

# SAFETY DATA SHEET



**F4019-4**

Version	Revision Date:	SDS Number:	Date of last issue: 27.06.2022
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## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : F4019-4

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

Recommended use : Crop nutrition

Restrictions on use : Use as recommended by the label.

### Manufacturer or supplier's details

Company : FMC Australasia Pty Ltd

Address : Building B, Suite G.01, 12 Julius Avenue  
North Ryde NSW 2113  
Australia

Telephone : 1 800 066 355

Telefax : (02) 9923 6011

E-mail address : SDS-Info@fmc.com

Emergency telephone number : For leak, fire, spill or accident emergencies, call:  
1800 033 111 (Ixon)

Medical emergency:  
1 800 033 111 (Transport and 24 h Medical information)

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## SECTION 2. HAZARDS IDENTIFICATION

### GHS Classification

Not a hazardous substance or mixture.

### GHS label elements

No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

### Other hazards which do not result in classification

None known.

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## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

### Components

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Chemical name	CAS-No.	Concentration (% w/w)
glycerol	56-81-5	>= 30 -< 60

## SECTION 4. FIRST AID MEASURES

- General advice : Do not leave the victim unattended.
- If inhaled : Move to fresh air.  
If experiencing any discomfort, immediately remove from exposure. Get medical attention if discomfort does not disappear.  
If unconscious, place in recovery position and seek medical advice.
- In case of skin contact : Wash off with soap and water.  
If symptoms persist, call a physician.  
Wash contaminated clothing before re-use.  
Get medical attention if irritation develops and persists.
- In case of eye contact : Flush eyes with water as a precaution.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.  
Do not induce vomiting without medical advice.
- Most important symptoms and effects, both acute and delayed : None known.
- Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing  
Avoid inhalation, ingestion and contact with skin and eyes.  
If potential for exposure exists refer to Section 8 for specific personal protective equipment.
- Notes to physician : Treat symptomatically.

## SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Dry chemical, CO<sub>2</sub>, water spray or regular foam.  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : Do not spread spilled material with high-pressure water streams.

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High volume water jet

- Hazardous combustion products : Thermal decomposition can lead to release of toxic and irritating vapors.  
Carbon oxides
- Specific extinguishing methods : Remove undamaged containers from fire area if it is safe to do so.  
Use a water spray to cool fully closed containers.  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for firefighters : Firefighters should wear protective clothing and self-contained breathing apparatus.

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Ensure adequate ventilation.  
If it can be safely done, stop the leak.  
Do not touch or walk through the spilled material.  
Never return spills in original containers for re-use.  
Mark the contaminated area with signs and prevent access to unauthorized personnel.  
Only qualified personnel equipped with suitable protective equipment may intervene.  
For disposal considerations see section 13.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.  
Prevent product from entering drains.  
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Never return spills in original containers for re-use.  
Collect as much of the spill as possible with a suitable absorbent material.  
Pick up and transfer to properly labelled containers.  
Keep in suitable, closed containers for disposal.

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## SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Advice on safe handling : For personal protection see section 8.  
Avoid formation of respirable particles.  
Dispose of rinse water in accordance with local and national regulations.

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Smoking, eating and drinking should be prohibited in the application area.

- Hygiene measures : Avoid contact with skin, eyes and clothing.  
Do not inhale aerosol.  
When using do not eat or drink.  
When using do not smoke.  
Wash hands before breaks and at the end of workday.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.  
Electrical installations / working materials must comply with the technological safety standards.
- Further information on storage conditions : The product is stable under normal conditions of warehouse storage.  
Protect from heat and direct sunlight.  
Store in closed, labelled containers. The storage room should be constructed of incombustible material, closed, dry, ventilated and with impermeable floor, without access of unauthorised persons or children. The room should only be used for storage of chemicals. Food, drink, feed and seed should not be present. A hand wash station should be available.
- Further information on storage stability : No decomposition if stored and applied as directed.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
glycerol	56-81-5	TWA (Mist)	10 mg/m3	AU OEL

## Personal protective equipment

- Respiratory protection : In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.
- Hand protection  
Material : Wear chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber.
- Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- Eye protection : Eye wash bottle with pure water  
Tightly fitting safety goggles
- Skin and body protection : Impervious clothing  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

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Protective measures : Plan first aid action before beginning work with this product.  
Always have on hand a first-aid kit, together with proper instructions.  
Wear suitable protective equipment.  
When using do not eat, drink or smoke.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: liquid
Colour	: tan
Odour	: Fermented
Odour Threshold	: not determined
pH	: 5.5 - 8.5 Concentration: 1 %
Melting point/freezing point	: not determined
Boiling point/boiling range	: not determined
Flash point	: > 100 °C
Evaporation rate	: No data available
Flammability (liquids)	: Not expected to be ignitable
Self-ignition	: not auto-flammable
Upper explosion limit / Upper flammability limit	: not determined
Lower explosion limit / Lower flammability limit	: not determined
Vapour pressure	: not determined
Relative vapour density	: not determined
Relative density	: not determined
Density	: 1.16 g/cm <sup>3</sup>
Solubility(ies)	

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Water solubility	: Miscible
Partition coefficient: n-octanol/water	: Not available for this mixture.
Auto-ignition temperature	: No data available
Decomposition temperature	: not determined
Viscosity	
Viscosity, dynamic	: 500 - 2,000 mPa,s
Viscosity, kinematic	: not determined
Explosive properties	: Not explosive
Oxidizing properties	: Non-oxidizing
Molecular weight	: Not applicable
Particle size	: Not applicable

## SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No decomposition if stored and applied as directed.
Chemical stability	: No decomposition if stored and applied as directed.
Possibility of hazardous reactions	: No decomposition if stored and applied as directed.
Conditions to avoid	: Avoid formation of aerosol. Protect from frost, heat and sunlight. Heating of the product will produce harmful and irritant vapours.
Hazardous decomposition products	: No decomposition if stored and applied as directed.

## SECTION 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

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

### Product:

Acute oral toxicity	: LD50 Oral (Rat): > 2,000 mg/kg Assessment: The component/mixture is minimally toxic after single ingestion. Remarks: Information given is based on data obtained from similar product.
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Acute inhalation toxicity : LC50 (Rat): > 5 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: The component/mixture is minimally toxic after short term inhalation.  
Remarks: The toxicological data has been taken from products of similar composition.

Acute dermal toxicity : LD50 Dermal (Rat): > 2,000 mg/kg  
Assessment: The component/mixture is minimally toxic after single contact with skin.  
Remarks: Information given is based on data obtained from similar product.

## **Components:**

### **glycerol:**

Acute oral toxicity : LD50 (Rat, female): 11,500 mg/kg

Acute inhalation toxicity : LC0 (Rat, male): 11 mg/l  
Exposure time: 1 h  
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Guinea pig, male and female): 56,750 mg/kg

## **Skin corrosion/irritation**

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

## **Product:**

Assessment : Not classified as irritant  
Result : No skin irritation

## **Components:**

### **glycerol:**

Species : Rabbit  
Result : No skin irritation

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

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

## **Product:**

Result : No eye irritation  
Assessment : Not classified as irritant

## **Components:**

### **glycerol:**

Species : Rabbit  
Result : No eye irritation

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**Respiratory or skin sensitisation****Skin sensitisation**

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

**Respiratory sensitisation**

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

**Product:**

Assessment	:	Not a skin sensitizer.
Result	:	Substance is not considered to be potential skin sensitiser.

**Chronic toxicity****Germ cell mutagenicity**

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

**Product:**

Germ cell mutagenicity - Assessment	:	Contains no ingredient listed as a mutagen
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**Components:****glycerol:**

Genotoxicity in vitro	:	Test Type: reverse mutation assay Result: negative
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**Carcinogenicity**

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

**Product:**

Carcinogenicity - Assessment	:	Contains no ingredient listed as a carcinogen
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**Components:****glycerol:**

Species	:	Rat
Application Route	:	Oral
Exposure time	:	2 years Years
Result	:	negative

**Reproductive toxicity**

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

**Product:**

Reproductive toxicity - Assessment	:	Contains no ingredient listed as toxic to reproduction
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## **Components:**

### **glycerol:**

Effects on fertility : Test Type: Two-generation study  
Species: Rat  
Application Route: Oral  
Result: negative

Effects on foetal development : Test Type: Two-generation study  
Species: Rat  
Application Route: Oral  
Result: negative

### **STOT - single exposure**

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

### **Product:**

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

### **STOT - repeated exposure**

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

### **Product:**

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

## **Repeated dose toxicity**

### **Components:**

#### **glycerol:**

Species : Rat  
LOAEL : 1 mg/kg  
Application Route : Inhalation  
Exposure time : 14 d  
Dose : 0, 1, 1.93, 3.91 mg/L  
Symptoms : respiratory tract irritation, Fatality

Species : Rat  
NOAEL : 0.165 mg/l  
LOAEL : 0.662 mg/l  
Application Route : Inhalation  
Exposure time : 13 w  
Dose : 0, 0.033, 0.165, 0.662 mg/L  
Symptoms : respiratory tract irritation

### **Aspiration toxicity**

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

### **Product:**

No aspiration toxicity classification

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## Further information

### Product:

Remarks : The product contains biologically active material. Hazards to human health which would require classification are not expected, but it is recommended to handle the product with care and to avoid unnecessary exposure.

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## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Product:

#### Ecotoxicology Assessment

Acute aquatic toxicity : The product is not expected to be toxic to fish, plants, algae, aquatic invertebrates, birds, mammals, insects and soil micro- and macroorganisms at a level which would require classification.

Chronic aquatic toxicity : The product is not expected to be toxic to fish, plants, algae, aquatic invertebrates, birds, mammals, insects and soil micro- and macroorganisms at a level which would require classification.

#### Components:

##### **glycerol:**

Toxicity to fish : LC50 (Fish): 885 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1,955 mg/l  
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (Scenedesmus capricornutum (fresh water algae)): 2,900 mg/l  
Exposure time: 192 h

Toxicity to microorganisms : EC10 (Pseudomonas putida): 10,000 mg/l  
Exposure time: 16 h

### Persistence and degradability

#### Product:

Biodegradability : Remarks: Not readily biodegradable.

#### Components:

##### **glycerol:**

Biodegradability : Result: Readily biodegradable.

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Biodegradation: 94 %  
Exposure time: 24 h

## Bioaccumulative potential

### Product:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

### Components:

#### glycerol:

Partition coefficient: n-octanol/water : log Pow: -1.75 (25 °C)  
pH: 7.4

## Mobility in soil

### Product:

Distribution among environmental compartments : Remarks: The product is not expected to be mobile in soils.

## Other adverse effects

### Product:

Additional ecological information : No data available

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## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues	: Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
Contaminated packaging	: Empty remaining contents. Do not re-use empty containers. Packaging that is not properly emptied must be disposed of as the unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal.

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## SECTION 14. TRANSPORT INFORMATION

### International Regulations

#### UNRTDG

UN number	: Not applicable
Proper shipping name	: Not applicable
Class	: Not applicable

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Subsidiary risk : Not applicable  
Packing group : Not applicable  
Labels : Not applicable

## **IATA-DGR**

UN/ID No. : Not applicable  
Proper shipping name : Not applicable  
Class : Not applicable  
Subsidiary risk : Not applicable  
Packing group : Not applicable  
Labels : Not applicable  
Packing instruction (cargo aircraft) : Not applicable  
Packing instruction (passenger aircraft) : Not applicable

## **IMDG-Code**

UN number : Not applicable  
Proper shipping name : Not applicable  
Class : Not applicable  
Subsidiary risk : Not applicable  
Packing group : Not applicable  
Labels : Not applicable  
EmS Code : Not applicable  
Marine pollutant : Not applicable

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

Not applicable for product as supplied.

## **National Regulations**

### **ADG**

UN number : Not applicable  
Proper shipping name : Not applicable  
Class : Not applicable  
Subsidiary risk : Not applicable  
Packing group : Not applicable  
Labels : Not applicable  
Hazchem Code : Not applicable

## **Special precautions for user**

Remarks : Not classified as dangerous in the meaning of transport regulations.

## **SECTION 15. REGULATORY INFORMATION**

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

Therapeutic Goods (Poisons Standard) Instrument : Schedule 6 (Please use the original publication to check for specific uses, specific conditions or threshold limits that might apply for this chemical)  
Prohibition/Licensing Requirements : There is no applicable prohibition, authorisation and restricted use requirements, including for carcinogens referred to in Schedule 10 of

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the model WHS Act and Regulations.

**The components of this product are reported in the following inventories:**

TCSI	: Not in compliance with the inventory
TSCA	: Product contains substance(s) not listed on TSCA inventory.
AIIC	: Not in compliance with the inventory
DSL	: This product contains chemical substance(s) exempt from CEPA DSL Inventory requirements. It is regulated as a pesticide subject to Pest Control Products Act (PCPA) requirements. Read the PCPA label, authorized under the Pest Control Products Act, prior to using or handling this pest control product.
ENCS	: Not in compliance with the inventory
ISHL	: Not in compliance with the inventory
KECI	: Not in compliance with the inventory
PICCS	: Not in compliance with the inventory
IECSC	: Not in compliance with the inventory
NZIoC	: Not in compliance with the inventory
TECI	: Not in compliance with the inventory

## SECTION 16: ANY OTHER RELEVANT INFORMATION

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**Full text of other abbreviations**

AU OEL	: Australia. Workplace Exposure Standards for Airborne Contaminants.
AU OEL / TWA	: Exposure standard - time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized Sys-

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tem; GLP - Good Laboratory Practice; 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; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; 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; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; 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; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); 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

## Disclaimer

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