

1 Identification

· **Product identifier**

· **Trade name:** **REASON® 500 SC FUNGICIDE**
EPA Registration No.: 10163-371

· **CAS Number:**

Active Ingredient: Fenamidone (44.40%), CAS:161326-34-7
1,2-Propanediol (2.31%), CAS: 57-55-6

· **Application of the substance / the mixture** Agricultural Fungicide

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Gowan Company
P.O. Box 5569
Yuma, Arizona 85366-5569
(928) 783-8844

· **Information department:** sds@gowanco.com

· **Emergency telephone number:**

Chemtrec® Emergency Telephone 24 - Hours: (Spills, leak or fire) Inside U.S. & Canada: (800) 424-9300
Outside the U.S. & Canada: +011 (703) 527-3887

For medical emergency (ProPharma Group®): (888) 478-0798

2 Hazard(s) identification

· **Classification of the substance or mixture**



Acute Tox. 4 H332 Harmful if inhaled.

Eye Irrit. 2B H320 Causes eye irritation.

· **Label elements**

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



· **Signal word** Warning

· **Hazard statements**

H332 Harmful if inhaled.

H320 Causes eye irritation.

· **Precautionary statements**

P264 Wash thoroughly after handling.

P280 Wear protective gloves / protective clothing.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 Call a poison center/doctor if you feel unwell.

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P337+P313 *If eye irritation persists: Get medical advice/attention.*

· **Hazard description:**

Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. HARMful if inhaled. Avoid breathing spray mist.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



HAZARD INDEX:

- 4 Severe Hazard
- 3 Serious Hazard
- 2 Moderate Hazard
- 1 Slight Hazard
- 0 Minimal Hazard

· **Other hazards**

· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable in US.
- **vPvB:** Not applicable in US.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 161326-34-7	fenamidone (ISO)	☠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	44.40%
CAS: 57-55-6	Propylene glycol	⚠ Acute Tox. 4, H302	2.31%

4 First-aid measures

· **Description of first aid measures**

· **General information:**

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

You may also contact 1-888-478-0798 for emergency medical treatment information.

· **After inhalation:**

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
- Call poison control center or doctor for further treatment advice.

· **After skin contact:**

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

· **After eye contact:**

- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after first 5 minutes, then continue rinsing eyes.
- Call a poison control center or doctor for treatment advice.

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- **After swallowing:**
 - Call a poison control center or doctor immediately for treatment advice.
 - Have affected person sip a glass of water if able to swallow.
 - Do not induce vomiting unless told by a poison control center or doctor.
 - Do not give anything by mouth to an unconscious person.
- **Information for doctor:**
 - **Most important symptoms and effects, both acute and delayed** No further relevant information available.
 - **Indication of any immediate medical attention and special treatment needed**
Possible mucosal damage may contraindicate the use of gastric lavage. May pose an aspiration pneumonia hazard.

5 Fire-fighting measures

- **Extinguishing media**
 - **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Use fire fighting measures that suit the environment.
 - **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture**
Carbon monoxide (CO)
Nitrogen oxides (NO_x)
Sulphur oxides (SO_x)
- **Advice for firefighters**
 - **Protective equipment:** Wear self-contained respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· PAC-1:		
CAS: 57-55-6	Propylene glycol	30 mg/m ³
· PAC-2:		
CAS: 57-55-6	Propylene glycol	1,300 mg/m ³
· PAC-3:		
CAS: 57-55-6	Propylene glycol	7,900 mg/m ³

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7 Handling and storage

- **Handling:**
 - **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
 - **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.
- **Conditions for safe storage, including any incompatibilities**
 - **Storage:**
 - **Requirements to be met by storerooms and receptacles:** Store in a cool, dry, well-ventilated area.
 - **Information about storage in one common storage facility:** Keep away from food, drink and feed.
 - **Further information about storage conditions:**
 - Keep containers tightly closed in a dry, cool and well-ventilated place.
 - Store in original container. Keep away from direct sunlight.
 - Protect from freezing.
 - **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
 - **Components with limit values that require monitoring at the workplace:**
 - The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
 - At this time, the remaining constituent has no known exposure limits.

CAS: 57-55-6 Propylene glycol	
WEEL	Long-term value: 10 mg/m ³

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**
 - **Personal protective equipment:**
 - **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing.
 - Wash hands before breaks and at the end of work.
 - Avoid contact with the eyes.
 - Avoid contact with the eyes and skin.
 - **Breathing equipment:**
 - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
 - **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
 Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
 Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves** Chemical-resistant gloves.

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· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

· **Body protection:**

Applicators and other handlers must wear:

- Long sleeved shirt and long pants
- Chemical resistant gloves
- Shoes plus socks

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

- **Form:** Liquid
- **Color:** White to light beige
- **Odor:** Slight
- **Odor threshold:** Not determined.

· **pH-value at 20 °C (68 °F):** 6.5 - 8.0

· **Change in condition**

- **Melting point/Melting range:** Undetermined.
- **Boiling point/Boiling range:** Undetermined.

· **Flash point:** >100 °C (>212 °F)

· **Flammability (solid, gaseous):** Not applicable.

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not self-igniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

- **Lower:** Not determined.
- **Upper:** Not determined.

· **Vapor pressure:** Not determined.

· **Density at 20 °C (68 °F):** 1.13 g/cm³ (9.42985 lbs/gal)

- **Relative density** Not determined.
- **Vapor density** Not determined.
- **Evaporation rate** Not determined.

· **Solubility in / Miscibility with**

- **Water:** Dispersible.

· **Partition coefficient (n-octanol/water):** Not determined.

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- | | |
|---|-----------------|
| · Viscosity: | |
| · Dynamic: | Not determined. |
| · Kinematic: | Not determined. |
| · Solvent content: | |
| · Organic solvents: | 2.3 % |
| · VOC content: | 2.31 % |
| · Solids content: 53.3 % | |
| · Other information No further relevant information available. | |

10 Stability and reactivity

- **Reactivity** Thermal decomposition >500 °C
- **Chemical stability** Stable under normal conditions
 - **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** Avoid freezing, Heat, flames and sparks.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**
 - Carbon monoxide (CO)
 - Nitrogen oxides (NO_x)
 - Sulfur oxides (SO_x)

11 Toxicological information

- **Information on toxicological effects**
 - **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

Oral	LD50	>5,000 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rabbit)
Inhalative	LC50/4 h	0.9 mg/l (rat)

- **Primary irritant effect:**
 - **on the skin:** Slightly irritating
 - **on the eye:** Moderately Irritating
- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful
Irritant

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the ingredients are listed.

- **NTP (National Toxicology Program)**

None of the ingredients are listed.

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· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

12 Ecological information

- **Toxicity**

Toxicity to Fish

Rainbow trout (Oncorhynchus mykiss) LC50: 0.74 mg/l

Exposure time: 96 h

The value mentioned relates to the active ingredient fenamidone.

Toxicity to aquatic invertebrates

Daphnia magna (Water flea) EC50: 0.055 mg/l

Exposure time: 48 h

The value mentioned relates to the active ingredient fenamidone.

Toxicity to aquatic plants

Scenedesmus sbspicatus IC50: 3.4 mg/l

Exposure time: 72 h

The value mentioned relates to the active ingredient fenamidone.

- **Aquatic toxicity:** No further relevant information available.

- **Persistence and degradability** Fenamidone: not rapidly biodegradable

- **Behavior in environmental systems:**

- **Bioaccumulative potential** Fenamidone: Does not bioaccumulate

- **Mobility in soil** No further relevant information available.

- **Additional ecological information:**

- **General notes:**

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**

- **Recommendation:**

Dispose in accordance with all local, state/provincial and federal regulations.

Pesticide, spray mixture or rinse water that cannot be used according to label instructions may be disposed of on site or at an approved waste disposal facility.

Follow advice on product label and/or leaflet.

- **Uncleaned packagings:**

- **Recommendation:**

Disposal must be made according to official regulations.

Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application

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equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

14 Transport information

· UN-Number

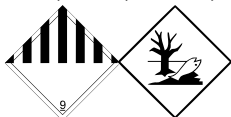
· **DOT** Not regulated
 · **ADR, IMDG, IATA** UN3082

· UN proper shipping name

· **DOT** Not regulated
 · **ADR** 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (fenamidone (ISO))
 · **IMDG** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (fenamidone (ISO)), MARINE POLLUTANT
 · **IATA** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (fenamidone (ISO))

· Transport hazard class(es)

· **DOT, ADR, IMDG, IATA**



· **Class** 9 Miscellaneous dangerous substances and articles
 · **Label** 9

· Packing group

· **DOT** Void
 · **ADR, IMDG, IATA** III

· Environmental hazards:

· **Marine pollutant:** Yes (DOT)
 Symbol (fish and tree)
 · **Special marking (ADR):** Symbol (fish and tree)
 · **Special marking (IATA):** Symbol (fish and tree)

· Special precautions for user

Warning: Miscellaneous dangerous substances and articles
 · **Hazard identification number (Kemler code):** 90
 · **EMS Number:** F-A,S-F
 · **Stowage Category** A

· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable

· Transport/Additional information:

· **DOT**
 · **Quantity limitations** On passenger aircraft/rail: No limit
 On cargo aircraft only: No limit
 · **Remarks:** Special marking with the symbol (fish and tree).

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· **ADR**· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **IMDG**· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **UN "Model Regulation":**

US DOT:

Not regulated

OTHERS:

UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
LIQUID, N.O.S. (FENAMIDONE (ISO)), 9, III

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture****EPA /FIFRA Information:**

This chemical is a pesticide product registered by the Environmental Protection Agency (EPA) 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, and for workplace labels of non-pesticide chemicals.

· **SARA Title III**· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

· **TSCA (Toxic Substances Control Act):**

CAS: 57-55-6 | Propylene glycol

ACTIVE

· **Hazardous Air Pollutants**

None of the ingredients are listed.

· **Proposition 65**· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

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· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients are listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients are listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**

Not applicable

· **Signal word**

(US EPA) CAUTION

· **Hazard statements**

H332 Harmful if inhaled.

H320 Causes eye irritation.

· **Precautionary statements**

P264 Wash thoroughly after handling.

P280 Wear protective gloves / protective clothing.

P303+P361+P353 **IF ON SKIN (or hair):** Take off immediately all contaminated clothing. Rinse skin with water.

P304+P340 **IF INHALED:** Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 **If in eyes:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 Call a poison center/doctor if you feel unwell.

P337+P313 **If eye irritation persists:** Get medical advice/attention.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Supply Chain

· **Contact:** sds@gowanco.com

· **Date of preparation / last revision** 07/08/2020 / 6

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

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NFPA: National Fire Protection Association (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Tox. 4: Acute toxicity – Category 4

Eye Irrit. 2B: Serious eye damage/eye irritation – Category 2B

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

. * Data compared to the previous version altered.

US