

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.12.2021

Revision: 20.12.2021

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

· 1.1 Product identifier

- **Trade name:** Dualitas
- **Registration number** Mixture
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use** SU1 Agriculture, forestry, fishery
- **Product category** PC27 Plant protection products
- **Application of the substance / the mixture** Fungicide
- **Uses advised against**

Any use carrying a risk of direct contact with eyes/skin where workers are exposed without adequate personal protective equipment (PPE).

Any use involving significant release of aerosol, vapour or dust in the breathing zone of workers where they are exposed without suitable respiratory protective equipment (RPE).

Processes involving extreme heat use advised against.

Processes where workers who may be pregnant or breastfeeding could potentially come into direct contact with the undiluted product.

· 1.3 Details of the supplier of the safety data sheet

· **Manufacturer/Supplier:**

Agrovista UK Ltd
Rutherford House
Nottingham Science and Technology Park
University Boulevard
Nottingham
NG7 2PZ
UK

Tel: +44 (0)1952 897910

- **Further information obtainable from:** Product safety department.

· **1.4 Emergency telephone number:**

UK National Poisons Information Service. E-mail: npis.birmingham@nhs.net; Tel: +44 (0)344 892 0111

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



health hazard

Repr. 2 H361d Suspected of damaging the unborn child.



environment

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

· 2.2 Label elements

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms** GHS08, GHS09
- **Signal word** Warning

· **Hazard-determining components of labelling:**

Tebuconazole

Alcohols, coco, ethoxylated (>2EO)

Trifloxystrobin

Reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3 one [EC no. 247-500-7] and 2-methyl-2H -isothiazol 3-one [EC no. 220-239-6] (3:1)

1,2-benzisothiazol-3(2H)-one

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.12.2021

Revision: 20.12.2021

Trade name: Dualitas

(Contd. of page 1)

- **Hazard statements**
 - H361d Suspected of damaging the unborn child.
 - H410 Very toxic to aquatic life with long lasting effects.
- **Precautionary statements**
 - P280 Wear protective gloves/protective clothing/eye protection/face protection.
 - P308+P311 IF exposed or concerned: Call a POISON CENTER/doctor/Product Safety Department.
 - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Additional information:**
 - EUH401 To avoid risks to human health and the environment, comply with the instructions for use.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 107534-96-3 ELINCS: 403-640-2	Tebuconazole ⚠ Repr. 2, H361d; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	18.2%
CAS: 99734-09-5 EC number: 619-457-8	2,2-dichloro-1-(3-methyl-2,3-dihydro-1,4-benzoxazin-4-yl) ethanone Aquatic Chronic 3, H412	>1-≤25%
CAS: 141517-21-7	Trifloxystrobin ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Skin Sens. 1, H317; Lact., H362	9.1%
CAS: 61791-13-7 EC number: 612-394-7	Alcohols, coco, ethoxylated (>2EO) ⚠ Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302	>1-≤25%
CAS: 2634-33-5 EINECS: 220-120-9	1,2-benzisothiazol-3(2H)-one ⚠ Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1, H317	> 0.005 – < 0.05%
CAS: 55965-84-9	Reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3 one [EC no. 247-500-7] and 2-methyl-2H -isothiazol 3-one [EC no. 220-239-6] (3:1) ⚠ Acute Tox. 3, H301; Acute Tox. 2, H310; Acute Tox. 2, H330; ⚠ Skin Corr. 1C, H314; Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Skin Sens. 1A, H317	> 0.0002 – < 0.0015%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
 - DO NOT DELAY!
 - Immediately wash with water and soap and rinse thoroughly.
 - If skin irritation continues, consult a doctor.
- **After eye contact:**
 - DO NOT DELAY!
 - Check for and remove any contact lenses.
 - Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.12.2021

Revision: 20.12.2021

Trade name: Dualitas

(Contd. of page 2)

- **After swallowing:**
DO NOT DELAY!
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.
If vomiting occurs spontaneously, keep head below hips to prevent aspiration.
Seek immediate medical advice.
- **Information for doctor:**
Treat symptomatically and supportively.
Gastric lavage is not normally required. However, if a significant amount (more than a mouthful) has been ingested, administer activated charcoal and sodium sulphate. There is no specific antidote.
- **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Do not inhale explosion gases or combustion gases.
Wear self-contained respiratory protective device.
Wear fully protective suit.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Particular danger of slipping on leaked/spilled product.
Ensure adequate ventilation
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
Do not allow product to reach sewage system or any water course in the undiluted form.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Send for recovery or disposal in suitable receptacles.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Avoid direct contact (skin/eye contact, ingestion and/or inhalation of fume/mist/dust) with the product in the undiluted form.
Ensure good ventilation/exhaustion at the workplace.
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Prevent any seepage into the ground.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.12.2021

Revision: 20.12.2021

Trade name: Dualitas

(Contd. of page 3)

- **Information about storage in one common storage facility:**
 - Store away from foodstuffs.
 - Store away from oxidising agents.
- **Further information about storage conditions:**
 - Store in a banded area.
 - Store in cool, dry conditions in well sealed receptacles.
 - Protect from heat and direct sunlight.
 - Protect from frost.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Additional information about design of technical facilities:** No further data; see item 7.
- **Ingredients with limit values that require monitoring at the workplace:**
 - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Wash hands before breaks and at the end of work.
 - Do not eat or drink while working.
 - Do not inhale gases / fumes / aerosols.
 - Ensure that washing facilities are available at the work place.
 - Pregnant women should strictly avoid inhalation or skin contact.
- **Respiratory protection:** Use suitable respiratory protective device in case of insufficient ventilation.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**
 - The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
 - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**
 - Safety glasses
 - Goggles recommended during refilling
- **Body protection:**
 - Impervious protective clothing
 - Body protection must be chosen depending on product properties, activity and possible exposure.

GB

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.12.2021

Revision: 20.12.2021

Trade name: Dualitas

(Contd. of page 4)

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Suspension

Colour: Whitish

· Odour: Mild

· Odour threshold: Not determined.

· pH-value at 23 °C: 6-8

· Change in condition

Melting point/freezing point: Undetermined.

Initial boiling point and boiling range: Undetermined.

· Flash point: Not applicable.

· Flammability (solid, gas): Not applicable.

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not self-igniting.

· Explosive properties: Product does not present an explosion hazard.

· Explosion limits:

Lower: Not determined.

Upper: Not determined.

· Vapour pressure: Not determined.

· Density at 20 °C: 1.1 g/cm³

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with water:

Fully miscible.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

Dynamic: Not determined.

Kinematic: Not determined.

· 9.2 Other information

NOTE: The physical data presented above are typical values and should not be construed as a specification.

SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant information available.

· 10.2 Chemical stability

· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

· 10.3 Possibility of hazardous reactions No dangerous reactions known.

· 10.4 Conditions to avoid No further relevant information available.

· 10.5 Incompatible materials: Strong oxidising agents.

· 10.6 Hazardous decomposition products:

In the event of fire the following may be released: Hydrogen cyanide (hydrocyanic acid), Carbon monoxide (CO), Nitrogen oxides (NO_x), Hydrogen fluoride

GB

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.12.2021

Revision: 20.12.2021

Trade name: Dualitas

(Contd. of page 5)

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation**
Sensitisation: Non-sensitizing. (guinea pig): OECD Test Guideline 406, Magnusson & Kligman test
- **Additional toxicological information:**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity**
Suspected of damaging the unborn child.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** The organic portion of the product is biodegradable.
- **12.3 Bioaccumulative potential** Product is not expected to bioaccumulate.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Recommended Hierarchy of Controls:
 - Minimise waste;
 - Reuse if not contaminated;
 - Recycle, if possible; or
 - Safe disposal (if all else fails).
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Contact waste processors for recycling information.
Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.
- **Uncleaned packaging:**
- **Recommendation:**
Disposal must be made according to official regulations.
Container remains hazardous when empty. Continue to observe all precautions.
Containers, even those that are "empty," may contain residues that can develop flammable and/or hazardous vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.12.2021

Revision: 20.12.2021

Trade name: Dualitas

(Contd. of page 6)

· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· **14.1 UN-Number**
· **ADR, IMDG, IATA**

UN3082

· **14.2 UN proper shipping name**
· **ADR**

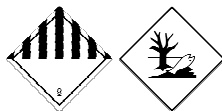
3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tebuconazole, Trifloxystrobin)

· **IMDG**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tebuconazole, Trifloxystrobin), MARINE POLLUTANT

· **IATA**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tebuconazole, Trifloxystrobin)

· **14.3 Transport hazard class(es)**· **ADR, IMDG, IATA**· **Class**

9 Miscellaneous dangerous substances and articles.

· **Label**

9

· **14.4 Packing group**· **ADR, IMDG, IATA**

III

· **14.5 Environmental hazards:**· **Marine pollutant:**

Symbol (fish and tree)

· **Special marking (ADR):**

Symbol (fish and tree)

· **Special marking (IATA):**

Symbol (fish and tree)

· **14.6 Special precautions for user**

Warning: Miscellaneous dangerous substances and articles.

· **Hazard identification number (Kemler code):**

90

· **EMS Number:**

F-A,S-F

· **Stowage Category**

A

· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

· **Transport/Additional information:**· **ADR**· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **Transport category**

3

· **Tunnel restriction code**

(-)

· **IMDG**· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.12.2021

Revision: 20.12.2021

Trade name: Dualitas

(Contd. of page 7)

· UN "Model Regulation":	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUCONAZOLE, TRIFLOXYSTROBIN), 9, III
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SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category** E1
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**

H301 Toxic if swallowed.
 H302 Harmful if swallowed.
 H310 Fatal 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.
 H330 Fatal if inhaled.
 H361d Suspected of damaging the unborn child.
 H362 May cause harm to breast-fed children.
 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:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 Acute Tox. 3: Acute toxicity – Category 3
 Acute Tox. 4: Acute toxicity – Category 4
 Acute Tox. 2: Acute toxicity – Category 2
 Skin Corr. 1C: Skin corrosion/irritation – Category 1C
 Skin Irrit. 2: Skin corrosion/irritation – Category 2
 Eye Dam. 1: Serious eye damage/eye irritation – Category 1
 Skin Sens. 1: Skin sensitisation – Category 1
 Skin Sens. 1A: Skin sensitisation – Category 1A
 Lact.: Reproductive toxicity – effects on or via lactation
 Repr. 2: Reproductive toxicity – Category 2
 Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
 Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
 Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3