

SAFETY DATA SHEET
EU Regulation No. 1907/2006,
Annex II

Page : 1

Revised edition no : 5

Date : 6 / 1 / 2014

Supersedes : 2 / 8 / 2011

Chronos 45 EC

R-7168.DPD

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

1.1. Product identifier

Trade name : Chronos 45 EC
Chemical formula : C₁₅H₁₆Cl₃N₃O₂

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

Relevant identified uses : Fungicide
Uses advised against : None under normal conditions.

1.3. Details of the supplier of the safety data sheet

: ADAMA SOUTH AFRICA (PTY) LTD
21 Viben Street
Brackenfell 7560
Email : SDS@ADAMA.COM

1.4. Emergency telephone number

: +27 82 331 6463
+27 21 982 1460

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

Classification 67/548/EEC (DSD) - 1999/45/EC (DPD)

: N; R51-53

2.2. Label elements

Labelling 1999/45/EC (DPD)

Symbol(s)



R Phrase(s)

: N : Dangerous for the environment.
R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S Phrase(s)

: S02 - Keep out of the reach of children.
S13 - Keep away from food, drink and animal feedingstuffs.
S20/21 - When using, do not eat, drink or smoke.
S61 - Avoid release to the environment. Refer to special instructions/Safety data sheets.

2.3. Other hazards

Other hazards : None under normal conditions.

SECTION 3. Composition/information on ingredients

Components : This product is considered to be hazardous and contains hazardous components.

Substance name	Concentration % w/w	CAS No	EC No	Index No	REACH Reg.	Classification
Prochloraz	450 g/l	67747-09-5	266-994-5	613-128-00-2	----	Xn; R22 N; R50-53 ----- Acute Tox. 4 - H302 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410
Butyrolactone	ca 4 %	96-48-0	202-509-5	-----	01-2119471839-21-0000	Xn; R22 R67 Xi; R41 ----- Eye Dam 1 - H318 Acute Tox. 4 - H302 STOT SE 3 - H336
n-Butyl alcohol	ca 4 %	71-36-3	200-751-6	603-004-00-6	01-2119484630-38-0001	R10 Xn; R22 R67 Xi; R37/38-41 ----- Eye Dam 1 - H318

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SECTION 3. Composition/information on ingredients (continued)

Flam. Liq. 3 - H226
Acute Tox. 4 - H302
Skin Irrit. 2 - H315
STOT SE 3 - H335
STOT SE 3 - H336

Text of R/H-Phrases - Sec. 16

SECTION 4. First aid measures

4.1. Description of first aid measures

First aid measures

- Inhalation** : Remove victim to fresh air. Consult a doctor in the event of any complaints.
- Skin contact** : Remove affected clothing and wash all exposed skin area with soap and water, followed by warm water rinse. Consult a doctor in the event of any complaints.
- Eye contact** : Wash off with plenty of water
If pain persists, consult an eye specialist.
- Ingestion** : Do not induce vomiting. Never give anything by mouth to an unconscious person. Wash out mouth with plenty of water. Consult a doctor.

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

- Eye contact** : Redness , tears .

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

- Note to physician** : No specific antidote known.
Treat symptomatically and give supportive therapy.
If ingested perform gastric lavage and administer activated charcoal.

SECTION 5. Fire-fighting measures

5.1. Extinguishing media

- Suitable extinguishing media** : If involved in fire: water spray , water fog , foam .

5.2. Special hazards arising from the substance or mixture

- Specific hazards** : Thermal decomposition may generate : carbon dioxide , carbon monoxide , chlorides , nitrogen oxides .

5.3. Advice for fire-fighters

- Protection against fire** : Wear suitable protective clothing Self-contained breathing apparatus.
- Special procedures** : Fight fires from a protected location . Dike fire control water for later disposal.

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- For emergency responders** : Use appropriate protection (see section 8).

6.2. Environmental precautions

- Environmental precautions** : Dispose of this material and its container at hazardous or special waste collection point In accordance with national and regional regulations . If the product has contaminated surface water, inform the appropriate authorities. Contaminated soil layers have to be dug out.

6.3. Methods and material for containment and cleaning up

- Clean up methods** : In the event of minor spillage: Absorb in sand or other inert material . Use appropriate container to avoid environmental contamination.
In the event of major spillage: Collect and contain as much free liquid as possible. Dike spills using absorbent or impervious materials such as sand or clay for later disposal.

6.4. Reference to other sections

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SECTION 7. Handling and storage

7.1. Precautions for safe handling

Handling : Do not breath fumes . Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities

Storage : Keep locked up . Keep in original containers. Keep container tightly closed and in a well-ventilated place (<50°C).

7.3. Specific end use(s)

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

TLV© : Prochloraz : Not established

8.2. Exposure controls

: Wash hands thoroughly after handling.
Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower . Wash clothing before re-using.

Personal protection

- Respiratory protection : During spraying wear suitable respiratory equipment.
- Hand protection : Wear suitable gloves.
- Skin protection : Wear protective clothing and chemical resistant boots .
- Eye protection : Chemical goggles or safety glasses.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance : Liquid
Colour : Clear amber solution
Odour : characteristic
Odour threshold : Not available
pH : Not available
Melting point / Freezing point : Prochloraz : 48 - 51 (Pure)
Initial boiling point - boiling range : Not available
Flash point : 66 (Closed cup)
Evaporation rate : Not available
Flammability : Not flammable
Explosion limits (lower - upper) : Not available
Vapour pressure : Prochloraz : 4.5X (10)⁻⁶ Pa at a temperature of 25°C (Pure)
Vapour density : Not available
Relative density : (H₂O = 1) 1.13 - 1.14
Solubility : Emulsifiable Prochloraz : 25 ppm at a temperature of 20°C (Pure)
Partition coefficient : n-octanol / water : Prochloraz : log Pow = 4.06
Auto-ignition temperature : Not available
Decomposition temperature : Not available
Viscosity : Not available
Explosive Properties : Not explosive
Oxidising properties : Not available

9.2. Other information

: Not available

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SECTION 9. Physical and chemical properties (continued)

Molecular weight : Prochloraz : 376.7

SECTION 10. Stability and reactivity

10.1. Reactivity

10.2. Chemical stability

Chemical stability : Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions : Hazardous polymerization will not occur .

10.4. Conditions to avoid

Conditions to avoid : Protect from sunlight , open flame , sources of heat . Decomposes upon heating.

10.5. Incompatible materials

Materials to avoid : Avoid contact with : strong acids , strong bases .

10.6. Hazardous decomposition products

Hazardous decomposition products : Thermal decomposition may generate : carbon dioxide , carbon monoxide , nitrogen oxides , chlorides .

SECTION 11. Toxicological information

11.1. Information on toxicological effects

- Acute toxicity
 - Oral, Rat LD50 (mg/kg) : > 2000
 - Dermal, Rat LD50 [mg/kg] : > 2000
 - Inhalation, Rat LC50 [mg/l/4h] : > 4.99
- Skin corrosion/irritation : Mildly irritating to skin
- Serious eye damage/irritation : Mildly irritating to eyes
- Respiratory or skin sensitisation : Guinea pig maximization test: Non sensitizer
- Germ cell mutagenicity : Prochloraz : Not mutagenic
- Carcinogenicity : Prochloraz : Not carcinogenic (rat)
- Reproductive toxicity : Prochloraz : Not teratogenic in animal experiments
- STOT-single exposure : Not available
- STOT-repeated exposure : Not available
- Aspiration hazard : Not available

SECTION 12. Ecological information

12.1. Toxicity

Acute toxicity

- 96 H-LC50 - Rainbow trout [mg/l] : 3.05
- 48 H-EC50 - Daphnia magna [mg/l] : 4.00
- 72 H-EbC50 - Algae [mg/l] : 1.42
- 72 H-ErC50 - Algae [mg/l] : 4.34
- Bees LD50 [µg] : Prochloraz Technical: Not toxic to bees
- LD50 Birds [mg/kg] : Prochloraz Technical: > 2000

Long-term exposure

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SECTION 12. Ecological information (continued)

12.2. Persistence - degradability

: Rapidly degrades when exposed to sunlight and UV light .

12.3. Bioaccumulative potential

: Not available

12.4. Mobility in soil

: Product does not leach to ground water.

12.5. Results of PBT and vPvB assessment

: Not available

12.6. Other adverse effects

: None known.

SECTION 13. Disposal considerations

13.1. Waste treatment methods

General

: Dispose in a safe manner in accordance with local/national regulations.

SECTION 14. Transport information

14.1. UN number

UN N°

: 3082

Hazard Label(s)



14.2. UN proper shipping name

- Land transport - ADR/RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (450 g/l PROCHLORAZ)
- Sea transport - IMO-IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (450 g/l PROCHLORAZ)
- Air transport - ICAO/IATA : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (450 g/l PROCHLORAZ)

14.3. Transport hazard class(es)

- Land transport - ADR/RID : 9
- Sea transport - IMO-IMDG : 9
- Air transport - ICAO/IATA : 9

14.4. Packing group

- Land transport - ADR/RID : III
- Sea transport - IMO-IMDG : III
- Air transport - ICAO/IATA : III

14.5. Environmental hazards

- IMDG-Marine pollution : Marine pollutant - Polluant marin

14.6. Special precautions for user

: See transport documents.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

: Not applicable.

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SECTION 15. Regulatory information

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

: Ensure all national/local regulations are observed.

15.2. Chemical Safety Assessment

: Not applicable

SECTION 16. Other information

List of relevant R phrases (heading 3) : R10 - Flammable.
R22 - Harmful if swallowed.
R37/38 - Irritating to respiratory system and skin.
R41 - Risk of serious damage to eyes.
R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R67 - Vapours may cause drowsiness and dizziness.

List of relevant H phrases (Section 3) : H226 - Flammable liquid and vapour.
H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H318 - Causes serious eye damage.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H400 - Very toxic to aquatic life.
H410 - Very toxic to aquatic life with long lasting effects.

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Recommended uses and restrictions : None.

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