

## 1 Identification

### 1.1 Product identifier

· **Trade name: AVADEx® LIQUID EC HERBICIDE**

· **CAS Number:**

Triallate (480 g/L): 2303-17-5

Registration number: PCP Registration No.: 16759

Group 8 Herbicide

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

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

· **Manufacturer/Supplier:**

Gowan Company

P.O. Box 5569

Yuma, Arizona 85366-5569

(800) 883-1844

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

### 1.4 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 (Prosar®): (888) 478-0798

## 2 Hazard identification

### 2.1 Classification of the substance or mixture

· **Classification according to Regulation (EC) No 1272/2008**



GHS02 Flame

Flammable Liquids - Category 3 H226 Flammable liquid and vapour.



GHS09 Environment

Aquatic Acute 1

H400 Very toxic to aquatic life.

Aquatic Chronic 1

H410 Very toxic to aquatic life with long lasting effects.

### 2.2 Label elements

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labeled according to the CLP regulation.

· **Hazard pictograms**



GHS02 GHS09

· **Signal word** Warning

· **Hazard statements**

H226 Flammable liquid and vapour.

H410 Very toxic to aquatic life with long lasting effects.

· **Precautionary statements**

P210

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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- P233                    *Keep container tightly closed.*
- P240                    *Ground and bond container and receiving equipment.*
- P241                    *Use explosion-proof [electrical/ventilating/lighting] equipment.*
- P280                    *Wear protective gloves/protective clothing/eye protection/face protection.*
- P303+P361+P353 *IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].*
- P403+P235            *Store in a well-ventilated place. Keep cool.*
- P501                    *Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **Hazard description:**

**KEEP OUT OF REACH OF CHILDREN**  
**COMBUSTIBLE**  
**MAY CAUSE SKIN AND EYE IRRITATION.**  
**MAY BE HARMFUL IF SWALLOWED.**

· **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 1  
 Fire = 2  
 Reactivity = 0

**HAZARD INDEX:**

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

· **2.3 Other hazards**

- PBT: Not applicable.  
 · vPvB: Not applicable.

### 3 Composition/Information on ingredients

· **3.2 Chemical characterization: Mixtures**

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

· **Dangerous components:**

CAS: 2303-17-5	Triallate (ISO) / diisopropylthiocarbamate de S-2,3,3-tri-chloroallyle ⚠ Specific Target Organ Toxicity - Repeated Exposure - Category 2, H373; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Toxicity (Oral) - Category 4, H302; Skin Sensitizer - Category 1, H317	46.3% w/w
CAS: 64742-95-6	Solvent naphtha (petroleum), light arom. ⚠ Aspiration Hazard - Category 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ Acute Toxicity (Inhalation) - Category 4, H332; Specific Target Organ Toxicity - Single Exposure - Category 3, H335; Flammable Liquids - Category 4, H227; Aquatic Acute 2, H401	46.0% w/w

### 4 First aid measures

· **4.1 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.*

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- **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.
- **After swallowing:**
  - Call a poison control center or doctor immediately for treatment advice.
  - Have person sip a glass of water if able to swallow.
  - Do not induce vomiting unless told to do so by a poison control center or doctor.
  - Do not give anything by mouth to an unconscious person.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
This product contains petroleum distillates. Treat symptomatically.

## 5 Firefighting measures

- **5.1 Extinguishing media**
  - **Suitable extinguishing agents:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
  - **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**  
During heating or in case of fire poisonous gases are produced.
- **5.3 Advice for firefighters**
  - **Protective equipment:** Mouth respiratory protective device.

## 6 Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Do not use, pour, spill or store near heat or flame. Do not take internally. Do not get in eyes or on skin or on clothing. Wear a long-sleeved shirt and long pants, chemical-resistant gloves, socks and chemical-resistant footwear during mixing, loading, application, clean-up and repair. In addition, during clean-up and repair, wear either a respirator with a NIOSH/MSHA/BHSE approved organic-vapour-removing cartridge with a prefilter approved for pesticides OR a NIOSH/MSHA/BHSE-approved canister approved for pesticides.
- **6.2 Environmental precautions:**  
Do not allow product to reach sewage system or any water course.  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

### 7 Handling and storage

#### · 7.1 Precautions for safe handling

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or spray mist. User should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Do not use, pour, spill or store near heat or flame. Use only with adequate ventilation.

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washings.

#### · Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

#### · 7.2 Conditions for safe storage, including any incompatibilities

##### · Storage:

##### · Requirements to be met by storerooms and receptacles:

STORE ABOVE 32° F (0° C) TO KEEP FROM FREEZING.

Freezing will result in crystals, which settle to the bottom. If allowed to freeze, place in a warm room (72° F, 22° C) and gently shake the jug frequently for several days to dissolve crystals before using. For bulk containers, see the bulk container label for alternate storage information. Keep containers closed to prevent spills, evaporation and contamination.

· Information about storage in one common storage facility: Store away from foodstuffs.

· Further information about storage conditions: Keep receptacle tightly sealed.

#### · 7.3 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.

#### · 8.1 Control parameters

##### · Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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

#### · 8.2 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.

Store protective clothing separately.

##### · 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

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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.

- **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:**

Wear a long-sleeved shirt and long pants, chemical-resistant gloves, socks and chemical-resistant footwear during mixing, loading, application, clean-up and repair. In addition, during clean-up and repair, wear either a respirator with a NIOSH/MSHA/BHSE approved organic-vapour-removing cartridge with a prefilter approved for pesticides OR a NIOSH/MSHA/BHSE-approved canister approved for pesticides.

## 9 Physical and chemical properties

### · 9.1 Information on basic physical and chemical properties

#### · General Information

##### · Appearance:

- **Form:** Liquid
- **Color:** Amber to Brown
- **Odor:** Characteristic
- **Odor threshold:** Not determined.

· **pH-value at 20 °C (68 °F):** 5.2

#### · Change in condition

- **Melting point/Melting range:** Undetermined.
- **Boiling point/Boiling range:** 160 °C (320 °F)

· **Flash point:** 46 °C (114.8 °F)

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

· **Ignition temperature:** 450 °C (842 °F)

- **Decomposition temperature:** Not determined.

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

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

#### · Explosion limits:

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

· **Vapor pressure:** Not determined.

· **Density at 20 °C (68 °F):** 1.053 g/cm<sup>3</sup> (8.78729 lbs/gal)

- **Relative density** Not determined.

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- |   |  |
|---|--|
| <b>· Vapor density</b>                    | Not determined.                            |
| <b>· Evaporation rate</b>                 | Not determined.                            |
| <b>· Solubility in / Miscibility with</b> |  |
| <b>· Water:</b>                           | Dispersible.                               |
| <b>· 9.2 Other information</b>            | No further relevant information available. |

### 10 Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability** Stable under normal conditions
  - **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological information

- **11.1 Information on toxicological effects**
  - **Acute toxicity:** Based on available data, the classification criteria are not met.

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

Oral	LD50	2193 mg/kg (rat)
Dermal	LD50	>5000 mg/kg (rabbit)
Inhalative	LC50/4 h	>5.2 mg/l (rat)

- **Primary irritant effect:**
  - **on the skin:** Slightly irritating
  - **on the eye:** Moderately Irritating
- **Sensitization:** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
  - **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.

### 12 Ecological information

- **12.1 Toxicity**

This product contains a petroleum distillate which is moderately to highly toxic to aquatic organisms. Avoid contamination of aquatic habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs, ditches and wetlands) estuaries and marine habitats during application. Do not contaminate irrigation or drinking water supplies or aquatic habitats through direct application, disposal of waste or cleaning equipment.

  - **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.

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- **12.5 Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **13.1 Waste treatment methods**
  - **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable federal, provincial or municipal regulations. Keep out of drains, sewers, ditches and waterways.
  - **Uncleaned packagings:**
    - **Recommendation:**  
Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:
      1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
      2. Make the empty, rinsed container unsuitable for further use.
 If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

### 14 Transport information

- **14.1 UN-Number**
    - **DOT/TDG, ADR, IMDG, IATA** UN1268
  - **14.2 UN proper shipping name**
    - **DOT/TDG** Packages less than 450 L  
Exemption TDG 1.33  
Packages greater than 450 L  
UN1268 PETROLEUM PRODUCTS, N.O.S. (Triallate, Solvent naphtha), 3, PGIII
    - **ADR, IATA** 1268 PETROLEUM PRODUCTS, N.O.S. (Triallate, Solvent naphtha)
    - **IMDG** 1268 PETROLEUM PRODUCTS, N.O.S. (Triallate, Solvent naphtha), MARINE POLLUTANT
  - **14.3 Transport hazard class(es)**
    - **14.3 DOT/TDG (Transport dangerous goods):**
- 

- **Class** 3 Flammable liquids

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· Label	3
· ADR, IMDG	
 	
· Class	3 Flammable liquids
· Label	3
· IATA	
	
· Class	3 Flammable liquids
· Label	3
· 14.4 Packing group	III
· DOT/TDG, ADR, IMDG, IATA	
· 14.5 Environmental hazards:	Product contains environmentally hazardous substances: Triallate (ISO) / diisopropylthiocarbamate de S-2,3,3-tri-chloroallyle, Solvent naphtha (petroleum), light arom.
· Marine pollutant:	Symbol (fish and tree)
· Special marking (ADR):	Symbol (fish and tree)
· 14.6 Special precautions for user	Warning: Flammable liquids
· Danger code (Kemler):	30
· EMS Number:	F-E,S-E
· Stowage Category	A
· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable
· Transport/Additional information:	
· DOT/TDG	
· Quantity limitations	On passenger aircraft/rail: 60 L On cargo aircraft only: 220 L
· 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

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- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>· UN "Model Regulation":</li> </ul> | <ul style="list-style-type: none"> <li>Packages less than 450 L</li> <li>Exemption TDG 1.33</li> <li>Packages greater than 450 L</li> <li>UN1268 PETROLEUM PRODUCTS, N.O.S. (Triallate, Solvent naphtha), 3, PGIII</li> </ul> |
|--|---|

### 15 Regulatory information

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

· **SARA Title III**

· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

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

CAS: 2303-17-5 | Triallate (ISO) / diisopropylthiocarbamate de S-2,3,3-tri-chloroallyle

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

CAS: 64742-95-6 | Solvent naphtha (petroleum), light arom.

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

None of the ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 1%)**

None of the ingredients are listed.

· **National regulations:**

· **Additional classification according to Decree on Hazardous Materials:**

Read the label, authorized under the Pest Control Products Act, prior to using or handling the pest control product.

There are Canada-specific environmental requirements for handling, use, and disposal of this pest control product that are indicated on the label.

· **15.2 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.

· **Relevant phrases**

H227 Combustible liquid.

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

H317 May cause an allergic skin reaction.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H401 Toxic to aquatic life.

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*H410 Very toxic to aquatic life with long lasting effects.*

*H411 Toxic to aquatic life with long lasting effects.*

· **Department issuing SDS:** Supply Chain

· **Contact:** *sds@gowanco.com*

· **Date of the latest revision of the safety data sheet** 07/01/2019 / -

· **Abbreviations and acronyms:**

*IMDG: International Maritime Code for Dangerous Goods*

*DOT: US Department of Transportation*

*IATA: International Air Transport Association*

*GHS: Globally Harmonised System of Classification and Labelling of Chemicals*

*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)*

*NFPA: National Fire Protection Association (USA)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

· **\* Data compared to the previous version altered.**

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