

Material Safety Data Sheet

RANCONA PINNACLE

Version 1.2 Revision Date: 20.08.2015 MSDS Number: 400000001099 Country: CA
Language: EN

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 400000001099

Product code : 400000001099

Manufacturer or supplier's details

Company: MacDermid Agricultural Solutions, Inc
245 Freight St
Waterbury, CT
United States of America
06702
Telephone : +1 800 423 8569

Prepared by sds.request@arysta.com

Further information for the safety data sheet :
sds.request@arysta.com

1.4 Emergency telephone number

Emergency telephone number: 613-996-6666 (call collect) (CANUTEC)
For additional emergency telephone numbers see section 16 of the
Safety Data Sheet.

Recommended use : Seed treatment

Restrictions on use : Agriculture, For professional users only.

Prepared by :

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

WARNING!	
Appearance	liquid
Colour	red
Odour	No information available.

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Hazard Summary	Causes eye irritation. Harmful if inhaled. Suspected of damaging fertility or the unborn child. Very toxic to aquatic life with long lasting effects.
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WHMIS Regulatory status : This product is registered under the Pest Control Products Act and is therefore exempt from WHMIS supplier labeling and MSDS requirements. Please read entire MSDS and product label for safety precautions.

Potential Health Effects

Inhalation : Harmful if inhaled.
Eyes : Causes eye irritation.
Chronic Exposure : Reproductive hazard
Aggravated Medical Condition : None known.
Symptoms of Overexposure : irritant effects
Symptoms may be delayed.

Carcinogenicity:

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture
Substance name : Fungicide

Hazardous components

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

SECTION 4. FIRST AID MEASURES

If inhaled : Remove to fresh air.
Obtain medical attention.

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- 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.
- Notes to physician : The first aid procedure should be established in consultation
with the doctor responsible for industrial medicine.
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SECTION 5. FIREFIGHTING 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
- 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 firefighters : Wear full protective clothing and self-contained breathing apparatus.
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SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, 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.
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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

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
ethane-1,2-diol	107-21-1	CEV	100 mg/m ³	CA ON OEL
		(c)	100 mg/m ³	CA AB OEL
		(c)	100 mg/m ³	CA AB OEL
		TWA (particulate)	10 mg/m ³	CA BC OEL
		STEL (particulate)	20 mg/m ³	CA BC OEL
		C (aerosol)	100 mg/m ³	CA BC OEL
		C (Vapour)	50 ppm	CA BC OEL
		C (Vapour and mist)	50 ppm 127 mg/m ³	CA QC OEL
		C	100 mg/m ³	ACGIH
		C (Aerosol only)	100 mg/m ³	ACGIH

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 recommendations 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

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Colour : red

Odour : No information available.

Odour 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

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : 1.062 (25 °C)

Solubility(ies)

 Water solubility : No data available

 Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Auto-ignition 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

Hazardous decomposition products : Thermal decomposition can lead to release of irritating gases and vapours.

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SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation
Eye contact

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

Components:

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

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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

Components:

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

Components:

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 sensitisation

Product:

Species: Guinea pig
Method: Buehler Test

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Result: Did not cause sensitisation on laboratory animals.

Components:

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

Species: Guinea pig

Method: Magnusson-Kligmann-Test

Result: Did not cause sensitisation on laboratory animals.

GLP: yes

Germ cell mutagenicity

Components:

gamma-butyrolactone:

Genotoxicity in vitro : Test Type: in vitro assay
Metabolic activation: with and without metabolic activation
Result: positive

: Test Type: Chromosome aberration test in vitro
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

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Genotoxicity in vivo : Species: Mouse
Cell type: Bone marrow
Result: negative

Germ cell mutagenicity - Assessment : In vitro tests did not show mutagenic effects

Carcinogenicity

Components:

gamma-butyrolactone:
Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

Cyclopentanol,2-[(4-chlorophenyl)methyl]-5-(1-methylethyl)-1-(1H-1,2,4-triazol-1-ylmethyl)-:
Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.

Reproductive toxicity

Components:

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: No observed adverse effect level: 9 - 10 mg/kg bw/day

STOT - single exposure

Product:

Remarks: No data available

STOT - repeated exposure

Components:

gamma-butyrolactone:
Exposure routes: 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

Components:

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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
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

Components:

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
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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
GLP: yes
- Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 0.62 mg/l
Exposure time: 72 h
GLP: yes
- M-Factor (Acute aquatic toxicity) : 1
- Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 0.00044 mg/l
Exposure time: 28 d
GLP: yes
- Toxicity to daphnia and other aquatic invertebrates (Chronic 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

Components:

gamma-butyrolactone:

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

Bioaccumulative potential

Components:

ethane-1,2-diol:

- Partition coefficient: n-octanol/water : log Pow: -1.3

gamma-butyrolactone:

- Bioaccumulation : Remarks: Does not bioaccumulate.
- Partition coefficient: n-octanol/water : log Pow: -0.566
Method: OECD Test Guideline 107

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

Partition coefficient: n-octanol/water : log Pow: 4.21

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information : 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.

National Regulations

TDG

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

WHMIS Classification : D2B: Toxic Material Causing Other Toxic Effects
This product is registered under the Pest Control Products Act and is therefore exempt from WHMIS supplier labeling and MSDS requirements. Please read entire MSDS and product label for safety precautions.

NPRI Components : ethane-1,2-diol

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This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

Canadian lists

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

(Q)SAR - (Quantitative) Structure Activity Relationship; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; OECD - Organization for Economic Cooperation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TDG - Transportation of Dangerous Goods; UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System; DSL - Domestic Substances List (Canada); KECI - Korea Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); AICS - Australian Inventory of Chemical Substances; IECSC - Inventory of Existing Chemical Substances in China; ENCS - Existing and New Chemical Substances (Japan); ISHL - Industrial Safety and Health Law (Japan); PICCS - Philippines Inventory of Chemicals and Chemical Substances; NZIoC - New Zealand Inventory of Chemicals; TCSI - Taiwan Chemical Substance Inventory; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice

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.

CA / EN

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Carechem24 International Worldwide Coverage

Emergency Phone Number

<u>Europe:</u>	All European Countries	+44 (0) 1235 239 670 (NCEC)
<u>Asia Pacific:</u>	East / South East Asia – Regional Number	+65 3158 1074
	Australia	+61 2801 44558
	New Zealand	+64 9929 1483
	China	+86 532 8388 9090
	China Taiwan	+86 10 5100 3039
	Japan	+81 345 789 341
	Indonesia	00780 3011 0293
	Malaysia	+60 3 6207 4347
	Thailand	001800 1 2066 6751
	Korea	+65 3158 1285 +82 (0)234 798 401
	Vietnam	+65 3158 1255
	India	+65 3158 1198 0800 100 7479
	Pakistan	+65 3158 1329
	Philippines	+65 31581203
	Sri Lanka	+65 3158 1195
	Emergency Phone Number	+65 3158 1200
<u>Middle East / Africa:</u>	Arabic speaking countries	+44 (0) 1235 239 671
	South Africa	+27 21 300 2732
	All other countries	+44 (0) 1235 239 670
<u>America</u>	United States of America and Canada	+1866 928 0789 +1 215 207 0061
<u>Latin America:</u>	Brazil	+55 113 711 9144
	Mexico	+52 555 004 8763
	Chile	+56 225 829 336
	All other countries	+44 (0) 1235 239 670