	No information available

IATA

14.1 UN number	UN1760
14.2 UN proper shipping name	CORROSIVE LIQUID, N.O.S. (1-Octyl-2-pyrrolidinone)
14.3 Transport hazard class(es)	8
14.4 Packing group	III
Description	UN1760, CORROSIVE LIQUID, N.O.S. (1-Octyl-2-pyrrolidinone), 8, III
14.5 Environmental hazard	Yes
14.6 Special Precautions for Users	
Special Provisions	A3, A803
ERG Code	8L



* 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

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

National regulations

Trade name	Registration number	Registration date
Not Applicable	Not Applicable	Not Applicable

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Authorizations and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not applicable

Dangerous substance category per Seveso Directive (2012/18/EU)

E1 - Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1

E2 - Hazardous to the Aquatic Environment in Category Chronic 2

Chemical name	Plant protection products directive (91/414/EEC)
Prothioconazole - 178928-70-6	Plant protection agent

15.2. Chemical safety assessment

Chemical Safety Report

A risk assessment was performed according to directive (EC) No. 91/414 or according to regulation (EC) No. 1107/2009

SECTION 16: Other information

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

Full text of H-Statements referred to under section 3

H302 - Harmful if swallowed
 H314 - Causes severe skin burns and eye damage
 H317 - May cause an allergic skin reaction
 H318 - Causes serious eye damage
 H319 - Causes serious eye 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
 H412 - Harmful to aquatic life with long lasting effects

Legend

SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Revision date 08-Feb-2021

Reason for revision 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

Classification according to Regulation (EC) No. 1272/2008 [CLP]**Classification of the mixture**

H302 - Harmful if swallowed
 H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

H317 - May cause an allergic skin reaction

H400 - Very toxic to aquatic life

H411 - Toxic to aquatic life with long lasting effects

Classification procedure

Classification based on test data

Classification based on the decision of the plant protection authority in UK.

Classification based on the decision of the plant protection authority in UK.

Classification based on test data

Classification based on test data

Classification based on Calculation method

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**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