

CLAYTON PLANT PROTECTION

CLAYTON NAVARO Safety Data Sheet according to Regulation (EC) No. 1907/2006. Version 1/dsc 10/04/2024
This version replaces all previous versions

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

- 1.1. Product identifier CLAYTON NAVARO
1.2. Relevant identified uses of the substance or mixture and uses advised. FUNGICIDE
1.3. Details of the supplier of the safety data sheet : Clayton Plant Protection Ltd.,
Bracetown Business Park, Clonee, Dublin15. Ireland.
Tel: (00 353) 1 8210127 www.cpp.ag Email: info@cpp.ag
1.4 In the event of an emergency, call the NHS 111

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.
Skin sensitisation category 1 H317 may cause an allergic skin reaction
Specific target organ toxicity - single exposure: Category 3 H335 May cause respiratory irritation.
Reproductive toxicity: Category 2 H361d Suspected of damaging the unborn child.
Chronic aquatic toxicity: Category 1 H410 Toxic to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to Regulation (EC) 1272/2008



Hazardous components which must be listed on the label:

Tebuconazole Prothioconazole N,N-Dimethyl decanamide

Signal word(s) WARNING

Hazard statements

- H315 Causes skin irritation.
H317 May cause an allergic skin reaction
H335 May cause respiratory irritation.
H361d Suspected of damaging the unborn child.
H411 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

- P102 Keep out of reach of children
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P308 + P311 IF exposed or concerned: Call a POISON CENTRE/ doctor/ physician.
P391 Collect spillage.
P501 Dispose of contents/container to a licensed hazardous waste disposal contractor or collection site, except for triple rinsed empty 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 : Hazard statements according to Regulation (EC) No. 1272/2008

Name	CAS-No. / EC-No. / REACH Reg. No	Classification REGULATION (EC) No 1272/2008	Conc [%]
Prothioconazole	178928-70-6	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	12.76
Tebuconazole	107534-96-3 403-640-2	Acute Tox. 4, H302 Repr. 2, H361d Aquatic Acute 1, H400 Aquatic Chronic 1, H410	12.76
N,N-Dimethyl decanamide	14433-76-2 238-405-1 01-2119485027-36-XXXX	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Chronic 3, H412	> 20

Further information

Prothioconazole 178928-70-6 M-Factor: 10 (acute), 1 (chronic)

Tebuconazole 107534-96-3 M-Factor: 1 (acute), 10 (chronic)

For the full text of the H-Statements mentioned in this Section, see Section 16.

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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 centre 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.

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 firefighters : In the event of fire and/or explosion do not breathe fumes. Wear self-contained breathing apparatus and protective suit.

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 the product contaminates rivers and lakes or drains inform respective authorities.

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. Collect and transfer the product into a properly labelled and tightly closed container.

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

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. Protect from freezing. Keep away from direct sunlight.

Advice on common storage : Keep away from food, drink and animal feeding-stuffs.

Suitable materials : HDPE (high density polyethylene)

7.3 Specific end use(s) : Refer to the label and/or leaflet.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Prothioconazole	178928-70-6	1.4 mg/m ³ (SK-ABS)		OES
Tebuconazole	107534-96-3	0.2 mg/m ³ (SK-ABS)		OES

*OES "Occupational Exposure Standard"

8.2 Exposure controls

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 : Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Wash gloves when contaminated. 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. Material Nitrile rubber Rate of permeability > 480 min Glove thickness > 0.4 mm Protective index Class 6 Directive Protective gloves complying with EN 374.

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 (1 %) (23 °C) (deionized water)

Flash point >148 °C

Vapour pressure No data available

Density ca. 0.98 g/cm³ (20 °C)

Water solubility emulsifiable

Partition coefficient: noctanol/water Prothioconazole: log Pow: 3.82 (20 °C) (pH 7)

Tebuconazole: log Pow: 3.7

N,N-Dimethyldecanamide: log Pow: 2.46

Viscosity, dynamic 49.9 mPa.s (20 °C)

Surface tension ca. 29.1 mN/m (20 °C)

Oxidizing properties No oxidizing properties

Explosivity Not explosive

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.

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SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity LD50 (Rat) > 2,500 mg/kg

Acute inhalation toxicity LC50 (Rat) > 5.153 mg/l Exposure time: 4 h Irritating to respiratory system.

Acute dermal toxicity LD50 (Rat) > 4,000 mg/kg

Skin corrosion/irritation Irritating to skin. (Rabbit) Serious eye damage/eye irritation Irritating to eyes. (Rabbit)

Respiratory or skin sensitisation Skin: Non-sensitizing. (Guinea pig) OECD Test Guideline 406

Assessment STOT Specific target organ toxicity – single exposure

Prothioconazole: Based on available data, the classification criteria are not met. Tebuconazole: Based on available data, the classification criteria are not met. N,N-Dimethyldecan-1-amide: May cause respiratory irritation.

Assessment STOT Specific target organ toxicity – repeated exposure

Prothioconazole did not cause specific target organ toxicity in experimental animal studies. Tebuconazole did not cause specific target organ toxicity in experimental animal studies. N,N-Dimethyldecanamide 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. N,N-Dimethyldecanamide was not genotoxic in a battery of in vitro 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. N,N-Dimethyldecanamide is not considered carcinogenic.

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. N,N-Dimethyldecanamide is not considered a reproductive toxicant at non-maternally toxic dose levels.

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. N,N-Dimethyldecanamide did not cause developmental toxicity in rats and rabbits.

Aspiration hazard : Based on available data, the classification criteria are not met.

Further information : No further toxicological information is available.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish LC50 (Oncorhynchus mykiss (rainbow trout)) 3.94 mg/l Exposure time: 96 h

Toxicity to aquatic invertebrates EC50 (Daphnia magna (Water flea)) 8.8 mg/l Exposure time: 48 h

Chronic toxicity to aquatic invertebrates NOEC (Daphnia (water flea)): 0.010 mg/l Exposure time: 21 d The value mentioned relates to the active ingredient tebuconazole.

Toxicity to aquatic plants IC50 (Raphidocelis subcapitata (freshwater green alga)) 9.5 mg/l Growth rate; Exposure time: 72 h ErC50 (Skeletonema costatum) 0.03278 mg/l Exposure time: 72 h The value mentioned relates to the active ingredient prothioconazole. EC10 (Skeletonema costatum) 0.01427 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

N,N-Dimethyldecanamide: 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.

N,N-Dimethyldecanamide: Does not bioaccumulate.

12.4 Mobility in soil

Prothioconazole: Slightly mobile in soils. Tebuconazole: Slightly mobile in soils

N,N-Dimethyldecanamide: Slightly mobile in soils

12.5 Results of 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). N,N-Dimethyldecanamide: 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

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13.1 Waste treatment methods

Product : It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines.

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. Follow advice on product label and/or leaflet.

Contaminated packaging : Not completely emptied packaging should be disposed of as hazardous waste.

Waste key for the unused product 02 01 08* agrochemical waste containing hazardous substances

SECTION 14: TRANSPORT INFORMATION

ADR/RID/ADN

14.1 UN number 3082

14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUCONAZOLE, PROTHIOCONAZOLE SOLUTION)

14.3 Transport hazard class(es) 9

14.4 Packaging Group III

14.5 Environm. Hazardous Mark YES

Hazard no. 90

This classification is in principle not valid for carriage by tank vessel on inland waterways. Please refer to the manufacturer for further information.

IMDG

14.1 UN number 3082

14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUCONAZOLE, PROTHIOCONAZOLE SOLUTION)

14.3 Transport hazard class(es) 9

14.4 Packaging Group III

14.5 Marine pollutant YES

IATA

14.1 UN number 3082

14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUCONAZOLE, PROTHIOCONAZOLE SOLUTION)

14.3 Transport hazard class(es) 9

14.4 Packaging Group III

14.5 Environm. Hazardous Mark YES

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

14.7 Transport in bulk according to Annex II of MARPOL 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

Supply and Use

European Communities (Prohibition of Certain Active Substances in Plant Protection Products) Regulations 1981 (SI No 320/1981) European Communities (Authorization, Placing on the Market, Use and Control of Plant Protection Products) Regulations 2003 (SI No 83/2003) European Communities (Classification, Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations 2001 (SI No 624/2001 2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations, 2001 (SI No 619/2001)

Waste Treatment

Landfill Directive Regulation on Substances That Deplete the Ozone Layer 1994 (EEC/3093/94)

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 the hazard statements mentioned in Section 3

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H361d Suspected of damaging the unborn child.

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.

Abbreviations and acronyms

ADN European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ADR European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE Acute toxicity estimate

CAS-Nr. Chemical Abstracts Service number Conc. Concentration

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EC-No. European community number
ECx Effective concentration to x %
EINECS European inventory of existing commercial substances
ELINCS European list of notified chemical substances
ELV Exposure Limit Value
EN European Standard
EU European Union
IATA International Air Transport Association
IBC International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)
ICx Inhibition concentration to x %
IMDG International Maritime Dangerous Goods
LCx Lethal concentration to x %
LDx Lethal dose to x %
LOEC/LOEL Lowest observed effect concentration/level
MARPOL MARPOL: International Convention for the prevention of marine pollution from ships
N.O.S. Not otherwise specified
NOEC/NOEL No observed effect concentration/level
OECD Organization for Economic Co-operation and Development
RID Regulations concerning the International Carriage of Dangerous Goods by Rail
SI Statutory Instrument
TWA Time weighted average
UN United Nations
WHO World health organisation

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.