

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 19.07.2018

Version number 1

Revision: 01.03.2018

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

- **1.1 Product identifier**
  - **Trade name: Avadex® 15G**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
  - **Sector of Use** Agriculture
  - **Application of the substance / the mixture** Agricultural Herbicide
- **1.3 Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**  
Gowan Crop Protection Limited  
Highlands House Basingstoke Road  
Spencers Wood  
Reading  
Berkshire  
England  
RG7 1NT  
Tel +44 0 1582 280390
  - **Further information obtainable from:** sds@gowanco.com
- **1.4 Emergency telephone number:**  
Chemtrec Emergency Telephone 24 - Hours: (London) +44 870 820 0418  
Outside london: +1 703 527-3887

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
  - **Classification according to Regulation (EC) No 1272/2008**



GHS08 health hazard

STOT RE 2      H373 May cause damage to organs through prolonged or repeated exposure.



GHS09 environment

Aquatic Acute 1    H400 Very toxic to aquatic life.  
Aquatic Chronic 2    H411 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 labelled according to the CLP regulation.



GHS08    GHS09

- **Signal word** Warning

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- **Hazard-determining components of labelling:**  
triallate (ISO)
- **Hazard statements**  
H373 May cause damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H411 Toxic to aquatic life with long lasting effects.
- **Precautionary statements**  
P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P273 Avoid release to the environment.  
P314 Get medical advice/attention if you feel unwell.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Additional information:**  
EUH208 Contains tri-allate (ISO). May produce an allergic reaction.  
EUH401 To avoid risk to human health and the environment, comply with instructions for use.  
SP1 Do not contaminate water with the product or its container.  
Do not clean application equipment near surface water. Avoid contamination via drains from farmyards and roads.
- **2.3 Other hazards**
  - **Results of PBT and vPvB assessment**
    - **PBT:** Not applicable.
    - **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
  - **Description:** Mixture of substances listed below with nonhazardous additions.

· <b>Dangerous components:</b>		
CAS: 2303-17-5	triallate (ISO)	15.0%
EINECS: 218-962-7	STOT RE 2, H373;  Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Skin Sens. 1, H317	
CAS: 64742-94-5	Solvent naphtha (petroleum), heavy arom.	7.5%
EINECS: 265-198-5	Asp. Tox. 1, H304;  Aquatic Chronic 2, H411	

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
  - **General information:**  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  - **After inhalation:**  
Supply fresh air and to be sure call for a doctor.  
In case of unconsciousness place patient stably in side position for transportation.
  - **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
  - **After eye contact:** Rinse opened eye for several minutes under running water.
  - **After swallowing:** If symptoms persist consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

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- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### **SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
  - **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture**  
Product may decompose in a fire to release toxic fumes.
- **5.3 Advice for firefighters**
  - **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear chemical-resistant protective clothing and self-contained breathing apparatus.
  - **Additional information**  
Prevent run-off water contaminating drains or watercourses (bund if necessary); inform appropriate authority immediately if this happens.

### **SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation (see Section 8 if this is not possible). Avoid contamination with chemical; wear personal protective equipment (see Section 8). Keep people and animals away.
- **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:**  
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.  
See Section 13 for disposal information.

### **SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Ensure appropriate measures (eg engineering controls and/or personal protective equipment) are in place to minimise exposure – see Section 8. Avoid contact with skin or eyes. Avoid inhaling dust.
  - **Information about fire - and explosion protection:** Product is non-combustible but packaging is combustible.
- **7.2 Conditions for safe storage, including any incompatibilities**
  - **Storage:**
    - **Requirements to be met by storerooms and receptacles:** No special requirements.
    - **Information about storage in one common storage facility:** Store this product away from food or feed.
    - **Further information about storage conditions:**  
Store in cool, dry conditions in well sealed receptacles.  
Store in a secure, cool, dry, designated area in original packaging, in accordance with any label storage advice. Keep children and public away. Rotate stock and check regularly for damage.

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· 7.3 **Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.· 8.1 **Control parameters**· **Ingredients 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 valid during the making 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.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **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**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **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:**

Goggles recommended during refilling

Wear goggles with side pieces.

· **Body protection:** Protective work clothing

### SECTION 9: Physical and chemical properties

· 9.1 **Information on basic physical and chemical properties**· **General Information**· **Appearance:**· **Form:**

Solid

· **Colour:**

Tan-purple

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· <b>Odour:</b>	Characteristic
· <b>pH-value at 20 °C:</b>	7.17
· <b>Change in condition</b>	
· <b>Melting point/freezing point:</b>	Undetermined.
· <b>Initial boiling point and boiling range:</b>	Undetermined.
· <b>Flash point:</b>	Not applicable.
· <b>Auto-ignition temperature:</b>	Product is not selfigniting.
· <b>Explosive properties:</b>	Product does not present an explosion hazard.
· <b>Density at 20 °C:</b>	0.87 g/cm <sup>3</sup>
· <b>Solubility in / Miscibility with</b>	
· <b>water:</b>	Soluble.
· <b>9.2 Other information</b>	No further relevant information available.

### SECTION 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.

### SECTION 11: Toxicological information

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

· <b>LD/LC50 values relevant for classification:</b>		
CAS: 2303-17-5 triallate (ISO)		
Oral	LD50	1700 mg/kg (rat)

- **Primary irritant effect:**
  - **Skin corrosion/irritation**  
Low acute toxicity: rabbit dermal LD50 >20,000 mg/kg. May cause sensitisation. In modified Draize test, mean EU scores for redness 1.25, swelling 0.25.
  - **Serious eye damage/irritation**  
Unlikely to cause irritation. In OECD 405 test, mean EU scores for conjunctival redness 1.11, conjunctival swelling 0.28, corneal opacity 0, iris lesions 0 (3 days to heal)†.
  - **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**  
Sub-chronic toxicity: Harmful: danger of serious damage to health by prolonged exposure if swallowed.

Chronic toxicity: The ingredients of this preparation are not classified by their suppliers as carcinogenic, mutagenic or toxic for reproduction under EU rules.

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
  - **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
  - **Carcinogenicity** Based on available data, the classification criteria are not met.
  - **Reproductive toxicity** Based on available data, the classification criteria are not met.

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- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure**  
May cause damage to organs through prolonged or repeated exposure.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

- **12.1 Toxicity**
  - **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability**  
May cause long-term adverse effects to the aquatic environment. For triallate, half lives are 2-3 days (water/sediment) and 35-61 days (soil, aerobic); not readily degradable, <1% degradation within 28 days in manometric respirometry test.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** Triallate adsorbs strongly to soil and is not expected to leach to groundwater.
  - **Ecotoxicological effects:**
    - **Remark:**  
Toxic for fish  
Avarian toxicity: For Triallate, bobwhite quail oral LD50 2,251 mg/kg.  
Toxicity to honey bees: For triallate, oral/contact 48 hr. LD50 >100 µg/bee.  
Toxicity to earthworms: For triallate, 14 day LC50 549 mg/kg dry soil.
- **Additional ecological information:**
  - **General notes:**  
Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water  
Do not allow product to reach ground water, water course or sewage system, even in small quantities.  
Danger to drinking water if even extremely small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies.  
Toxic for aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

## SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
  - **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
  - **Recommendation:** Disposal must be made according to official regulations.
  - **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

## SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR, IMDG, IATA** 3077

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<ul style="list-style-type: none"> <li>· <b>14.2 UN proper shipping name</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG, IATA</b></li> </ul>	<p>3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (tri-allate (ISO))</p> <p>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (tri-allate (ISO))</p>
<ul style="list-style-type: none"> <li>· <b>14.3 Transport hazard class(es)</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>  <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>	<p>9 Miscellaneous dangerous substances and articles.</p> <p>9</p>
<ul style="list-style-type: none"> <li>· <b>14.4 Packing group</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>	<p>III</p>
<ul style="list-style-type: none"> <li>· <b>14.5 Environmental hazards:</b></li> <li>· <b>Marine pollutant:</b></li> <li>· <b>Special marking (ADR):</b></li> <li>· <b>Special marking (IATA):</b></li> </ul>	<p>Product contains environmentally hazardous substances: triallate (ISO)</p> <p>Yes</p> <p>Symbol (fish and tree)</p> <p>Symbol (fish and tree)</p> <p>Symbol (fish and tree)</p>
<ul style="list-style-type: none"> <li>· <b>14.6 Special precautions for user</b></li> <li>· <b>Danger code (Kemler):</b></li> <li>· <b>EMS Number:</b></li> </ul>	<p>Warning: Miscellaneous dangerous substances and articles.</p> <p>90</p> <p>F-A,S-F</p>
<ul style="list-style-type: none"> <li>· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b></li> </ul>	<p>Not applicable.</p>
<ul style="list-style-type: none"> <li>· <b>Transport/Additional information:</b></li> </ul>	
<ul style="list-style-type: none"> <li>· <b>ADR</b></li> <li>· <b>Excepted quantities (EQ):</b></li> <li>· <b>Limited quantities (LQ)</b></li> <li>· <b>Transport category</b></li> <li>· <b>Tunnel restriction code</b></li> </ul>	<p>E1</p> <p>LQ27</p> <p>3</p> <p>E</p>
<ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>	<p>UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III</p>

### SECTION 15: Regulatory information

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

### SECTION 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**
- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.

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*H317 May cause an allergic skin reaction.**H373 May cause damage to organs through prolonged or repeated exposure.**H400 Very toxic to aquatic life.**H410 Very toxic to aquatic life with long lasting effects.**H411 Toxic to aquatic life with long lasting effects.*· **Department issuing SDS: Supply Chain**· **Abbreviations and acronyms:***RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)**ICAO: International Civil Aviation Organisation**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**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)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Acute Tox. 4: Acute toxicity – Category 4**Skin Sens. 1: Skin sensitisation – Category 1**STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2**Asp. Tox. 1: Aspiration hazard – Category 1**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**Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2*· **\* Data compared to the previous version altered.**

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