



SAFETY DATA SHEET

Safety Data Sheet according to Regulation (EC) No. 1272/2008 (REACH) Annex II

LEGEND

Revision Date	13-February-2018	Version	2	Product No	JTA/UK/002
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Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

LEGEND

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

Recommended Use	Fungicide
Uses advised against	No information available

1.3. Details of the supplier of the safety data sheet

Supplier Address	JT Agro Ltd 1 Bell Street, Maidenhead, Berkshire, SL6 1BU, U.K. Tel: +44 1628 421599 Fax: +44 1628 421623
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For further information, please contact

Email address	info@jtagro-cropthetics.com
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1.4. Emergency telephone number

Emergency Telephone	National Chemical Emergency Centre (UK): Tel: 01865 407333 (24 hours)
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Section 2: HAZARD IDENTIFICATION

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity	Category 4 - (H302)
Skin irritation	Category 2 - (H315)
Eye irritation	Category 2 - (H319)
Specific Target Organ Toxicity SE	Category 3 - (H335)
Reproductive toxicity	Category 2 - (H361D)
Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 1 - (H410)

2.2. Label elements

Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazardous components which must be listed on the label:

- Tebuconazole
- N,N-Dimethyl decanamide

Hazard pictograms



Signal word

Warning

Hazard Statements

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
 H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements

P201 - Obtain special instructions before use
 P202 - Do not handle until all safety precautions have been read and understood
 P261 - Avoid breathing spray
 P264 - Wash hands thoroughly after handling
 P270 - Do not eat, drink or smoke when using the product
 P271 - Use only outdoors or in a well-ventilated area
 P280 - Wear protective gloves / protective clothing / eye protection
 P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician If you feel unwell
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
 P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing
 P308 + P313 - If exposed or concerned: Get medical advice/attention
 P312 - Call a POISON CENTER or doctor/physician if you feel unwell
 P321 - Specific treatment (see first aid instructions on label)
 P330 - Rinse mouth
 P332 + P313 - If skin irritation occurs: Get medical advice/attention
 P337 + P313 - If eye irritation persists get medical advice/attention
 P362 - Take off contaminated clothing
 P391 - Collect spillage
 P403 + P233 - Store in a well ventilated place. Keep container tightly closed
 P405 - Store locked up
 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.

Supplementary statements

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

2.3. Other hazards

No information available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Weight-%	CAS No	EC No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	M-Factor	REACH Registration Number
Tebuconazole	25.9	107534-96-3	403-640-2	Repr. 2 (H361d) Acute Tox. 4 (H302) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H401)	M=1 M=10	-
N,N-Dimethyl decanamide	>=25	14433-76-2	238-405-1	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335) Aquatic Chronic 3 (H412)	-	-

Full text of R phrases: see section 16

Full text of H- and EUH-phrases: see section 16

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice	In case of accident or un-wellness, seek medical advice immediately (show directions for use or safety data sheet if possible) First aider: Pay attention to self-protection!
Inhalation	Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Consult a physician if necessary.
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 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: FIRE-FIGHTING 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), Nitrogen oxides (NO_x)

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 firefighting 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

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

6.3. Methods and material 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 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. Keep away from direct sunlight. Protect from frost.
Advice on common storage	Keep away from food, drink and animal feeding stuffs.
Suitable materials	HDPE (high density polyethylene) Coextruded containers with an internal barrier layer made of ethylene vinyl alcohol copolymer (EVOH)

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	Basis
Tebuconazole	107534-96-3	0.2 mg/m ³ (TWA)	OES*

*OES: "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	<p>Respiratory protection is not required under anticipated circumstances of exposure.</p> <p>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.</p>
Hand protection	<p>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.</p> <p>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.</p> <p>Material Nitrile rubber Rate of permeability > 480 min Glove thickness > 0.4 mm Protective index Class 6 Directive Protective gloves complying with EN 374.</p>
Eye protection	Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).
Skin and body protection	<p>Wear standard coveralls and Category 3 Type 6 suit.</p> <p>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.</p> <p>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.</p>

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Form	Liquid
Colour	light yellow
Odour	aromatic
pH	5.0 - 8.0 at 1 % (23 °C) (deionized water)
Density	ca. 0.97 g/cm ³ at 20 °C
Partition coefficient: noctanol/water	Tebuconazole: log Pow: 3.7 N,N-Dimethyldecanamide: log Pow: 2.46
Viscosity, kinematic	ca. 34.1 mm ² /s 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 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: TOXICOLOGY INFORMATION

11.1. Information on toxicological effects

Acute oral toxicity	LD50 (rat) > 300 - < 2,000 mg/kg
Acute inhalation toxicity	LC50 (rat) ca. 5 mg/l Exposure time: 4 h Determined in the form of a respirable aerosol.
Acute dermal toxicity	LD50 (rat) > 4,000 mg/kg
Skin irritation	No skin irritation (rabbit)
Eye irritation	Risk of serious damage to eyes. (rabbit)
Sensitisation	Non-sensitizing. (guinea pig) OECD Test Guideline 406, Buehler test Non-sensitizing. (guinea pig) OECD Test Guideline 406, 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
Exposure time: 96 h

**Toxicity to aquatic
Invertebrates**

EC50 (Daphnia magna (Water flea)) 7.3 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

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**

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

ADR/RID/ADN

14.1 UN number	3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUCONAZOLE SOLUTION)
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.

IMDG

14.1 UN number	3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUCONAZOLE SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packing 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 SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES

UK 'Carriage' Regulations

14.1 UN number	3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUCONAZOLE SOLUTION)
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.

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

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
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 Organization

This material safety data sheet complies with the requirements of Regulation (EC) No. 1272/2008

Disclaimer

The information provided in this Material 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.

End of Safety Data Sheet

