

# CLAYTON PLANT PROTECTION

**CLAYTON ZORRO PRO** Safety Data Sheet according to Regulation (EC) No. 1907/2006 and Regulation (EU) No. 453/2010. Version 1/dsc 13/05/2015. This version replaces all previous versions.

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier Trade name CLAYTON ZORRO PRO

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

1.3 Details of the supplier of the safety data sheet :

Clayton Plant Protection (UK) Ltd., Bracetown Business Park, Clonee, Dublin15. Ireland.

Tel: (00 353) 1 8210127 www.cpp.ag Email: info@cpp.ag

## SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture Classification in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Skin irritation: Category 2 H315 Causes skin irritation.

Eye irritation: Category 2 H319 Causes serious eye irritation.

Reproductive toxicity: Category 2 H361d Suspected of damaging the unborn child.

Acute aquatic toxicity: Category 1 H400 Very toxic to aquatic life.

Chronic aquatic toxicity: Category 1 H410 Very toxic to aquatic life with long lasting effects.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Xi Irritant, R38 N Dangerous for the environment, R51/53 Repr.Cat.3, R63

2.2 Label elements Labelling in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Hazard label for supply/use required.

Hazardous components which must be listed on the label: • Prothioconazole • Tebuconazole

Signal word: Warning



Hazard statements

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H361d Suspected of damaging the unborn child.

H410 Very toxic to aquatic life with long lasting effects.

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

EUH208 Contains 2-[2-(1-chlorocyclopropyl)-2-hydroxy-3-phenylpropyl]-2, 4-dihydro-3H-1,2,4-triazole-3-thione.

May produce an allergic reaction.

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P308 + P311 IF exposed or concerned: Call a POISON CENTRE or doctor/ physician.

P501 Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

2.3 Other hazards No other hazards known.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical nature : Emulsifiable concentrate (EC) Prothioconazole/Tebuconazole 125:125 /g/l

Hazardous components R-phrases according to EC directive 67/548/EEC

Hazard statements according to Regulation (EC) No. 1907/2006

Name	CAS-No. / EC-No.	Classification EC Directive 67/548/EEC	Classification Regulation (EC) No 1272/2008	Concentration [%]
Prothioconazole	178928-70-6 605-841-2	N; R51/53	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	12.76
Tebuconazole	107534-96-3 403-640-2	Repr.Cat.3 R63 Xn; R22 N; R51/53	Repr. 2, H361d Acute Tox. 4, H302 Aquatic Chronic 2, H411	12.76
N,N-Dimethyl decanamide	14433-76-2 238-405-1	Xi; R36/38	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 3,	H412 > 10.00

Further information : Prothioconazole178928-70-6. M-Factor: 10 (acute)

For the full text of the R-phrases/ Hazard statements mentioned in this Section, see Section 16.

## SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.

Inhalation Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.

Skin contact Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.

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Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Do NOT induce vomiting. Call a physician or poison control centre immediately.

4.2 Most important symptoms and effects, both acute and delayed Symptoms No symptoms known or expected.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment Treat symptomatically. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. There is no specific antidote.

### **SECTION 5: FIREFIGHTING MEASURES**

5.1 Extinguishing media : Suitable Use - water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable - High volume water jet.

5.2 Special hazards arising from the substance or mixture In the event of fire the following may be released:, Hydrogen chloride (HCl), Hydrogen cyanide (hydrocyanic acid), Carbon monoxide (CO), Sulphur oxides, Nitrogen oxides (NOx)

5.3 Advice for firefighters - Special protective equipment for fire-fighters. In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.

Further information Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses.

### **SECTION 6: ACCIDENTAL RELEASE MEASURES**

6.1 Personal precautions, protective equipment and emergency procedures: Precautions ; Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.

6.2 Environmental precautions : Do not allow to get into surface water, drains and ground water. If spillage enters drains leading to sewage works inform local water company immediately. If spillage enters rivers or watercourses, inform the Environment Agency (emergency telephone number 0800 807060).

6.3 Methods and materials for containment and cleaning up : Methods for cleaning up - Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Clean contaminated floors and objects thoroughly, observing environmental regulations. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections Information regarding safe handling, see section 7.  
Information regarding personal protective equipment, see section 8.  
Information regarding waste disposal, see section 13.

### **SECTION 7: HANDLING AND STORAGE**

7.1 Precautions for safe handling : Advice on safe handling - No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice. Ensure adequate ventilation.

Hygiene measures Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands before breaks and immediately after handling the product. Remove soiled clothing immediately and clean thoroughly before using again. Garments that cannot be cleaned must be destroyed (burnt).

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers - Store in original container. Keep containers tightly closed in a dry, cool and well ventilated place. Store in a place accessible by authorized persons only.

Advice on common storage Keep away from food, drink and animal feeding stuffs. Suitable materials HDPE (high density polyethylene)

7.3 Specific end uses - Refer to the label and/or leaflet.

### **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

8.1 Control parameters

Components	CAS-No	.Control parameters	Update	Basis
Prothioconazole	178928-70-6	1.4 mg/m3 (TWA)		OES BCS*
Tebuconazole	107534-96-3	0.2 mg/m3 (TWA)		OES BCS*

\*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

8.2 Exposure controls : Refer to COSHH assessment (Control of Substances Hazardous to Health (Amendment) Regulations 2004). Engineering controls should be used in preference to personal protective equipment wherever practicable. Refer also to COSHH Essentials.

Personal protective equipment : In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection : Wear respirator with a particle filter mask (protection factor 4) conforming to European norm EN149FFP1 or equivalent. Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.

Hand protection : Wear CE Marked (or equivalent) nitrile rubber gloves (minimum thickness of 0,4 mm). Wash when contaminated and dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently

and always before eating, drinking, smoking or using the toilet.

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Eye protection : Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).

Skin and body protection : Wear standard coveralls and Category 3 Type 6 suit. If there is a risk of significant exposure, consider a higher protective type suit. Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently. If chemical protection suit is splashed, sprayed or significantly contaminated, decontaminate as far as possible, then carefully remove and dispose of as advised by manufacturer.

### **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

#### 9.1 Information on basic physical and chemical properties

Form Liquid, clear to slightly turbid

Colour tan

Odour aromatic

pH 5.0 - 7.0 at 1 % (23 °C) (deionized water)

Flash point > 148 °C

Density ca. 0.98 g/cm<sup>3</sup> at 20 °C

Water solubility emulsifiable

Partition coefficient: n-octanol/ water Prothioconazole: log Pow: 3.82 at 20 °C at pH 7 Tebuconazole: log Pow: 3.7

Viscosity, dynamic 49.9 mPa.s at 20 °C

Surface tension ca. 29.1 mN/m at 20 °C 9.2

Other information Further safety related physical-chemical data are not known.

### **SECTION 10: STABILITY AND REACTIVITY**

10.1 Reactivity Thermal decomposition Stable under normal conditions.

10.2 Chemical stability Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions No hazardous reactions when stored and handled according to prescribed instructions.

10.4 Conditions to avoid Extremes of temperature and direct sunlight.

10.5 Incompatible materials Store only in the original container.

10.6 Hazardous decomposition products No decomposition products expected under normal conditions of use.

### **SECTION 11: TOXICOLOGICAL INFORMATION**

#### 11.1 Information on toxicological effects

Acute oral toxicity LD<sub>50</sub> (rat) > 2,500 mg/kg

Acute inhalation toxicity LC<sub>50</sub> (rat) > 5.153 mg/l Exposure time: 4 h

Acute dermal toxicity LD<sub>50</sub> (rat) > 4,000 mg/kg

Skin irritation Irritating to skin. (rabbit)

Eye irritation Irritating to eyes. (rabbit)

Sensitisation Non-sensitizing. (guinea pig) OECD Test Guideline 406

Assessment repeated dose toxicity : Prothioconazole did not cause specific target organ toxicity in experimental animal studies. Tebuconazole did not cause specific target organ toxicity in experimental animal studies.

Assessment Mutagenicity : Prothioconazole was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests. Tebuconazole was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment Carcinogenicity : Prothioconazole was not carcinogenic in lifetime feeding studies in rats and mice.

Tebuconazole caused at high dose levels an increased incidence of tumours in mice in the following organ(s): liver. The mechanism of tumour formation is not considered to be relevant to man.

Assessment toxicity to reproduction : Prothioconazole caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Prothioconazole is related to parental toxicity. Tebuconazole caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Tebuconazole is related to parental toxicity.

Assessment Carcinogenicity : Prothioconazole was not carcinogenic in lifetime feeding studies in rats and mice.

Tebuconazole caused at high dose levels an increased incidence of tumours in mice in the following organ(s): liver. The mechanism of tumour formation is not considered to be relevant to man.

Assessment toxicity to reproduction Prothioconazole caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Prothioconazole is related to parental toxicity. Tebuconazole caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Tebuconazole is related to parental toxicity.

Assessment developmental toxicity : Prothioconazole caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Prothioconazole are related to maternal toxicity. Tebuconazole caused developmental toxicity only at dose levels toxic to the dams. Tebuconazole caused an increased incidence of post implantation losses, an increased incidence of non-specific malformations.

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### SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity	
Toxicity to fish	LC50 (Rainbow trout ( <i>Oncorhynchus mykiss</i> )) 3.94 mg/l Exposure time: 96 h
Toxicity to aquatic invertebrates	EC50 (Water flea ( <i>Daphnia magna</i> )) 8.8 mg/l Exposure time: 48 h
Toxicity to aquatic plants	IC50 ( <i>Pseudokirchneriella subcapitata</i> ) 9.5 mg/l Growth rate; Exposure time: 72 h EC50 ( <i>Skeletonema costatum</i> ) 0.046 mg/l Growth rate; Exposure time: 72 h The value mentioned relates to the active ingredient prothioconazole
12.2 Persistence and degradability	
Biodegradability	Prothioconazole: not rapidly biodegradable Tebuconazole: not rapidly biodegradable
Koc	Prothioconazole: Koc: 1765 Tebuconazole: Koc: 769
12.3 Bioaccumulative potential	
Bioaccumulation	Prothioconazole: Bioconcentration factor (BCF) 19 Does not bioaccumulate. Tebuconazole: Bioconcentration factor (BCF) 35 - 59 Does not bioaccumulate.
12.4 Mobility in soil	
Mobility in soil	Prothioconazole: Slightly mobile in soils Tebuconazole: Slightly mobile in soils
12.5 Results of PBT and vPvB assessment	
PBT and vPvB assessment	Prothioconazole: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB). Tebuconazole: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

12.6 Other adverse effects Additional ecological information No other effects to be mentioned.

### SECTION 13: DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods

Product : In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant. Advice may be obtained from the local waste regulation authority (part of the Environment Agency in the UK).

Contaminated packaging : Small containers (< 10 l or < 10 kg) should be rinsed thoroughly using an integrated pressure rinsing device, or, by manually rinsing three times. Add washings to sprayer at time of filling. Dispose of empty and cleaned packaging safely. Large containers (> 25 l or > 25 kg) should not be rinsed or re-used for any other purpose. Return large containers to supplier. Follow advice on product label and/or leaflet.

Waste key for the unused product : 020108 agrochemical waste containing dangerous substances

### SECTION 14: TRANSPORT INFORMATION

ADR/RID/ADN	IMDG	IATA	UK 'Carriage' Regulations
14.1 UN number 3082	14.1 UN number 3082	14.1 UN number 3082	14.1 UN number 3082
14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUCONAZOLE, PROTHIOCONAZOLE SOLUTION)	14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUCONAZOLE, PROTHIOCONAZOLE SOLUTION )	14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUCONAZOLE, PROTHIOCONAZOLE SOLUTION )	14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUCONAZOLE, PROTHIOCONAZOLE SOLUTION)
14.3 Transport hazard class(es) 9	14.3 Transport hazard class(es) 9	14.3 Transport hazard class(es) 9	14.3 Transport hazard class(es) 9
14.4 Packing group III	14.4 Packing group III	14.4 Packing group III	14.4 Packing group III
14.5 Environm. Hazardous Mark YES Hazard no. 90 Tunnel Code E This classification is in principle not valid for carriage by tank vessel on inland waterways. Please refer to the manufacturer for further information.	14.5 Environm. Hazardous Mark YES	14.5 Environm. Hazardous Mark YES	14.5 Environm. Hazardous Mark YES Emergency action code 3Z

14.6 Special precautions for user See sections 6 to 8 of this Safety Data Sheet.

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14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code. No transport in bulk according to the IBC Code.

### **SECTION 15: REGULATORY INFORMATION**

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture UK and Northern Ireland Regulatory References

This material may be subject to some or all of the following regulations (and any subsequent amendments). Users must ensure that any uses and restrictions as indicated on the label and/or leaflet are followed.

Transport

Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No 1348)

Merchant Shipping (Dangerous Goods and Marine Pollutants) Regulations 1997 (SI 1997 No 2367) Air Navigation

Dangerous Goods Regulations 2002 (SI 2002 No 2786)

Supply and Use

Chemical (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No 716) Chemical (Hazard

Information and Packaging for Supply) (Northern Ireland) Regulations 2009 Control of Substances Hazardous to Health

Regulations 2002 (SI 2002 No 2677) EH40 Occupational Exposure Limits - Table 1 List of approved workplace exposure

limits. Control of Pesticide Regulations 1986 Dangerous Substances and Explosive Atmospheres Regulations 2002

Waste Treatment

Environmental Protection Act 1990, Part II Environmental Protection (Duty of Care) Regulations 1991 The Waste

Management Licensing Regulations 1994 (as amended) Hazardous Waste Regulations 2005 (Replacing Special Waste

Regulations 1996 as amended) Landfill Directive Regulation on Substances That Deplete the Ozone Layer 1994

(EEC/3093/94) Water Resources Act 1991 Anti-Pollution Works Regulations 1999 Further information WHO-

classification: III (Slightly hazardous)

15.2 Chemical Safety Assessment : A chemical safety assessment is not required.

### **SECTION 16: OTHER INFORMATION**

Text of R-phrases mentioned in Section 3 R22 Harmful if swallowed. R36/38 Irritating to eyes and skin. R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R63 Possible risk of harm to the unborn child	Text of the hazard statements mentioned in Section 3 H302 Harmful if swallowed. H315 Causes skin irritation. H319 Causes serious eye irritation. H361d Suspected of damaging the unborn child. 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.
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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.