



SAFETY DATA SHEET

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

Chronos 450 SC

Revision date 20-Dec-2022

Version 1 Supersedes Date: 20-Dec-2022

Product Code(s)

FNG57004-27

Print Date 20-Dec-2022

ADM.06000.F.1.A 9211437

1. Identification

Product identifier

Chronos 450 SC

Other means of identification

Synonyms	Prochloraz-Zinc 450 SC
Formulation type	SC
Registration Number(s)	L7276
Pure substance/mixture	Mixture

Recommended use of the chemical and restrictions on use

Recommended use	Fungicide; 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
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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)
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E-mail address	SDS@ADAMA.COM
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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
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Hazard pictograms**Hazard statements**

H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements

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
 P273 - Avoid release to the environment
 P391 - Collect spillage
 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**

Prochloraz-Zinc 450 SC

Chemical name	CAS No	Weight-%	EC No	INTERNATIONAL GHS CLASSIFICATION	M-Factor
Prochloraz-Zinc complex	137001-93-5	36-40		Eye Irrit. 2 (H319) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	M=1M=10
Poly(oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-[tris(1-phenylethyl)phenoxy -, ammonium salt	119432-41-6	2-4		Aquatic Chronic 3 (H412)	

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 Chronos 450 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**General advice**

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.

Inhalation	Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Consult a physician if necessary.
Eye contact	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.
Ingestion	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 This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

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).

Eye/face protection Tight sealing safety goggles.

Skin and body protection 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.

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

Environmental exposure controls 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>
Appearance			
Physical state	: Liquid		
Color	: white		
Odor	: None		
Odor threshold	: No data available		
pH	: 6 - 7	CIPAC MT 75.2	22°C
Melting point / freezing point °C	: No data available		
Boiling point / boiling range °C	: No data available		
Flash point °C	: > 150	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	: No data available		
Vapor density	: No data available		
Relative density	: 1.136 - 1.236	OECD 109	
Solubility(ies) mg/l	: No data available		
Partition coefficient Log Pow	:		See Section 12 for additional Ecological Information
Autoignition temperature °C	: > 606	EEC A.15	Not detected
Decomposition temperature °C	: No data available		
Kinematic viscosity mm ² /s 40 °C	: 195 - 11775	CIPAC MT 114	
Explosive properties	: Not an explosive		
Oxidizing properties	: Not oxidizing		
Surface tension	: 41.4	OECD 115	20°C
Particle Size	: Not applicable		
Other information			
Bulk density g/ml	: Not applicable		

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**

	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
Oral LD50 mg/kg	: > 2000	Rat	OECD 401	
Dermal LD50 mg/kg	: > 2000	Rat	OECD 402	
Inhalation LC50 LC50	: No data available			
Skin corrosion/irritation	: Non-irritating to the skin	Rabbit	OECD 404	
Serious eye damage/eye irritation	: May cause slight irritation	Rabbit	OECD 405	
Sensitization	: Not a skin sensitizer	Guinea pig	OECD 406	

Chronic toxicity**Germ cell mutagenicity**

Chemical name
Prochloraz-Zinc complex : Not classified

Carcinogenicity

Chemical name
Prochloraz-Zinc complex : Not Carcinogenic

Reproductive toxicity

Chemical name
Prochloraz-Zinc complex : Not toxic for the reproductive system

STOT - Single Exposure

Chemical name
Prochloraz-Zinc complex : No data available

STOT - Repeated Exposure

Chemical name
Prochloraz-Zinc complex : No data available

Aspiration hazard

Chemical name
Prochloraz-Zinc complex : No data available

12. Ecological information**Ecotoxicity****Aquatic toxicity**

	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
Acute toxicity				
Fish 96-hour LC50 mg/l	: No data available			Not available
Crustacea 48-hour EC50 mg/l	: No data available			Not available
Algae 72-hour EC50 mg/l	: No data available			Not available

Other plants EC50 mg/l	:	No data available		Not available
Chronic aquatic toxicity		<u>Values</u>	<u>Species</u>	<u>Method</u>
Fish NOEC mg/l	:	No data available		<u>Remarks</u>
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				
Prochloraz-Zinc complex	:	1440	Bobwhite quail	EPA-OPPTS 850.2100
Bees Oral LD50 µg/bee				
Chemical name				
Prochloraz-Zinc complex	:	121.53		OECD 213
Abiotic Degradation				
Water DT50 days				
Chemical name				
Prochloraz-Zinc complex	:	11.7		
Soil DT50 days				
Chemical name				
Prochloraz-Zinc complex	:	223.62		201 °C
Biodegradation				
Chemical name				
Prochloraz-Zinc complex	:	Not readily biodegradable		OECD 301 F
Log Pow		<u>Values</u>	<u>Method</u>	<u>Remarks</u>
Chemical name				
Prochloraz-Zinc complex	:	3.5	OECD 117	
Bioconcentration factor (BCF)				
Chemical name				
Prochloraz-Zinc complex	:	150 - 247		
Adsorption/Desorption		<u>Values</u>	<u>Method</u>	<u>Remarks</u>
Chemical name				
Prochloraz-Zinc complex	:	1222 - 8654		KOC

13. Disposal considerations

Disposal methods

Waste from residues/unused products	Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.
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. (Prochloraz-Zinc)

	complex)
14.3 Transport hazard class(es)	9
Labels	9
14.4 Packing group	III
Description	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Prochloraz-Zinc complex), 9, III, (-)
14.5 Environmental hazard	Yes
14.6 Special Precautions for Users	
Special Provisions	274, 335, 601, 375
Classification code	M6
Tunnel restriction code	(-)
 RID	
14.1 UN number	UN3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Prochloraz-Zinc complex)
14.3 Transport hazard class(es)	9
Labels	9
14.4 Packing group	III
Description	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Prochloraz-Zinc complex), 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. (Prochloraz-Zinc complex)
14.3 Hazard Class	9
14.4 Packing group	III
Description	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Prochloraz-Zinc complex), 9, III, Marine pollutant
14.5 Marine pollutant	P
Environmental hazard	Yes
14.6 Special Precautions for Users	
Special Provisions	274, 335, 969
EmS-No	F-A, S-F
IMDG Stowage and segregation	Category A
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code	No information available
 IATA	
14.1 UN number	UN3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Prochloraz-Zinc complex)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
Description	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Prochloraz-Zinc complex), 9, III
14.5 Environmental hazard	Yes
14.6 Special Precautions for Users	
Special Provisions	A97, A158, A197
ERG Code	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

H319 - Causes serious eye irritation
 H400 - Very toxic to aquatic life
 H410 - Very toxic to aquatic life with long lasting effects
 H412 - Harmful to aquatic life with long lasting effects

Date of preparation of the SDS No data available

Revision date 20-Dec-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)**Classification of the mixture**

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

Classification procedure

Classification based on test data

Classification based on Calculation method

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