



Conforms to HazCom 2012/United States

SDS

SePRO Total Pond - React

SAFETY DATA SHEET



SePRO Total Pond - React®

Landscape and Aquatic Herbicide

Section 1. Identification

Product name : SePRO Total Pond - React®
Other means of identification : EPA Registration Number 67690-53

Supplier's details : SePRO Corporation
11550 North Meridian Street
Suite 600
Carmel, IN 46032 U.S.A.
Tel: 317-580-8282
Toll free: 1-800-419-7779
Fax: 317-580-8290
Monday - Friday, 8am to 5pm [E.S.T.](#)
www.sepro.com

Emergency telephone : **INFOTRAC - 24-hour service 1-800-535-5053**

The following recommendations for exposure controls and personal protection are intended for the manufacture, formulation and packaging of this product. For applications and/or use, consult the product label. The label directions supersede the text of this Safety Data Sheet for application and/or use.

Section 2. Hazards identification

Classification: Eye Damage 1
Skin irritation 2
Acute Tox. 3
Oral, Skin Sensitization I
Acute Tox. 2
Inhalation, STOT SE 3, STOT RE 1
Aquatic Acute 1
Aquatic Chronic 3

Hazard statement: Causes serious eye damage; Causes skin irritation; Toxic if swallowed; May cause an allergic skin reaction; Fatal if inhaled; May cause respiratory irritation; Cause damage to organs through prolonged or repeated exposure; Very toxic to aquatic life; Harmful to aquatic life with long lasting effects

Signal Word: Danger

Hazard Pictograms:



GHS07



GHS08



GHS09



GHS06



Precautionary statements: Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/ protective clothing/ eye protection/face protection. Rinse mouth

IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Dispose of contents/ container in accordance with local/ regional/national/international regulation

IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention Specific treatment (Reference to supplemental first aid instruction on the label). Take off contaminated clothing and wash before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Avoid breathing dust/fume/gas/mist/vapors/ spray.
Contaminated work clothing should not be allowed out of the workplace.

IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

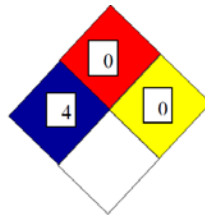
Store locked up. Do not eat, drink or smoke when using this product. Get medical advice/ attention if you feel unwell. Avoid accidental release to the environment. Wash contaminated clothing before reuse. Wear respiratory protection. Immediately call a POISON CENTER or doctor/physician. Specific treatment is urgent (see if immediate administration of antidote is required on this label). Call a POISON CENTER or doctor/physician if you feel unwell. Store in a well-ventilated place. Keep container tightly closed. Do not breathe dust/fume/ gas/mist/ vapors/spray. Use only outdoors or in a well-ventilated area.

Hazard Ratings: NFPA

Health: 4
 Flammability: 0
 Reactivity: 0

Hazard Ratings: HMIS

Health: 4
 Flammability: 0
 Reactivity: 0



Routes of Entry: Ingestion, Inhalation, eye, and dermal contact.

Section 3. Composition/information on ingredients

List of raw materials in the mixture with hazardous/non-hazardous additional

% Conc.	CAS No.	Substance Name
91.42%	85-00-7	Diquat Concentrate
8.58%	7732-18-5	Water

No major known impurity have Carcinogen, Mutagen & Reprotoxic (CMR) classification which can contribute to the Classification & Labelling of the chemical.

Section 4. First aid measures

Description of first aid measures

- General information:** Immediately remove any clothing soiled by the product. Symptoms of poisoning may even occur after several hours; medical observation for at least 48 hrs after the accident is recommended. Remove breathing apparatus only after contaminated clothing have been completely removed. In case of irregular breathing or respiratory arrest provide artificial respiration.
- Inhalation:** Remove source of contamination or move victim to fresh air. Keep victim warm and at rest. Treat symptomatically and supportively. Obtain medical advice if necessary.
- Skin contact:** Remove contaminated clothing, shoes and leather goods. Wash skin gently and thoroughly with water and non-abrasive soap. Persons who become sensitized may require specialized medical management with anti-inflammatory agents.
- Eye contact:** Immediately flush the eyes with gently flowing lukewarm water or saline solution for 20 minutes, occasionally lifting the upper and lower lids. Specialized ophthalmologic treatment might be required.
- Oral:** Do not induce emesis. Seek medical advice.
- Important Symptoms & Effects:** Possible symptoms are as per the hazard identified in section 2 of the SDS, known symptoms being skin and eye irritation, causing redness and pain.
- Immediate Medical Attention: Notes for the doctor:** There is no specific antidote. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.
- For 24-hour emergency assistance call INFOTRAC at 1-800-535-5053.

Section 5. Fire-fighting measures

Suitable Extinguishing Media: Water, foam, carbon dioxide

Special hazards arising from the chemical: Carbon oxides, Hydrogen chloride gas, nitrogen oxides (NOx)

Special protective equipment and precautions for firefighters: As in any fire, wear full protective clothing and self-contained breathing apparatus with full face piece operated in pressure-demand or other positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Protective equipment: Wear appropriate protective eyeglasses, splash goggles or chemical safety goggles and appropriate respiratory equipment. Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls as appropriate to prevent skin contact.



Emergency procedures: Remove an incapacitated worker from further exposure. Keep Personal unconscious victims warm and on their sides to avoid choking if vomiting occurs. Initiate precautions, the measures / procedures as mentioned in Section 4.

Removal of ignition sources: Disconnect electrical connection and all other sources of equipment and ignition.

Provision of sufficient ventilation: Adequate ventilation should be provided when procedures accidental release occurs.

For emergency responders: Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Do not touch the spilled material. Avoid the spread of the spillage by using adsorbents, if this can be done without risks. Ground all equipment containing material.

Methods and material for containment and cleaning up

Cleaning techniques: Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

Vacuuming techniques: Sweep or vacuum up spillage and collect in suitable container for disposal

Equipment required for containment/clean-up: Use approved industrial vacuum cleaner for removal. Shovel into suitable container for disposal.

Section 7. Handling and storage

Precautions for safe handling

Recommendations: Read label carefully before use. Avoid contact with skin, eyes or clothing. Avoid breathing dust. Remove personal protective equipment (PPE) immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Conditions for safe storage, including any incompatibilities

How to manage risks associated with storage: Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco product in the storage area. Prevent eating, drinking, tobacco use and cosmetic application in areas where there is a potential for exposure to the including any material. Wash thoroughly with soap and water after handling.

Other advice including: Do not contaminate water, food, or feed by storage or disposal. Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Section 8. Exposure controls/personal protection

Medium – AIR Specification – Work Place	
Country	Exposure limit description
Australia	Threshold limit value (TLV) Time-weighted average (TWA) = 0.5 mg/m3 Short-term exposure limit (STEL) = 1 mg/m3

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Belgium	Threshold limit value (TLV) Time-weighted average (TWA) = 0.5 mg/m ³ Short-term exposure limit (STEL) = 1 mg/m ³
Bulgaria	Maximum permissible concentration Time weighted average (TWA) = 0.5 mg/m ³
Finland	Threshold limit value (TLV) Time-weighted average (TWA) = 0.5 mg/m ³ Short-term exposure limit (STEL) = 1.5 mg/m ³
Switzerland	Maximum work-site concentration (MAK) Time-weighted average (TWA) = 0.5 mg/m ³
USA (OSHA)	Permissible exposure limit (PEL) Time-weighted average (TWA) = 0.5 mg/m ³
USA (ACGIH)	Threshold limit value (TLV) Time-weighted average (TWA) = 0.5 mg/m ³
United Kingdom	Recommended limit (RECL) 8-h time-weighted average (TWA) = 0.5 mg/m ³ Short-term exposure level (STEL) = 1 mg/m ³ (10-min time-weighted average)

Exposure Controls**Appropriate engineering controls:**

A system of general or local exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value needs to be provided. Ensure that eyewash stations and safety showers are proximal to the work-station location. Do not release to the atmosphere or water streams.

Individual protection measures:**Eye /face protection:**

Wear appropriate protective eyeglasses, splash goggles or chemical safety goggles and face shield.

Skin protection:

wear appropriate protective clothing like impervious lab coat, apron or coveralls.

Hand protection: Use compatible chemical / solvent resistant protective gloves made of suitable materials like rubber, plastic, etc.

Other: Wear appropriate boots and other footwear.

Respiratory Protection:

In case of a brief exposure or low pollution, use respiratory filter device. In case of intensive or longer exposure, use self-contained respiratory protective device. Short term filter device: Filter AX. In case of emergency spills, use a NIOSH approved respirator with any N, R, P, or HE filter.

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.
Store protective clothing separately.

Section 9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance:	Liquid
Color:	None
Auto-ignition temperature:	Not applicable
pH of liquid formulation:	4.5
Partition coefficient (n-octanol/water):	3.05
Boiling Point:	> 200°C
Bulk Density:	10.1 lb/gal at 240°C
Vapour pressure:	1.67 mPa (25°C)
Flammability (solid, gas):	Not applicable
Explosion limits:	
Lower:	Not applicable
Upper:	Not applicable
Solubility (ies):	(Water) 6.1 g/L (25°C)
Relative Density:	1.5 at 25°C

Section 10. Stability and reactivity

Reactivity	Not known
Chemical stability	Stable at normal temperature and pressure
Possibility of hazardous reactions	No information known
Conditions to avoid	Not known
Incompatible materials:	It poses a fire and explosion hazard in the presence of strong oxidizers
Hazardous decomposition products:	Thermal decomposition of diquat dibromide will release toxic oxides of nitrogen and carbon and toxic and corrosive fumes of bromides

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity:	Acute oral toxicity 4 Acute inhalation toxicity 2
Skin corrosion/irritation: Serious eye damage / irritation:	Irritant to skin in category 2 Eye irritant in category 2
Respiratory or skin sensitization:	Skin sensitizing in category 1
Carcinogenicity:	No known evidence
Reproductive toxicity:	No known evidence
STOT - single exposure:	STOT SE 1
STOT- repeated exposure:	STOT RE 1

**Numerical measures of toxicity (such as acute toxicity estimates)**

Oral LD50	120 mg/kg in rats 233 mg/ kg in mice 188 mg/ kg in rabbits.
Inhalation:	Inhalation of diquat dibromide may cause coughing and sore throat. Exposing the skin and eyes may cause redness and pain.
Neurotoxicity:	No evidence for neurotoxic effects in rats dosed up to 400 ppm ion in the diet for 13 weeks.; but symptoms of headache; confusion, excitement, mania, disorientation, emotional ability; Depression, stupor, coma, respiratory failure, often without convulsions. Intense nausea, vomiting and diarrhea may occur.
Reproductive Effects:	Mutagenicity: No evidence in the in vivo assays; Rats receiving 25 mg/kg decreased their food intake and showed slowed growth, but had unchanged reproduction.
Development Toxicity:	In rabbit studies, a small percentage of fetuses had minor defects at 3 and 10 mg ion/kg/d
Chronic/Subchronic Toxicity Studies:	Kidney weight decreases and cataracts seen in dogs at 12.5 mg ion/kg/d
Eye irritation:	Cataracts, a clouding of the eyes which interferes with light entering the eye, occurred in rats and dogs given 2 .5 mg/kg and 5 mg/kg of diquat dibromide, respectively.
Skin irritation:	The effects of repeated, or prolonged, dermal contact with diquat dibromide range from inflammation of the skin, to general bodily ('systemic') poisoning, as evidenced by injury to internal organs, primarily the kidneys. Repeated applications of 42 mg/kg of diquat dibromide killed four out of six rabbits tested. While rats fed 50 mg/kg of diquat dibromide for two years did not die from testing, their food intake and growth was decreased.
STOT RE:	Repeated inhalation exposure of rats to 1.9 mg/m ³ caused inflammatory changes in connective tissues, damage to the kidneys and heart, abnormal levels of several liver enzymes, low white blood cell counts, high red blood cell counts, and depressed cholinesterase activity.

Chemical if, listed in NTP or IARC or by OSHA as Carcinogens

Diquat dibromide is not classified as a tumor-causing chemical. An 80-week feeding study showed that dietary doses of 15 mg/kg/day of diquat dibromide did not cause tumors in rats. Likewise, dietary levels of 36 mg/kg/day for two years did not induce tumors in rats.

Other Information Product shows following danger according to internally approved calculation methods for preparation:

Very Toxic
Dangerous for the environment

Section 12. Ecological information

Eco – Toxicity

Freshwater Algae Data:	96 Hr EC50 Selenastrum capricornutum = 0.011 mg/L
Water Flea Data:	48 Hr EC50 Daphnia magna = 1.2 mg/L
Rainbow Trout	96-hour LC50 = 21 mg/L
Mirror Carp	96 hours LC50 = 67 mg/L



Persistence and Degradability

Probability of Rapid Biodegradation (BIOWIN v4.10):

- Biowin 1 (Linear Model Prediction): Biodegrades Fast
- Biowin2 (Non-Linear Model Prediction): Does Not Biodegrade Fast
- Biowin3 (Ultimate Biodegradation Timeframe): Weeks-Months
- Biowin4 (Primary Biodegradation Timeframe): Days-Weeks
- Biowin5 (MITI Linear Model Prediction): Does Not Biodegrade Fast
- Biowin6 (MITI Non-Linear Model Prediction): Does Not Biodegrade Fast
- Biowin7 (Anaerobic Model Prediction): Does Not Biodegrade Fast
- Ready Biodegradability Prediction: NO
- Ready Biodegradability Prediction: Does Not Biodegrade Fast

Bioaccumulative Potential

Summary Results:

- Log BCF (regression-based estimate): 0.50 (BCF = 3.16 L/kg wet-wt)
- Biotransformation Half-Life (days): 0.0076 (normalized to 10 g fish)
- Log BAF (Arnot-Gobas upper trophic): -0.05 (BAF = 0.893 L/kg wet-wt)

Environmental Fate (Exposure)

Persistence:

Typical half-life is 1 000 d. Diquat dibromide is highly persistent due to strong binding to clay and unavailability to microbes. Diquat dibromide in soil is not taken up by plants, so any crop can be seeded at any time after application.

Mobility:

Immobile in soil (Diquat)

Level III Fugacity Model:

	Mass Amount (%)	Half-Life (hr)	Emissions (kg/hr)
Air	1.05e-005	11	1000
Water	10.3	900	1000
Soil	84.1	1.8e+003	1000
Sediment	5.57	8.1e+004	0

- Persistence Time: 1.95e+003 hr
- Reaction Time: 2.45e+003 hr
- Advection Time: 9.56e+003 hr
- Percent Reacted: 79 .6
- Percent Advected: 20.4

Other adverse effects:

This product is not a PBT chemical

Section 13. Disposal considerations

Waste treatment containers and methods

Waste Disposal Method:

Product disposal- Pesticide wastes may be acutely hazardous. Improper disposal is a violation of federal law. Pesticide, mixtures, or equipment rinse water that cannot be chemically reprocessed must be disposed of according to applicable federal, state or local regulations. Contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional office for guidance.

Container disposal:

Dispose of product containers, waste containers, and residues according to label instructions and local, state, and federal health and environmental regulations.

Sewage disposal:

Sewage disposal shall be discouraged.

Additional Information: RCRA HAZARD CLASS: Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

Section 14. Transport information

UN Number: UN3082



UN proper shipping name: ADR: 3082 - Environmentally hazardous substance, liquid toxic, n.o.s (diquat dibromide),

DOT: Environmentally hazardous substance, liquid toxic, n.o.s (diquat dibromide)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (diquat dibromide), MARINE POLLUTANT

IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID TOXIC, N.O.S (diquat dibromide)

Transport hazard class(es): 9 Miscellaneous dangerous substance and articles

Packing group: III

Environmental hazards
(e.g., Marine pollutant): Yes

Special precautions for user: Warning: Miscellaneous dangerous substance and articles

Danger code (kemler): 90

EMS number: F-A, S-F

Quantity specification: Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code: Not applicable

Section 15. Regulatory information

Safety, health and environmental regulations/legislation

Hazard statements: Harmful if inhaled. Harmful if swallowed. Causes moderate eye irritation.

Signal word: CAUTION

Precautionary statements: Avoid breathing spray mist. Avoid contact with eyes or clothing

Other regulations:

Listed /not listed within
the following regulation

CERCLA/SARA 302 Reportable Quantity (RQ) Report product spills \geq 250 gal. (based on diquat [RQ = 1,000 lbs.] content in the formulation)

Sara- section 355 (extremely hazardous substance): Not listed



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TSCA (TOXIC SUBSTANCE CONTROL ACT) -listed
EU CLP Regulation (EC) No 1272/2008 -listed
Proposition 65 (chemical known to cause cancer): Not listed
Proposition 65 (chemical known to cause reproductive toxicity for females/ males): Not listed
U.S. EPA Carcinogens - Unlikely
TLV: ACGIH: listed
NIOSH - Ca (National Institute of Occupational Health and Safety): Not listed
OSHA - Ca (Occupational Health and Safety Administration) : Not listed

Section 16. Other information

Date of Issue: 08 June 2016

Abbreviations and acronyms:

OSHA: Occupational Safety and Health Administration
GHS: Globally harmonized system on classification and labelling
TWA: Time Weighted Average
STEL: Short Term Exposure Limit
PEL: Permissible Exposure Limits
ACGIH: American Conference of Governmental Industrial Hygienists
NIOSH: National Institute for Occupational Safety and Health
TLV: Threshold Limit Value
MARPOL: Marine pollution
IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IARC: International Agency for Research on Cancer
NTP: National Toxicology Program
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
IMDG: International Maritime Code for Dangerous Goods IATA: International Air

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