

MATERIAL SAFETY DATA SHEET
**REGEV HBX
(STK20A)**
1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1	IDENTIFICATION OF THE SUBSTANCE/PREPARATION	REGEV HBX (STK20A) (DIFENOCONAZOLE/TTO 200/200 EC)
	CHEMICAL NAME	Difenoconazole IUPAC: 3-chloro-4-[(2RS,4RS;2RS,4SR)-4-methyl-2-(1H-1,2,4-triazol-1-ylmethyl)-1,3-dioxolan-2-yl]phenyl 4-chlorophenyl ether CA: 1-[2-[2-chloro-4-(4-chlorophenoxy)phenyl]-4-methyl-1,3-dioxolan-2-ylmethyl]-1H-1,2,4-triazole Tea Tree Oil (<i>Melaleuca alternifolia</i>) (TTO)
1.2	USE OF PREPARATION	Fungicide
1.3	COMPANY/UNDERTAKING IDENTIFICATION	Summit Agro USA, LLC 240 Leigh Farm Road, Suite 415 Durham, NC 27707
1.4	EMERGENCY TELEPHONE NUMBER	1-800-424-9300 (CHEMTREC)

2. HAZARDOUS IDENTIFICATION
2.1 Classification of the mixture
2.1.1 Classification according to Regulation (EC) No. 1272/2008 (CLP)

- **Health hazards:** Acute Tox 4 - Category 2 – Warning; H302
- Eye Irrit 1- Category 1 – Danger; H318
- **Environmental hazards:** Aquatic Chronic 2 – Category 2 – no signal word used; H411

2.2 label elements
Labelling Regulation (EC) 1272/2008

- **Hazard pictograms:**


Pictograms-Codes: GHS05 GHS09

- **Signal words:** Danger

- Hazard statements:** H302 - Harmful if swallowed
 H318 - Causes serious eye damage.
 H411 - Toxic to aquatic life with long lasting effects

Precautionary statements:

- Prevention:**
 - P264: Wash hands thoroughly after handling
 - P270: Do not eat, drink, or smoke when using this product.
 - P273: Avoid release to the environment.
 - P280: Wear protective gloves and protective clothing
- Response:**
 - P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - P301 + P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
 - P310: Immediately call a POISON CENTER or doctor/physician.
 - P330: Rinse mouth.
 - P391: Collect spillage.
- Storage:**
 - P102: Keep out of the reach of children
 - P501: Dispose of this material and its container to hazardous or special collection point, in accordance with local, regional, national and/or international

3. COMPOSITION/INFORMATION ON INGREDIENTS
Information on hazardous ingredients *

Common name	CAS No.	%	EC Number	Symbol	R-Phrases
Difenoconazole	119446-68-3	18.8-21.2	-----	Xn, N	R22-50/53
				Acute Tox 4 – H302 Aquatic Acute 1 - H410	
Tea Tree Oil	68647-73-4	18.8-21.2	-----	Xn, N	R10-R22-R36/38-R50
				Flammable liquid and vapour – H226 Acute Tox 4 – H302 Eye Irrit. 2 - H319 Skin Irrit. 2 - H315 Aquatic Acute 1 - H400	

*For occupational exposure limits, see section 8.

4. FIRST AID MEASURES

Remove victim from area of exposure. Wash off remaining material with plenty of water.

EYE CONTACT	Wash out with water with the eyelid held wide open for at least 15 minutes. Get medical attention.
SKIN CONTACT	Remove contaminated clothing. Wash away remainder with water and soap

INHALATION	Remove victim to fresh air. If breathing is difficult: artificial respiration. Get medical attention.
INGESTION	Wash out mouth with plenty of water. Get medical attention. Never give anything by mouth to an unconscious person.
Note to physician: No special antidote. Treat symptomatically and supportively.	
5. FIRE-FIGHTING MEASURES	
<p>Firefighting media: Foam, dry powder, carbon dioxide or vaporising liquids. Do not use full water jet.</p> <p>Fire & explosive hazards: Flash point: 78.7°C. Flash back may occur a long vapour trail.</p> <p>Hazardous thermal (de)composition products: Carbon oxides, chloride and nitrogen compounds.</p> <p>Protection of fire-fighters: Use breathing apparatus with independent air supply.</p> <p>Additional information: Cool containers at risk with water spray jet. Fire residues and contaminated fire fighting water must be disposed of in accordance with the local regulations.</p>	
6. ACCIDENTAL RELEASE MEASURES	
<p>Personal precautions: Wear suitable protective clothing, protective gloves and tightly sealed goggles.</p> <p>Environmental precautions: Prevent spills to reach any water course, surface and ground water. In case of leakage to water course inform the respective authorities.</p> <p>Methods for cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13. Ensure adequate ventilation. Do not flush with water or aqueous cleansing agents.</p>	
7. HANDLING AND STORAGE	
<p>Handling: Avoid contact with skin and eyes. Ventilation required. When handling, wear suitable protective clothing. Keep away from ignition sources -Do not smoke. Protect against electrostatic charges.</p> <p>Storage: Keep only in the original container. Keep container tightly closed in a cool, dry, well ventilated place away from direct sunlight.</p>	
8. EXPOSURE CONTROLS/ PERSONAL PROTECTION	
<p>Engineering measures: Ventilation required.</p> <p>Hygiene measures: When handling do not eat, drink or smoke. Wash hands thoroughly after handling. Wash clothing separately before re-use.</p> <p>Occupational Exposure Limits Common name : Difenconazole: not established Common name : Tea Tree Oil (TTO) : Not established</p> <p>Personal protective equipment Respiratory system: Respiratory protection is not required if good ventilation is maintained. Use approved half face respirator if using undiluted in confined spaces.</p> <p>Skin and body: Wear suitable protective clothing.</p>	

Hands: Protective gloves. The glove material has to be impermeable and resistant to the product
Eyes: Safety goggles.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Liquid (Emulsifiable concentrate)
COLOUR	Yellow-brownish
ODOUR	Characteristic odour
FLASH POINT	78.7°C (closed cup)
FLAMMABILITY	Combustible
PH (1%)	4 - 8.5 (20°C)
EXPLOSIVE PROPERTIES	Not explosive
OXIDIZING PROPERTIES	Not oxidizing
DENSITY	0.96-1 g/ml (20°C)
VAPOUR PRESSURE	Difenoconazole: 3.3×10^{-5} mPa (25°C) TTO: not determined
WATER SOLUBILITY	Miscible
OCTANOL/WATER PARTITION COEFFICIENT	Difenoconazole: Kow log P = 4.4 (25°C) TTO: not relevant

10. STABILITY AND REACTIVITY

Stability: Not subject to polymerization, stable under normal storage conditions.

Materials to avoid: Oxidizing agents. Keep away from heat or flame.

Hazardous reactions: None

Hazardous decomposition products: Carbon oxides, chloride and nitrogen compounds.

11. TOXICOLOGICAL INFORMATION

11.1	Acute oral toxicity	LD ₅₀ , rats = 1,000 mg/kg b.w
11.2	Acute dermal toxicity	LD ₅₀ , rabbits > 2,000 mg/kg
11.3	Acute inhalation toxicity	LC ₅₀ , rats > 12.96mg/L (4-h exposure) (maximum attainable concentration)
11.4	Skin irritation	Not irritant (rabbits)
11.5	Eye irritation	Severe irritant (rabbits)
11.6	Sensitization	Not sensitizer (guinea pig)

Difenoconazole

Chronic toxicity : NOEL (rats) = 1 mg/kg/day (2 years)
 NOEL (mice) = 4.7 mg/kg/day (1.5 years)

Carcinogenicity: EPA : Group C Carcinogen
 IARC: Not listed
 EU: Not listed

Mutagenicity : Not mutagenic

Reproduction toxicity : Not reproductive toxin

Other information: Teratogenicity – Not teratogenic

Tea Tree oil (TTO)

Under normal use there are no carcinogenic, mutagenic, teratogenic and reproductive adverse effects expected.

12. ECOLOGICAL INFORMATION

Formulation

Ecotoxicity –

Fish (*Danio rerio*): LC₅₀ (96 h) = 1.31 mg/L

Daphnia magna: EC_{50} (48 h) = 3.66 mg/L

Algae (*Pseudokirchneriella subcapitata*): E_yC_{50} (72 h) = 2.71 mg/L

Birds: Acute oral LD_{50} Japanese quail (*Coturnix coturnix japonica*) > 2,000 mg/kg

Bees (*Apis mellifera*): Oral LD_{50} (48 hours) = 51.62 μ g test item/bee

Difenoconazole

Ecotoxicity -

Fish

LC_{50} (96 hours) trout = 1.1 mg/L

Daphnia magna

LC_{50} (48 hours) = 0.77 mg/L

Algae (*Scenedesmus subspicatus*)

EC_{50} (72 hours) = 0.03 mg/L

Aquatic plant

EC_{50} (14 days) Lemna gibba = 9.9 mg/L

Birds

Acute oral LD_{50} mallard duck > 2,150 mg/kg

Acute oral LD_{50} Japanese quail > 2,000 mg/kg

Dietary LC_{50} (5 d) for bobwhite quail > 4,760 ppm

Dietary LC_{50} (5 d) for mallard duck > 5,000 ppm

Bees

Oral LD_{50} (48 hours) > 177 μ g a.i./bee

Contact LD_{50} (48 hours) > 100 μ g a.i./bee

Environmental fate

Mobility:

Soil

Immobile

K_{oc} = 4545 mL/g

Persistence/degradability

Soil:

medium persistent

Lab half-life time ($t_{1/2}$): (median) 120 days

Field half-life time ($t_{1/2}$): (median) 83 days

Degradation is primarily via: microorganisms.

Water:

Stable at pH 5, 7, 9 (25°C, 30 days)

DT_{50} whole system (water /sediment) = 8 months

Bioaccumulative potential : Low

Tea Tree Oil (TTO)

Ecotoxicity

Daphnia magna

LC₅₀ (48 hours) = 0.591 mg/L

Mobility / Persistence /degradability /bioaccumulative potential

Due to its high volatility, Tea Tree Oil is not expected to be persistent, mobile or bioaccumulative in the environment.

Readily biodegradable.

13. DISPOSAL CONSIDERATION

Product would be treated, stored, transported, and disposed of according to the local waste regulation authority. Do not flush to surface water or sanitary sewer system.

14. TRANSPORT INFORMATION

UN 3082, Environmentally Hazardous Substance , Liquid, N.O.S (Tea Tree Oil, Difenoconazole)Class 9+marine pollutant, PG III

According to S.P 2.10.2.7 (IMDG) and S.P. A197 (ICAO), products under this UN classification which are shipped in inner packaging of 5 LT or less, are not subject to any provisions of the code. Therefore, in case the product is sent in 5 LT inner packages or smaller product is considered as Non-Hazardous.

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Ensure all national/local regulations are observed.

15.2 Chemical Safety Assessment: None

16. OTHER INFORMATION:

The information contained in the Safety data sheet is correct to the best of our knowledge at the date of issue. It is intended as a guide for the safe use, handling, disposal, storage and transportation and is not intended as warranty or as a specification. The information relates only to the product specified and may not be suitable for combinations with other materials or in processes other than those specifically described herein.

Full text of Risk (R)-phrases and H in Section 3

R10: Flammable.

R22: Harmful if swallowed.

R36/38: Irritating to eyes and skin.

R50: Very toxic to aquatic organisms,

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

H226: Flammable liquid and vapour

H302: Harmful if swallowed

H315: Causes skin irritation

H319: Causes serious eye irritation

H400: Very toxic to aquatic life

H410: Very toxic to aquatic life with long lasting effects

Prepared by:

Registration Dept, **Updated on:**

January 2022