

# SAFETY DATA SHEET

## Casoron 4G Herbicide



Version 1.1      Revision Date: 13.12.2016      MSDS Number: 400000000957      Country: AU  
Language: EN

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### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Casoron 4G Herbicide

Product code : 400000000957

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

Company: Arysta LifeScience Australia Pty Ltd  
c/o Level 3, 70 Hindmarsh Square  
Adelaide SA  
Australia  
5000  
Telephone : + 61 8 8112 0900

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: AU: 1800 033 111 (IXOM)  
International: +61 3 9663 2130 (IXOM)  
+61 2801 44558  
For advice, contact a Poisons Information Centre (Phone: Australia 131 126 or New Zealand 0800 764 766) or a doctor at once.  
For additional emergency telephone numbers see section 16 of the Safety Data Sheet.

#### Recommended use of the chemical and restrictions on use

Recommended use : Herbicide

Restrictions on use : Agriculture  
For professional users only.  
APVMA No: 69139

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### SECTION 2. HAZARDS IDENTIFICATION

#### GHS Classification

Not a hazardous substance or mixture.

#### GHS Label element

Not a hazardous substance or mixture.

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### Other hazards which do not result in classification

Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Occupational health effects due to inhalation of mineral dusts incorporating crystalline silica (quartz, cristobalite, tridymite), crystalline silicates (kaolin, talc) graphite or coal.

Harmful to aquatic life with long lasting effects.

Non-hazardous substance

Non-dangerous goods

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture  
Chemical nature : Dichlobenil - 4%

#### Hazardous components

Chemical Name	CAS-No.	Concentration (% w/w)
silicon dioxide	7631-86-9	>= 30 - < 60
aluminium oxide	1344-28-1	>= 10 - < 30
diiron trioxide	1309-37-1	< 10
magnesium oxide	1309-48-4	< 10
calcium oxide	1305-78-8	< 10
titanium dioxide	13463-67-7	< 10

### SECTION 4. FIRST AID MEASURES

General advice : For advice, contact a Poisons Information Centre (Phone: Australia 131 126 or New Zealand 0800 764 766) or a doctor at once.

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 : Immediately flush eye(s) with plenty of water.  
If symptoms persist, call a physician.

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

Most important symptoms and effects, both acute and delayed : No information available.  
No information available.

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 : Carbon dioxide (CO<sub>2</sub>)  
Dry powder  
Foam  
- water fog
- Unsuitable extinguishing media : Water spray
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Do not discharge extinguishing waters into streams, rivers and lakes.
- Special protective equipment for firefighters : Body covering protective clothing, full "turn-out" gear.  
Self-contained breathing apparatus (EN 133)

### SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Wear suitable protective equipment.
- Environmental precautions : Prevent leaks and prevent soil / water pollution caused by leaks.  
May be harmful to aquatic life.
- Methods and materials for containment and cleaning up : Sweep up and shovel into suitable containers for disposal.

### SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Avoid dust formation.  
Use only with adequate ventilation.
- 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
silicon dioxide	7631-86-9	TWA (respirable dust)	2 mg/m <sup>3</sup>	AU OEL
aluminium oxide	1344-28-1	TWA	10 mg/m <sup>3</sup>	AU OEL
	Further information: This value is for inhalable dust containing no asbestos and < 1% crystalline silica			
		TWA (Respirable fraction)	1 mg/m <sup>3</sup> (Aluminium)	ACGIH
diiron trioxide	1309-37-1	TWA (Fumes)	5 mg/m <sup>3</sup>	AU OEL

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			(Iron)	
		TWA (Respirable fraction)	5 mg/m <sup>3</sup>	ACGIH
magnesium oxide	1309-48-4	TWA (Fumes)	10 mg/m <sup>3</sup>	AU OEL
		TWA (Inhalable fraction)	10 mg/m <sup>3</sup>	ACGIH
calcium oxide	1305-78-8	TWA	2 mg/m <sup>3</sup>	AU OEL
		TWA	2 mg/m <sup>3</sup>	ACGIH
titanium dioxide	13463-67-7	TWA	10 mg/m <sup>3</sup>	AU OEL
	Further information: This value is for inhalable dust containing no asbestos and < 1% crystalline silica			
		TWA	10 mg/m <sup>3</sup>	ACGIH
		TWA	10 mg/m <sup>3</sup> (Titanium dioxide)	ACGIH

### Personal protective equipment

- Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.
- Hand protection
- Remarks : Impervious gloves
- Eye protection : Safety glasses with side-shields
- Skin and body protection : Preventive skin protection

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : granular
- Colour : grey
- Odour : aromatic
- Odour Threshold : No data available
- pH : Not applicable
- Melting point/range : No data available
- Boiling point/boiling range : Not applicable
- Flash point : Not applicable
- Evaporation rate : Not applicable
- Upper explosion limit : No data available
- Lower explosion limit : No data available
- Vapour pressure : Not applicable

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Relative vapour density : Not applicable

Relative density : No data available

Density : No data available

Solubility(ies)

    Water solubility : No data available

    Solubility in other solvents : slightly soluble

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

Auto-ignition temperature : > 400 °C

Decomposition temperature : No data available

Viscosity

    Viscosity, dynamic : Not applicable

    Viscosity, kinematic : Not applicable

Self-Accelerating decomposition temperature (SADT) : Method: No information available.

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### SECTION 10. STABILITY AND REACTIVITY

Possibility of hazardous reactions : Hazardous polymerisation does not occur.

Incompatible materials : Oxidizing agents  
Strong acids and strong bases

Hazardous decomposition products : Burning produces noxious and toxic fumes.

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### SECTION 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

##### **Product:**

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

Acute inhalation toxicity : Remarks: Not applicable

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

##### **Components:**

##### **silicon dioxide:**

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg

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Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg  
GLP: no

**aluminium oxide:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg  
Method: OECD Test Guideline 401

**diiron trioxide:**

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

**calcium oxide:**

Acute oral toxicity : LD50 (Rat): 500 - 2,000 mg/kg

**titanium dioxide:**

Acute oral toxicity : LD50 (Rat): > 10,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 6.8 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 10,000 mg/kg

### Skin corrosion/irritation

**Product:**

Species: Rabbit  
Exposure time: 4 h  
Assessment: No skin irritation  
Method: OECD Test Guideline 404  
GLP: yes

**Components:**

**silicon dioxide:**

Method: OECD Test Guideline 404  
Result: No skin irritation

**aluminium oxide:**

Species: Rabbit  
Method: OECD-Guideline No. 404  
Result: No skin irritation

**magnesium oxide:**

Species: Humans  
Result: No skin irritation

**calcium oxide:**

Species: Rabbit  
Method: OECD Test Guideline 404  
Result: No skin irritation  
GLP: yes

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### **titanium dioxide:**

Species: Rabbit  
Result: No skin irritation

### **Serious eye damage/eye irritation**

#### **Product:**

Species: Rabbit  
Assessment: No eye irritation

#### **Components:**

##### **silicon dioxide:**

Result: No eye irritation

##### **aluminium oxide:**

Species: Rabbit  
Result: No eye irritation  
Method: OECD Test Guideline 405

##### **magnesium oxide:**

Result: Eye irritation

##### **calcium oxide:**

Result: Risk of serious damage to eyes.

##### **titanium dioxide:**

Species: Rabbit  
Result: No eye irritation

### **Respiratory or skin sensitisation**

#### **Product:**

Remarks: Non sensitizing.

#### **Components:**

##### **silicon dioxide:**

Test Type: Maximisation Test (GPMT)  
Species: Guinea pig  
Assessment: Did not cause sensitisation on laboratory animals.

##### **diiron trioxide:**

Species: Guinea pig  
Assessment: Did not cause sensitisation on laboratory animals.

##### **calcium oxide:**

Species: Human  
Assessment: Did not cause sensitisation on laboratory animals.

##### **titanium dioxide:**

Species: Guinea pig  
Assessment: Did not cause sensitisation on laboratory animals.

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### Chronic toxicity

### Germ cell mutagenicity

#### **Product:**

Germ cell mutagenicity - Assessment : Weight of evidence does not support classification as a germ cell mutagen.

#### **Components:**

##### **silicon dioxide:**

Genotoxicity in vitro : Test Type: Ames test  
Metabolic activation: with and without metabolic activation  
Result: negative  
GLP: no

: Test Type: Unscheduled DNA synthesis (UDS)  
Result: negative

Genotoxicity in vivo : Test Type: in vivo assay  
Species: Rat (male)  
Application Route: Oral  
Result: negative  
GLP: no

Test Type: in vivo assay  
Species: Rat (male and female)  
Application Route: Oral  
Result: negative  
GLP: no

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

##### **aluminium oxide:**

Genotoxicity in vitro : Test Type: Ames test  
Metabolic activation: with and without metabolic activation  
Result: negative

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

##### **diiron trioxide:**

Genotoxicity in vitro : Test Type: Ames test  
Metabolic activation: with and without metabolic activation  
Result: negative

##### **calcium oxide:**

Genotoxicity in vitro : Test Type: In Vitro mammalian Cell Gene Mutation Test  
Result: negative

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



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Result: negative

: Test Type: Ames test  
Metabolic activation: with and without metabolic activation  
Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay)  
Result: negative

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

### **titanium dioxide:**

Genotoxicity in vitro : Test Type: Ames test  
Metabolic activation: with and without metabolic activation  
Result: negative

: Test Type: Unscheduled DNA synthesis (UDS)  
Result: negative

: Test Type: in vitro assay  
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 : Test Type: in vivo assay  
Species: Rat (female)  
Application Route: Oral  
Result: negative

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

### **Carcinogenicity**

#### **Product:**

Carcinogenicity - Assessment : Weight of evidence does not support classification as a carcinogen

#### **Components:**

##### **silicon dioxide:**

Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.

##### **diiron trioxide:**

Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.

##### **titanium dioxide:**

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

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**Reproductive toxicity**

**Product:**

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

**Components:**

**silicon dioxide:**

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

**calcium oxide:**

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

**STOT - single exposure**

**Components:**

**calcium oxide:**

Exposure routes: Inhalation  
Assessment: May cause respiratory irritation.

**STOT - repeated exposure**

**Components:**

**diiron trioxide:**

Exposure routes: Oral  
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**titanium dioxide:**

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

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**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Product:**

Toxicity to fish : LC50: 317 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 155 mg/l  
Exposure time: 48 h

Toxicity to algae : IC50 (Pseudokirchneriella subcapitata (green algae)): 50 mg/l  
Exposure time: 72 h

**Components:**

**silicon dioxide:**

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Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 5,000 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 5,000 mg/l  
Exposure time: 24 h

Toxicity to algae : EC50 (Chlorella pyrenoidosa (aglae)): 440 mg/l  
Exposure time: 72 h

### calcium oxide:

Toxicity to fish : LC50 (Cyprinus carpio (Carp)): 1,070 mg/l  
Exposure time: 96 h  
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates : EC50: 159.6 mg/l  
Exposure time: 24 h

### titanium dioxide:

Toxicity to fish : LC0 (Leuciscus idus (Golden orfe)): 1,000 mg/l  
Exposure time: 48 h  
Test Type: static test

LC50 (Cyprinodon variegatus (sheepshead minnow)): 240 - 370 mg/l  
Exposure time: 96 h

### Persistence and degradability

#### Components:

#### silicon dioxide:

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

#### Bioaccumulative potential

No data available

#### Mobility in soil

No data available

#### Other adverse effects

No data available

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## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : Dispose of waste in accordance with environmental legislation. The product should not be allowed to enter drains, water courses or the soil.

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### 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

##### ADG

Not regulated as a dangerous good

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### SECTION 15. REGULATORY INFORMATION

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

Standard for the Uniform Scheduling of Medicines and Poisons : Schedule 6

Standard for the Uniform Scheduling of Medicines and Poisons : Schedule 6

Prohibition/Licensing Requirements : There is no applicable prohibition or notification/licensing requirements, including for carcinogens under Commonwealth, State or Territory legislation.

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### 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; EC<sub>x</sub> - Concentration associated with x% response; EL<sub>x</sub> - Loading rate associated with x% response; EmS - Emergency Schedule; ErC<sub>x</sub> - 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;

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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); KECl - 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

Date format : dd.mm.yyyy

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.

AU / EN

### 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

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	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 11 3197 5891
	Mexico	+52 555 004 8763
	Chile	+56 225 829 336
	All other countries	+44 (0) 1235 239 670