CLAYTON PLANT PROTECTION

CLAYTON TEBUCON 250 EW Safety Data Sheet according to Regulation (EC) No. 1272/2008.

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

1.1 Product identifier

Product name : CLAYTON TEBUCON 250 EW

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

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

Tel: (00 353) 1 8210127 www.claytonpp.com Email: info@claytonpp.com

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EU) 1272/2008

Acute toxicity: Category 4 H302 Harmful if swallowed.
Acute toxicity: Category 4 H332 Harmful if inhaled.
Serious eye damage: Category 1 H318 Causes serious eye damage.
Specific target organ toxicity - single exposure: Category 3 H335 May cause respiratory 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
For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling: Regulation (EC) No. 1272/2008

Hazardous components which must be listed on the label:

Tebuconazole
N,N-Dimethyldecanamide

Signal word: Danger

Hazard statements
H302 + H332 Harmful if swallowed or if inhaled.
H318 Causes serious eye damage.
H335 May cause respiratory 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.

Precautionary statements
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/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 nonhazardous waste.

2.3 Other hazards

None known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical nature
Emulsion, oil in water (EW) Tebuconazole 250 g/l

Hazardous components

Hazard statements according to Regulation (EC) No. 1272/2008

Hazardous components

Component	CAS No./EC No.	Classification (EC/1272/2008)	Concentration
Tebuconazole	107534-96-3/ 403-640-2	Repr. 2, H361d Acute Tox 4, H302 Aquatic Acute 1, H400	25.9% w/w
N,N-Dimethyldecanamide	14433-76-2 238-405-1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Chronic 3, H412	>25% w/w

Further Information:

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

For the full text of the H statements mentioned here, 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.
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. Call a physician or poison control center immediately.

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

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : No information available

4.3 Indication of any immediate medical attention and special treatment needed

Medical advice : There is no specific antidote available. 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

Extinguishing media - small fires
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Extinguishing media - large fires
Use alcohol-resistant foam or water spray.
Do not use a solid water jet stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture

As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion such as Hydrogen Chloride (HCl), Hydrogen Cyanide (HCN), Carbon Monoxide (CO), Nitrogen oxides (NOx).
Exposure to decomposition products may be a hazard to health.

5.3 Advice for fire-fighters:

Wear full protective clothing and self-contained breathing apparatus. Do not allow run-off from fire fighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Refer to protective measures listed in sections 7 and 8.

6.2 Environmental precautions:

Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. 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

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). If the product contaminates rivers and lakes or drains inform respective authorities.

6.4 Reference to other sections

Refer to protective measures listed in sections 7 and 8.
Refer to disposal considerations listed in section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

No special protective measures against fire required. Avoid contact with skin and eyes. When using do not eat, drink or smoke. For personal protection see section 8.

7.2 Conditions for safe storage, including any incompatibilities

No special storage conditions required. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feeding stuffs.

7.3 Specific end use(s)

Registered Crop Protection products: For proper and safe use of this product,
please refer to the approval conditions laid down on the product label.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Component	Exposure limits	Type of exposure limit	Source
Tebuconazole	0.2 mg/m3	TWA	Bayer Cropscience

The following recommendations for exposure controls/personal protection are intended for the manufacture, formulation and packaging of the product.

8.2 Exposure controls

Engineering measures : Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated. The extent of these protection measures depends on the actual risks in use.

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:
Respiratory protection is not required under anticipated circumstances of exposure. 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

Physical State : Liquid
Colour : Light yellow
Odour : Aromatic
pH : 5-8 at 1% w/v
Density : 0.97 g/ml at 20^{o}C
Viscosity, kinematic: ca. 34.1 mm^{2}/s at 20^{o}C

9.2 Other information

No data available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:
Thermal decomposition: 350 °C, Heating rate: 3 K/min Exothermic decomposition.

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 : LD50 rat, 300 - <2000 mg/kg
Acute inhalational toxicity : LC50 rat, ca. 5 mg/l, 4h
Acute dermal toxicity : LD50 rat, >4,000 mg/kg
Skin irritation : Rabbit: No skin irritation
Eye irritation : Rabbit: Risk of serious damage to eyes.
Sensitisation : Non-sensitising (guinea pig), OECD 406, Buehler test.
Non-sensitising (guinea pig), OECD, Magnusson & Kligman test.

Assessment repeated dose toxicity
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
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
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
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

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.

Further information

The toxicological data refer to a similar formulation. Irritating to respiratory system

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish : LC50 Oncorhynchus mykiss (rainbow trout), 9.28 mg/l, 96 h

Toxicity to aquatic invertebrates: EC50 Daphnia magna (Water flea), 7.3 mg/l, 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

EC50 (Raphidocelis subcapitata (freshwater green alga)) 3.51 mg/l Growth rate; Exposure time: 72 h (Lemna gibba (gibbous duckweed)) 0.237 mg/l Growth rate; Exposure time: 14 d The value mentioned relates to the active ingredient tebuconazole.

12.2 Persistence and degradability

Biodegradability: Tebuconazole: not rapidly biodegradable N,N-Dimethyldecanamide: rapidly biodegradable

Koc Tebuconazole: Koc: 769

12.3 Bioaccumulative potential

Bioaccumulation Tebuconazole: Bioconcentration factor (BCF) 35 - 59 Does not bioaccumulate. N,N-Dimethyldecanamide: Does not bioaccumulate.

12.4 Mobility in soil

Mobility in soil Tebuconazole: Slightly mobile in soils N,N-Dimethyldecanamide: Slightly mobile in soils

12.5 Results of PBT and vPvB assessment

PBT and vPvB assessment 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

13.1 Waste treatment methods

Product : Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose of waste into sewer. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated packaging : Empty remaining contents. Triple rinse containers. Empty containers should be taken for local recycling or waste disposal. Do not re-use empty containers.

SECTION 14: TRANSPORT INFORMATION

Land transport (ADR/RID)

14.1 UN Number : UN 3082
14.2 UN proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUCONAZOLE SOLUTION)
14.3 Transport hazard class(es) : 9
14.4 Packing Group ; III
Labels : 9
14.5 Environmental hazards : Environmentally hazardous
Hazard class: 90
Tunnel Code: E

Sea transport(IMDG)

14.1 UN Number : UN 3082
14.2 UN proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUCONAZOLE SOLUTION)
14.3 Transport hazard class(es) : 9
14.4 Packing Group ; III
Labels : 9
14.5 Environmental hazards : Marine Pollutant

Air transport (IATA-DGR)

14.1 UN Number : UN 3082
14.2 UN proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUCONAZOLE SOLUTION)
14.3 Transport hazard class(es) : 9
14.4 Packing Group ; III
Labels : 9
14.6 Special precautions for user: none
14.6 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

UK 'Carriage' regulations

14.1 UN Number : UN 3082
14.2 UN proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUCONAZOLE SOLUTION)
14.3 Transport hazard class(es) : 9
14.4 Packing Group ; III
Labels : 9
14.5 Environm. Hazardous mark; Yes
Emergency action code: 3Z

Special precautions for user: See sections 6 to 8 of this SDS.

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

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: II (Moderately hazardous)

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

SECTION 16: OTHER INFORMATION

Further information : Approval number: MAPP 17823.

Use plant protection products safely. Always read the label and product information before use.

Full text of H-Statements referred to under sections 2 and 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.

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.