

CLAYTON PLANT PROTECTION

CLAYTON CAST Safety Data Sheet according to Regulation (EU) No. 453/2010. Version1/dsc 02/11/2016

This version replaces all previous versions

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

- 1.1. Product identifier **CLAYTON CAST MAPP17727**
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 : Marketing Company in UK
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.

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.

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: Trifloxystrobin. Cyproconazole



Signal word: Warning

Hazard statements

H361d Suspected of damaging the unborn child.

H410 Very toxic to aquatic life with long lasting effects.

EUH208 Contains Trifloxystrobin, 1,2-benzisothiazolin-3-one, 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-4-isothiazolin-3-one. May produce an allergic reaction.

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.

P308 + P311 IF exposed or concerned: Call a POISON CENTRE/ 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 : Suspension concentrate (=flowable concentrate)(SC). Trifloxystrobin/Cyproconazole 375:160 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. [%]
Trifloxystrobin	141517-21-7	Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	32.9
Cyproconazole	94361-06-5	Repr. 2, H361d Aquatic Acute 1, H400 Acute Tox. 4, H302 Aquatic Chronic 1, H410	14.0
1,2-Propanediol	57-55-6 200-338-0 01-2119456809-23-xxxx	Not classified	> 1.00
Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-4-isothiazolin-3-one	55965-84-9	Acute Tox. 3, H331 Acute Tox. 3, H311 Acute Tox. 3, H301 Skin Sens. 1, H317 Skin Corr. 1B, H314 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	> 0.0002 – < 0.0015
1,2-Benzisothiazol-3(2H)one	2634-33-5 220-120-9	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400	> 0.005 – < 0.05

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Further information

Trifloxystrobin 141517-21-7 M-Factor: 100 (acute)

Cyproconazole 94361-06-5 M-Factor: 10 (acute)

For the full text of the H-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 centre immediately.

Skin contact : Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water.

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. 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 Water spray, Carbon dioxide (CO₂), Foam, Sand

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), Hydrogen fluoride, Carbon monoxide (CO), Nitrogen oxides (NO_x)

5.3 Advice for firefighters : Special protective equipment for firefighters : 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.

Advice on protection against fire and explosion : No special precautions required.

Hygiene measures : Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands immediately after work, if necessary take a shower. 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. Keep away from direct sunlight. Protect from frost.

Suitable materials : HDPE (high density polyethylene)

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

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Trifloxystrobin	141517-21-7	2.7 mg/m ³ (SK-SEN)		OES BCS*
Cyproconazole	94361-06-5	0.08 mg/m ³ (TWA)		OES BCS*
1,2-Propanediol (Particulate.)	57-55-6	10 mg/m ³ (TWA)	12 2011	EH40 WEL
1,2-Propanediol (Total vapour and particulates.)	57-55-6	474 mg/m ³ /150 ppm (TWA)	12 2011	EH40 WEL

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

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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 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

Form : suspension	Water solubility: dispersible
Colour : white to beige	Partition coefficient : n-octanol/water Trifloxystrobin: log
Odour : weak, characteristic	Pow: 4.5 at 25 °C Cyproconazole: log Pow: 3.1
Flash point : > 105 °C No flash point - Determination conducted up to the boiling point.	Viscosity, dynamic : 200 - 400 mPa.s at 20 °C
Ignition temperature : 355 °C	Velocity gradient 20 /s
Density ca. : 1.14 g/cm ³ at 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.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity LD50 (Rat) >= 5,000 mg/kg

Acute inhalation toxicity LC50 (Rat) > 1.962 mg/l Exposure time: 4 h

Determined in the form of a respirable aerosol. Highest attainable concentration.

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

Skin irritation No skin irritation (Rabbit)

Eye irritation No eye irritation (Rabbit)

Sensitisation Non-sensitizing. (Guinea pig) OECD Test Guideline 406, Magnusson & Kligman test

Assessment repeated dose toxicity - Trifloxystrobin did not cause specific target organ toxicity in experimental animal studies. Cyproconazole did not cause specific target organ toxicity in experimental animal studies.

Assessment mutagenicity - Trifloxystrobin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Cyproconazole was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment carcinogenicity - Trifloxystrobin was not carcinogenic in lifetime feeding studies in rats and mice.

Cyproconazole was not carcinogenic in a lifetime feeding study in rats. Cyproconazole caused at high dose levels an increased incidence of tumours in mice in the following organ(s): Liver. The tumours seen with Cyproconazole were caused through peroxisome proliferation. The mechanism that triggers tumours in rodents and the type of tumours observed are not relevant to humans.

Assessment toxicity to reproduction - Trifloxystrobin 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 Trifloxystrobin is related to parental toxicity. Cyproconazole did not cause reproductive toxicity in a two-generation study in rats.

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Assessment developmental toxicity - Trifloxystrobin caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Trifloxystrobin are related to maternal toxicity. Cyproconazole caused developmental toxicity only at dose levels toxic to the dams. Cyproconazole caused an increased incidence of non-specific malformations.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish LC50 (Oncorhynchus mykiss (rainbow trout)) 0.0523 mg/l Exposure time: 96 h
Toxicity to aquatic invertebrates EC50 (Daphnia magna (Water flea)) 0.0845 mg/l Exposure time: 48 h
Toxicity to aquatic plants IC50 (Raphidocelis subcapitata (freshwater green alga)) 0.55 mg/l
Growth rate; Exposure time: 72 h

12.2 Persistence and degradability

Biodegradability Trifloxystrobin: Not rapidly biodegradable. Cyproconazole: Not rapidly biodegradable
Koc Trifloxystrobin: Koc: 2377 Cyproconazole: Koc: 309

12.3 Bioaccumulative potential

Bioaccumulation Trifloxystrobin: Bioconcentration factor (BCF) 431 Does not bioaccumulate.
Cyproconazole: Does not bioaccumulate.

12.4 Mobility in soil

Mobility in soil : Trifloxystrobin: Slightly mobile in soils. Cyproconazole: Moderately mobile in soils

12.5 Results of PBT and vPvB assessment

Trifloxystrobin: 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).

Cyproconazole: 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 02 01 08* agrochemical waste containing dangerous substances

SECTION 14: TRANSPORT INFORMATION

IATA 14.1 UN number 3082 14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIFLOXYSTROBIN, CYPROCONAZOLE) 14.3 Transport hazard class(es) 9 14.4 Packing group III 14.5 Environm. Hazardous Mark YES	IMDG 14.1 UN number 3082 14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIFLOXYSTROBIN, CYPROCONAZOLE) 14.3 Transport hazard class(es) 9 14.4 Packing group III 14.5 Marine pollutant YES
ADR/RID/ADN 14.1 UN number 3082 14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIFLOXYSTROBIN, CYPROCONAZOLE) 14.3 Transport hazard class(es) 9 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	UK 'Carriage' Regulations 14.1 UN number 3082 14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIFLOXYSTROBIN, CYPROCONAZOLE) 14.3 Transport hazard class(es) 9 14.4 Packing group III 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. 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code No transport in bulk according to the IBC Code.

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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 the hazard statements mentioned in Section 3

H301 Toxic if swallowed. H302 Harmful if swallowed. H311 Toxic in contact with skin. H314 Causes severe skin burns
and eye damage. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye
damage. H331 Toxic if inhaled. H361d Suspected of damaging the unborn child. H400 Very toxic to aquatic life. H410
Very toxic 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 CAS-Nr. Chemical Abstracts
Service number Conc. Concentration EC-No. European community number ECx Effective concentration to x % EH40
WEL Worker Exposure Limit EINECS European inventory of existing commercial substances ELINCS European list of
notified chemical substances 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.