

Replaces: Revision Date: 5/06/2016 4/25/2012

SECTION 1. IDENTIFICATION

: WARDEN CEREALS Product name

Unity # : 1416238

Manufacturer or supplier's details

Company: Winfield Solutions, LLC

> P.O. Box 64589 St. Paul, MN 55164

Non-Emergency Business Inquiries: 1-855-494-6343 Mon-Fri 8am-5pm (CST)

1.4 Emergency telephone

ChemTrec: 1-800-424-9300 Emergency telephone:

Medical Emergency: 1-877-424-7452 (24 hrs)

Recommended use of the chemical and restrictions on use

Recommended use : Seed treatment

Restrictions on use Agriculture, For professional users only.

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Inhalation) : Category 4

Eye irritation : Category 2B

Reproductive toxicity : Category 2

Acute aquatic toxicity : Category 3

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Chronic aquatic toxicity : Category 1

GHS Label element





Hazard pictograms

Signal Word : Warning

Hazard Statements : H320 Causes eve irritation.

H332 Harmful if inhaled.

H361 Suspected of damaging fertility or the unborn child.

H402 Harmful to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements

: Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read

and understood.

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

P264 Wash skin thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/

face protection.

Response:

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or

doctor/ physician if you feel unwell.

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.

P337 + P313 If eye irritation persists: Get medical advice/ atten-

tion.

P391 Collect spillage.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste dis-

posal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Ipconazole - 0.0385 lbs/gal



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Metalaxyl - 0.051 lbs/gal

Ipconazole - 4.61 gm/L Metalaxyl - 6.12 gm/L

Hazardous ingredients

Chemical Name	CAS-No.	Concentration (% w/w)
ethane-1,2-diol	107-21-1	>= 20 - < 30
gamma-butyrolactone	96-48-0	>= 1 -< 5
methyl N-(2,6-dimethylphenyl)-N-	57837-19-1	>= 0.1 -< 1
(methoxyacetyl)-DL-alaninate		
Cyclopentanol,2-[(4-chlorophenyl)methyl]-5-(1-	125225-28-7	>= 0.1 -< 1
methylethyl)-1-(1H-1,2,4-triazol-1-ylmethyl)-		

SECTION 4. FIRST AID MEASURES

If inhaled : Remove to fresh air.

Obtain medical attention.

In case of skin contact : Remove contaminated clothing and shoes.

Wash off with warm water and soap. If symptoms persist, call a physician.

In case of eye contact : In case of contact, immediately flush eyes with plenty of water

for at least 15 minutes.

If symptoms persist, call a physician.

If swallowed : Do NOT induce vomiting.

Do NOT induce vomiting. Rinse mouth with water. Obtain medical attention.

Most important symptoms and effects, both acute and

: irritant effects

delayed

Symptoms may be delayed. Causes eye irritation. Harmful if inhaled.

Suspected of damaging fertility or the unborn child.

Notes to physician : The first aid procedure should be established in consultation

with the doctor responsible for industrial medicine.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Extinguishing media - large fires

Alcohol-resistant foam (on small fires) Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing media: Water spray jet



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Specific extinguishing methods: Use extinguishing measures that are appropriate to local circum-

stances and the surrounding environment.

Further information : Prevent fire extinguishing water from contaminating surface

water or the ground water system.

Special protective equipment

for fire-fighters

: Wear full protective clothing and self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and

protective equipment and emergency procedures : Evacuate unnecessary

personnel. Avoid all contact with

material. Wear suitable protective equipment.

Environmental precautions : Prevent leaks and prevent soil / water pollution caused by leaks.

Methods and materials for containment and cleaning

up

: Absorb on inert material such as sand, earth, vermiculite.

Collect for disposal.

Dam up.

Large spills should be collected mechanically (remove by

pumping) for disposal.

Pump excess material into suitable container (metal drums,

metal tank, or such).

In accordance with local and national regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Wear suitable protective equipment.

Keep container tightly closed.

Conditions for safe storage : Keep in a dry, cool place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible con- centration	Basis
ethane-1,2-diol	107-21-1	С	50 ppm 125 mg/m3	OSHA P0
		С	100 mg/m3	ACGIH
		C (Aerosol only)	100 mg/m3	ACGIH

Hazardous components without workplace control parameters

Ingredients	CAS-No.
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gamma-butyrolactone	96-48-0
methyl N-(2,6-dimethylphenyl)- N-(methoxyacetyl)-DL- alaninate	57837-19-1
Cyclopentanol,2-[(4-	125225-28-7
chlorophenyl)methyl]-5-(1-	123223-20-7
methylethyl)-1-(1H-1,2,4-	
triazol-1-ylmethyl)-	

Personal protective equipment

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory

equipment.

Hand protection

Remarks : Impervious gloves

Eye protection : Face-shield

Skin and body protection : impervious clothing

Hygiene measures : NOTE TO END-USERS: The employee protection recommenda-

tions on this SDS may differ from those on the product label. For normal use of this product, always refer to the personal protective equipment requirements on the

product label.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Color : red

Odor : No information available.

Odor Threshold : No data available

pH : 5.5 - 7.5

: No data available

: No data available

Flash point : No data available

Evaporation rate : No data available

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapor pressure : No data available

Relative vapor density : No data available



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Relative density : 1.062 (25 °C)

Solubility(ies)

Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: : N

n- octanol/water

: No data available

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : 30 - 100 mPa,s

Viscosity, kinematic : No data available

Self-Accelerating

decomposition temperature

(SADT)

: Method: No information available.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Stable under recommended storage conditions.

Chemical stability : No decomposition if stored and applied as directed.

Conditions to avoid : None known.

Incompatible materials : None known.

Hazardous decomposition

products

: Thermal decomposition can lead to release of irritating gases

and vapors.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

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

GLP: yes

Acute inhalation toxicity : LC50 (Rat): > 2.58 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

GLP: yes

Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg

GLP: yes



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Ingredients: ethane-1,2-

diol:

Acute oral toxicity : LD50 (Rat, female): 4,700 mg/kg

Acute dermal toxicity : LD50 (Rabbit): 10,670 mg/kg

gamma-butyrolactone:

Acute oral toxicity : LD50 (Rat): 1,540 mg/kg

Acute dermal toxicity : LD50 (Guinea pig): > 5,000 mg/kg

Cyclopentanol,2-[(4-chlorophenyl)methyl]-5-(1-methylethyl)-1-(1H-1,2,4-triazol-1-ylmethyl)-:

Acute oral toxicity : LD50 (Rat, male): 1,338 mg/kg

Method: OECD Test Guideline 401

GLP: yes

LD50 (Rat, female): 888 mg/kg Method: OECD Test Guideline 401

GLP: yes

LD50 (Mouse, male): 537 mg/kg Method: OECD Test Guideline 401

GLP: yes

LD50 (Mouse, female): 468 mg/kg Method: OECD Test Guideline 401

GLP: yes

Acute inhalation toxicity : LC50 (Rat, male and female): > 1.88 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: OECD Test Guideline 403

GLP: yes

LC50 (Rat, male and female): > 3.53 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: OECD Test Guideline 403

GLP: yes

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg

Method: OECD Test Guideline 402

GLP: yes

Skin corrosion/irritation

Product:

Species: Rabbit Result: slight irritation

GLP: yes



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Ingredients:

gamma-butyrolactone:

Species: Rabbit

Result: No skin irritation

Cyclopentanol,2-[(4-chlorophenyl)methyl]-5-(1-methylethyl)-1-(1H-1,2,4-triazol-1-ylmethyl)-:

Species: Rabbit Exposure time: 4 h Result: No skin irritation

GLP: yes

Serious eye damage/eye irritation

Product:

Species: Rabbit

Result: Mild eye irritation

GLP: yes

Ingredients:

gamma-butyrolactone:

Species: Rabbit Result: Eye irritation Method: Draize Test

Cyclopentanol,2-[(4-chlorophenyl)methyl]-5-(1-methylethyl)-1-(1H-1,2,4-triazol-1-ylmethyl)-:

Species: Rabbit

Result: No eye irritation

Respiratory or skin sensitization

Product:

Species: Guinea pig Method: Buehler Test

Result: Did not cause sensitization on laboratory animals.

Ingredients:

Cyclopentanol,2-[(4-chlorophenyl)methyl]-5-(1-methylethyl)-1-(1H-1,2,4-triazol-1-ylmethyl)-:

Species: Guinea pig

Method: Test de Magnusson-Kligmann

Result: Did not cause sensitization on laboratory animals.

GLP: yes

Germ cell mutagenicity

Ingredients:

gamma-butyrolactone:

Genotoxicity in vitro : Test Type: in vitro test

Metabolic activation: with and without metabolic activation

Result: positive

: Test Type: Chromosome aberration test in vitro



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Result: positive

: Test Type: Ames test

Metabolic activation: with and without metabolic activation

Result: negative

: Test Type: Unscheduled DNA synthesis (UDS)

Metabolic activation: with and without metabolic activation

Result: negative

Genotoxicity in vivo : Test Type: in vivo assay

Species: Mouse (male)

Result: negative

Test Type: In vivo micronucleus test Species: Mouse (male and female)

Result: negative

Germ cell mutagenicity -

Assessment

: Animal testing did not show any mutagenic effects.

Cyclopentanol, 2-[(4-chlorophenyl)methyl]-5-(1-methylethyl)-1-(1H-1,2,4-triazol-1-ylmethyl)-:

Genotoxicity in vitro

: Test Type: Ames test

Metabolic activation: with and without metabolic activation Method: Mutagenicity (Escherichia coli - reverse mutation

assay)

Result: negative

: Test Type: In Vitro mammalian Cell Gene Mutation Test Metabolic activation: with and without metabolic activation

Result: negative

: Test Type: Chromosome aberration test in vitro

Metabolic activation: with and without metabolic activation

Result: negative

Genotoxicity in vivo : Species: Mouse

Cell type: Bone marrow

Result: negative

Germ cell mutagenicity -

Assessment

: In vitro tests did not show mutagenic effects

Carcinogenicity

Ingredients:

gamma-butyrolactone:

Carcinogenicity - Assess-

ment

: Not classifiable as a human carcinogen.

Cyclopentanol,2-[(4-chlorophenyl)methyl]-5-(1-methylethyl)-1-(1H-1,2,4-triazol-1-ylmethyl)-:

Carcinogenicity - Assess-

ment

: Animal testing did not show any carcinogenic effects.



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IARC No ingredient of this product present at levels greater than or

equal to 0.1% is identified as probable, possible or confirmed

human carcinogen by IARC.

OSHA No ingredient of this product present at levels greater than or

equal to 0.1% is identified as a carcinogen or potential carcino-

gen by OSHA.

No ingredient of this product present at levels greater than or

equal to 0.1% is identified as a known or anticipated carcinogen

by NTP.

Reproductive toxicity

Ingredients:

gamma-butyrolactone:

Reproductive toxicity - Assessment
: No toxicity to reproduction
No effects on or via lactation

Cyclopentanol,2-[(4-chlorophenyl)methyl]-5-(1-methylethyl)-1-(1H-1,2,4-triazol-1-ylmethyl)-:

Effects on fertility : Species: Rat

Dose: 0, 30, 100 or 300 ppm

General Toxicity F1: NOAEL (No observed adverse effect

level): 9 - 10 mg/kg bw/day

STOT-single exposure

Product:

Remarks: No data available

STOT-repeated exposure

Ingredients:

gamma-butyrolactone:

Routes of exposure: Oral

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated

exposure.

Cyclopentanol,2-[(4-chlorophenyl)methyl]-5-(1-methylethyl)-1-(1H-1,2,4-triazol-1-ylmethyl)-:

Target Organs: Eyes

Assessment: May cause damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Ingredients:

Cyclopentanol,2-[(4-chlorophenyl)methyl]-5-(1-methylethyl)-1-(1H-1,2,4-triazol-1-ylmethyl)-:

Species: Rat, female NOAEL: 7 mg/kg LOAEL: 33.2 mg/kg Application Route: Oral Exposure time: 13 weeks

Dose: 3.1, 7.0, 15.4 and 33.2 mg/kg

GLP: yes



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Target Organs: Adrenal gland, thymus gland

Species: Rat, male NOAEL: 25.9 mg/kg LOAEL: 52.2 mg/kg Application Route: Oral Exposure time: 13 weeks

Dose: 2.5, 5.8, 12.6, 25.9 and 52.2

GLP: yes

Target Organs: Adrenal gland, thymus gland

Species: Rat, male and female

NOAEL: 10 mg/kg LOAEL: 40 mg/kg Application Route: Dermal

Exposure time: 13 weeks

Dose: 0, 2, 10 or 40 mg/kg bw/day

GLP: yes

Species: Rat, male and female

NOAEL: 30 mg/kg LOAEL: 100 mg/kg

Application Route: Inhalation Exposure time: 28-day

Dose: 0, 30, 100, 300 or 1000 mg/m3

GLP: yes

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredients:

gamma-butyrolactone:

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 220 - 460 mg/l

Exposure time: 96 h Test Type: static test Method: DIN 38412

Toxicity to daphnia and other

aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): > 500 mg/l

Exposure time: 48 h

Toxicity to algae : EC50 (Desmodesmus subspicatus (Scenedesmus

subspicatus)): 79 mg/l Exposure time: 96 h

Cyclopentanol,2-[(4-chlorophenyl)methyl]-5-(1-methylethyl)-1-(1H-1,2,4-triazol-1-ylmethyl)-:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 1.3 mg/l

Exposure time: 96 h
Test Type: flow-through test

Toxicity to daphnia and other

aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 1.7 mg/l

Exposure time: 48 h



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GLP: yes

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 0.62

Exposure time: 72 h

GLP: yes

M-Factor (Acute aquatic tox-

icity)

Toxicity to fish (Chronic toxic-

ity)

: NOEC (Pimephales promelas (fathead minnow)): 0.00044

mg/l

Exposure time: 28 d

GLP: yes

Toxicity to daphnia and other

aquatic invertebrates (Chron-

ic toxicity)

: NOEC (Daphnia magna (Water flea)): 0.0109 mg/l

Exposure time: 21 d

GLP: yes

M-Factor (Chronic aquatic

toxicity)

: 100

Persistence and degradability

Ingredients:

gamma-butyrolactone:

Biodegradability : aerobic

> Inoculum: activated sludge Concentration: 100 mg/l Result: Readily biodegradable. Biodegradation: 62 - 90 % Exposure time: 14 d

Bioaccumulative potential

Ingredients: ethane-

1.2-diol:

Partition coefficient: n-

octanol/water

: log Pow: -1.3

gamma-butyrolactone:

Bioaccumulation : Remarks: Does not bioaccumulate.

Partition coefficient: n-: log Pow: -0.566

octanol/water Method: OECD Test Guideline 107

Cyclopentanol,2-[(4-chlorophenyl)methyl]-5-(1-methylethyl)-1-(1H-1,2,4-triazol-1-ylmethyl)-:

Partition coefficient: n-

octanol/water

: log Pow: 4.28 - 4.49

Mobility in soil

No data available



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Other adverse effects

Product:

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Pro-

tection of Stratospheric Ozone - CAA Section 602 Class I

Substances

Remarks: This product neither contains, nor was

manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A,

App.A + B).

Additional ecological informa-

tion

: The product itself has not been tested.

The following information is applicable to a component of this

material

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : In accordance with local and national regulations.

SECTION 14. TRANSPORT INFORMATION

International Regulation

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Ingredients	CAS-No.	Component RQ (lbs)	Component RQ (lbs)
Ethylene glycol	107-21-1	5000	*

^{*:} Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity



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This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Acute Health Hazard

SARA 302 : No chemicals in this material are subject to the

reporting requirements of SARA Title III, Section

302.

SARA 313 : The following components are subject to reporting levels

established by SARA Title III, Section 313:

ethane-1,2-diol 107-21-1 22.4674 %

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

ethane-1,2-diol 107-21-1 22.4674 %

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI

Intermediate or Fi- nal VOC's (40 CFR 60.489):

ethane-1,2-diol 107-21-1 22.4674 %

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

California Prop. 65 This product does not contain any chemicals known to the

State of California to cause cancer, birth, or any other

reproductive defects.

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

FIFRA Hazard Information:

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The pesticide label also includes other important information, including directions for use.

The hazard information required on the pesticide label is reproduced below.



CAUTION

Causes moderate eye irritation. Avoid contact with eyes or clothing.

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate or by disposal of wastes.

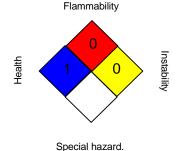
Metalaxyl is known to leach through soil into groundwater under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional office of the EPA.

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	1*
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,

2 = Moderate, 3 = High

4 = Extreme, * = Chronic

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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.