

# SAFETY DATA SHEET



## CEREOUS

Version 1 / NZ  
102000006929

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### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1 Product identifier

Trade name CEREOUS  
Product code (UVP) 04902750

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

Use Fungicide  
EPA-Nr. HSR000459

#### 1.3 Details of the supplier of the safety data sheet

Supplier Bayer New Zealand Limited  
3 Argus Place, Hillcrest  
Auckland 0627  
New Zealand  
Telephone 0800 428 246  
Telefax (09) 441 8645

#### 1.4 Emergency telephone no.

Emergency Number 0800 734 607 (24hr)  
Global Incident Response Hotline (24h) +1 (760) 476-3964 (Company 3E for Bayer AG, Crop Science Division)

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### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

Classified as hazardous according to the criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001

3.1D  
H227 Combustible liquid.  
6.1D  
H302 Harmful if swallowed.  
6.8B  
H361 Suspected of damaging fertility or the unborn child.  
6.9A  
H372 Causes damage to organs through prolonged or repeated exposure.  
9.1C  
H412 Harmful to aquatic life with long lasting effects.  
9.3C  
H433 Harmful to terrestrial vertebrates.

#### 2.2 Label elements

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### Labelling in accordance with Hazardous Substances Identification Regulations 2001

Hazard label for supply/use required.



**Signal word:** Danger

#### Hazard statements

H227	Combustible liquid.
H302	Harmful if swallowed.
H361	Suspected of damaging fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.
H433	Harmful to terrestrial vertebrates.

#### Precautionary statements

P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P264	Wash face, hands and any exposed skin thoroughly after handling.
P308 + P311	IF exposed or concerned: Call a POISON CENTER/ doctor/ physician.
P403	Store in a well-ventilated place.
P501	Dispose of contents/container in accordance with local regulation.

#### 2.3 Other hazards

No other hazards known.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2 Mixtures

#### Chemical nature

Emulsifiable concentrate (EC)  
Triadimenol 250 g/l

#### Hazardous components

Name	CAS-No.	Conc. [%]
Triadimenol	55219-65-3	22.9
N-Methyl-2-pyrrolidone	872-50-4	> 20
Alkylarylpolglycol ether	104376-75-2	> 1 – < 25

## SECTION 4: FIRST AID MEASURES

### 4.1 Description of first aid measures

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<b>Inhalation</b>	Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.
<b>Skin contact</b>	Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.
<b>Eye contact</b>	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. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	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.

Contact the National Poisons and Hazardous Chemicals Information center in Dunedin, PO Box 913, Dunedin. Phone 0800 POISON (0800 764 766).

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## SECTION 5: FIREFIGHTING MEASURES

### 5.1 Extinguishing media

**Suitable** Water spray, Carbon dioxide (CO<sub>2</sub>), Foam, Sand

**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<sub>x</sub>)

### 5.3 Advice for firefighters

**Special protective equipment for firefighters** 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 fire fighting to enter drains or water courses.

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## 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.

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**6.2 Environmental precautions** Do not allow to get into surface water, drains and ground water.

### 6.3 Methods and materials 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.

## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling

**Advice on safe handling** Use only in area provided with appropriate exhaust ventilation.

**Hygiene measures** Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands immediately after work, if necessary take a shower. 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.

**Advice on common storage** Keep away from food, drink and animal feedingstuffs.

**Suitable materials** Combination of sheet metal and HDPE (high density polyethylene)  
HDPE (high density polyethylene)

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Triadimenol	55219-65-3	1.6 mg/m <sup>3</sup> (TWA)		OES BCS*
N-Methyl-2-pyrrolidone	872-50-4	103 mg/m <sup>3</sup> /25 ppm (TWA)	07 2011	NZ OEL
N-Methyl-2-pyrrolidone	872-50-4	309 mg/m <sup>3</sup> /75 ppm (STEL)	07 2011	NZ OEL
N-Methyl-2-pyrrolidone	872-50-4	19 ppm (TWA)		OES BCS*

\*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

### 8.2 Exposure controls

#### 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

If product is handled while not enclosed, and if contact may occur:  
Wear a compressed air respirator (continuous flow) conforming to European norm EN14594 or EN14563-1 or equivalent or an organic

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	gas and vapour filter mask (protection factor 20) conforming to EN136 Type A filter or equivalent. 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. Filter A or self-contained breathing apparatus
<b>Eye protection</b>	Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).
<b>Skin and body protection</b>	Wear standard coveralls and Category 3 Type 3 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. 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.
<b>General protective measures</b>	If product is handled while not enclosed, and if contact may occur: Complete suit protecting against chemicals

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

<b>Form</b>	Liquid, clear
<b>Colour</b>	light brown
<b>Odour</b>	aromatic
<b>pH</b>	6.0 - 8.0 at 1 % (23 °C) (deionized water)
<b>Flash point</b>	93 °C
<b>Density</b>	ca. 1.09 g/cm <sup>3</sup> at 20 °C
<b>Water solubility</b>	emulsifiable
<b>Partition coefficient: n-octanol/water</b>	Triadimenol: log Pow: 3.08 - 3.28 N-methyl-2-pyrrolidone: log Pow: -0.46 at 25 °C

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## SECTION 10: STABILITY AND REACTIVITY

### 10.1 Reactivity

<b>Thermal decomposition</b>	Stable under normal conditions.
<b>10.2 Chemical stability</b>	Stable under recommended storage conditions.
<b>10.3 Possibility of hazardous reactions</b>	No hazardous reactions when stored and handled according to prescribed instructions.

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- 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: TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

- Acute oral toxicity** LD50 (Rat) > 2,000 mg/kg  
Test conducted with a similar formulation.
- Acute inhalation toxicity** LC50 (Rat) > 0.412 mg/l  
Determined in the form of a respirable aerosol.  
Highest attainable concentration.  
Test conducted with a similar formulation.
- Acute dermal toxicity** LD50 (Rat) > 5,000 mg/kg  
Test conducted with a similar formulation.
- Skin irritation** No skin irritation (Rabbit)  
Test conducted with a similar formulation.
- Eye irritation** Slight irritant effect - does not require labelling. (Rabbit)  
Test conducted with a similar formulation.

### Assessment STOT Specific target organ toxicity – single exposure

Triadimenol: Based on available data, the classification criteria are not met.

N-methyl-2-pyrrolidone: May cause respiratory irritation.

### Assessment STOT Specific target organ toxicity – repeated exposure

Triadimenol did not cause specific target organ toxicity in experimental animal studies.  
N-methyl-2-pyrrolidone caused specific target organ toxicity in experimental animal studies in the following organ(s): Testes.

### Assessment mutagenicity

Triadimenol was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.  
N-methyl-2-pyrrolidone was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

### Assessment carcinogenicity

Triadimenol caused at high dose levels an increased incidence of tumours in mice in the following organ(s): Liver. The increased tumour incidence is not considered to be treatment related.  
N-methyl-2-pyrrolidone was not carcinogenic in lifetime feeding studies in rats and mice.

### Assessment toxicity to reproduction

Triadimenol caused reduced fertility, reduced lactation rate. The reproduction toxicity seen with Triadimenol is related to parental toxicity.  
N-methyl-2-pyrrolidone caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. N-methyl-2-pyrrolidone caused a reduced pup survival, a reduced litter size and a reduced pup weight.

### Assessment developmental toxicity

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Triadimenol caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Triadimenol are related to maternal toxicity.  
N-methyl-2-pyrrolidone caused developmental toxicity only at dose levels toxic to the dams. N-methyl-2-pyrrolidone caused a reduced pup survival.

### Aspiration hazard

Based on available data, the classification criteria are not met.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

<b>Toxicity to fish</b>	LC50 (Oncorhynchus mykiss (rainbow trout)) 42 mg/l Exposure time: 96 h
<b>Chronic toxicity to fish</b>	Pimephales promelas (fathead minnow) NOEC: 0.17 mg/l The value mentioned relates to the active ingredient triadimenol.
<b>Toxicity to aquatic invertebrates</b>	EC50 (Daphnia magna (Water flea)) 253 mg/l Exposure time: 48 h
<b>Toxicity to aquatic plants</b>	IC50 (Raphidocelis subcapitata (freshwater green alga)) 41.13 mg/l Growth rate; Exposure time: 72 h

### 12.2 Persistence and degradability

<b>Biodegradability</b>	Triadimenol: Not rapidly biodegradable N-methyl-2-pyrrolidone: rapidly biodegradable
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<b>Koc</b>	Triadimenol: Koc: 273
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### 12.3 Bioaccumulative potential

<b>Bioaccumulation</b>	Triadimenol: Bioconcentration factor (BCF) 21 Does not bioaccumulate. N-methyl-2-pyrrolidone: Bioconcentration factor (BCF) 3.16 Does not bioaccumulate.
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### 12.4 Mobility in soil

<b>Mobility in soil</b>	Triadimenol: Moderately mobile in soils N-methyl-2-pyrrolidone: Highly mobile in soils
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### 12.5 Results of PBT and vPvB assessment

<b>PBT and vPvB assessment</b>	Triadimenol: 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-methyl-2-pyrrolidone: 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).
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### 12.6 Other adverse effects

<b>Additional ecological information</b>	No other effects to be mentioned.
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### SECTION 13: DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods

<b>Product</b>	Dispose of this product only by using according to the label, or at an approved landfill or other approved facility.
<b>Contaminated packaging</b>	Triple rinse containers. Recycle if possible. If allowed under local authority, burn if circumstances, especially wind direction permit, otherwise crush and bury in an approved local authority facility. Do not use container for any other purpose.

### SECTION 14: TRANSPORT INFORMATION

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

#### ADR/RID/ADN

14.1 UN number	<b>3082</b>
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIADIMENOL SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES
Hazchem Code	3Z

#### IMDG

14.1 UN number	<b>3082</b>
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIADIMENOL SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Marine pollutant	YES

#### IATA

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

#### 14.6 Special precautions for user

See sections 6 to 8 of this Safety Data Sheet.



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### 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

#### Further information

HSNO approval-Nr.	HSR000459
HSNO Controls	See <a href="http://www.epa.govt.nz">www.epa.govt.nz</a>
ACVM Reg.	P3506
ACVM Condition	See <a href="http://www.foodsafety.govt.nz">www.foodsafety.govt.nz</a>

## SECTION 16: OTHER INFORMATION

### 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
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
Conc.	Concentration
ECx	Effective concentration to x %
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
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe products in terms of their safety requirements. The above details do not imply any guarantee concerning composition, properties or performance of the product.

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Changes since the last version are highlighted in the margin. This version replaces all previous versions.