SAFETY PRECAUTIONS

Operator protection:
Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment:
WEAR SUITABLE PROTECTIVE GLOVES when handling the concentrate or contaminated surfaces.
WEAR SUITABLE PROTECTIVE COVERALLS, SUITABLE PROTECTIVE GLOVES AND RUBBER BOOTS when applying by hand-held equipment. However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection (UK only).
WHEN USING DO NOT EAT, DRINK OR SMOKE.
WASH CONCENTRATE from skin or eyes immediately.

Consumer protection:
DO NOT USE ON FOOD CROPS.

Environmental protection:
Extreme care must be taken to avoid spray drift onto non-crop plants outside of the target area.
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.
KEEP LIVESTOCK out of treated areas for at least 7 days or until foliage of any poisonous weeds such as ragwort has died and become unpalatable.

Storage and disposal:
KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.
RINSE CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinsing three times. Add washings to sprayer at time of filling and dispose of safely.

The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work (UK only).

PROFESSIONAL USE ONLY

TRIPLE RINSE, PUNCTURE AND INVERT TO DRY AT TIME OF USE

READ DIRECTIONS FOR USE ON ATTACHED LEAFLET.

PROTECT FROM FROST

1 Litre ℮

This label is compliant with the CPA Voluntary Initiative Guidance (UK only).

The Voluntary Initiative

Dow AgroSciences

(H)

Garlon® Ultra

HERBICIDE

Product Registration Number: MAPP 16211 / PCS No 04473

A soluble concentrate containing 12 g ae/litre aminopyralid (present as 23.08 g/litre aminopyralid triisopropanolammonium salt) + 120 g ae/litre triclopyr (present as 167.36 g/litre triclopyr triethylammonium).

For the control of a wide range of deep-rooted PERENNIAL, HERBACEOUS WEEDS and WOODY WEEDS on AMENITY GRASSLAND to include non-crop land such as motorway and railway embankments, roadsides and industrial areas (but excluding airfields).

Product Identifier according to Art.18 of Reg. (EC) No 1272/2008 [CLP]: GARLON®ULTRA, Triclopyr Triethylamine Salt

Warning
Causes serious eye irritation.
May cause respiratory irritation.
Avoid breathing mist/vapours/spray.
Wear protective eye/face protection.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site, except for empty clean containers which can be disposed of as non-hazardous waste.

To avoid risks to human health and the environment, comply with the instructions for use.

MAPP 16211/PCS No 04473

IMPORTANT INFORMATION
FOR USE ONLY AS AN INDUSTRIAL HERBICIDE

Crops/Situations	Maximum Individual Dose	Maximum Total Dose
Amenity grassland	4.0 litres product per hectare	4.0 litres product per hectare per year

Do not use on airfields.
Do not use on land that will be grazed by livestock.
Do not use on land within one year of sowing seed.
Do not use on land where the vegetation will be cut for animal feed, fodder or bedding nor for composting or mulching within one calendar year of treatment.
Users must have received adequate instruction, training and guidance in the safe use of the product and must take all reasonable precautions to protect the health of human beings, creatures and plants and safeguard the environment.
Read the label before use. Using this product in a manner that is inconsistent with the label may be an offence. Follow the Code of Practice for Using Plant Protection Products.

Approval holder:
Dow AgroSciences Limited
Latchmore Court, Brand Street, Hitchin, Hertfordshire. SG5 1NH.
Telephone: Hitchin (01462) 457272 Fax: (01462) 426605
24 Hour Emergency Telephone Number: +44 (0) 1553 761 251

Distributed by:
Nomix Enviro, A Division of Frontier Agriculture Ltd
The Grain Silos, Weyhill Road, Andover, Hampshire, SP10 3NT
Telephone: 01264 388050
Web: www.nomix.co.uk

nomix enviro

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DIRECTIONS FOR USE

IMPORTANT: This information is approved as part of the Product Label. All instructions within this section must be read carefully in order to obtain safe and successful use of this product.

WARNINGS

Take extreme care to avoid drift onto susceptible crops, non-target plants or waterways. Do not apply directly to, or allow spray drift to come into contact with agricultural or horticultural crops, amenity plantings, gardens, ponds, lakes or watercourses.

SENSITIVE PLANTS may be harmed by residues of GARLON ULTRA in soil and treated vegetation. Do not apply GARLON ULTRA on or adjacent to soil which may be used as garden top-soil, potting soil, etc. or to grass which may be cut and used as mulch or for compost for horticultural or garden crops. Do not use cuttings from treated grass for mulching or composting.

Cut treated grass must not be removed from site, or used for animal feed, animal bedding, composting or mulching.

Treated grass must not be used for grazing.

On level ground there is negligible lateral movement but do not apply GARLON ULTRA around desirable trees or shrubs, do not spray under the canopy and spray 1 metre at least from the trunk of desirable trees or shrubs. Care should be taken on slopes to prevent leaching into areas where desirable shrubs, etc are present.

NOTES

Grass and weeds must be actively growing to ensure good weed control and minimal check to the grass. Therefore do not spray in drought, hot or very cold weather conditions.

Do not use on grass less than one year old.

To allow maximum translocation to the roots do not cut grass for 7 days after application.

Clover will be killed by application of GARLON ULTRA.

Wash equipment thoroughly with water and detergent immediately after use.

HERBACEOUS WEED CONTROL

BROADCAST APPLICATION

WEEDS CONTROLLED, RATES OF USE AND TIMING OF APPLICATION

Weeds	Rates of use litres/ha	Optimum timing of application
Bramble[1]	4.0	Treat when the bramble is actively growing but is less than 50 cm high.
Common mugwort	4.0	Treat when the mugwort is actively growing and less than 70cm high.
Common nettle[1]	2.0	Treat when the nettles are actively growing.
Creeping thistle	4.0	Treat when the thistle is actively growing and less than 70cm high.
Hogweed[2]	4.0	Treat when the hogweed is actively growing and less than 70cm high.
Rosebay willowherb	4.0	Treat when the willowherb is actively growing and less than 15cm high.

[1] A second application may be required the following year.
[2] Moderately susceptible

WOODY AND HERBACEOUS WEED CONTROL

LOCALISED SPOT APPLICATION

WEEDS CONTROLLED, RATES OF USE AND TIMING OF APPLICATION

Weeds	Rate of use mL/10 litres of water	Optimum timing of application
Bramble	150	Up to 1 metre high.
Broom	200	Up to 1 metre high.
Buddleia	200	Up to 1 metre high.
Gorse	150	Up to 1 metre high.
Japanese knotweed	200	1 metre high, with good foliage cover.

TIMING OF APPLICATION

GARLON ULTRA should be applied between March and the end of October. The timing of application of GARLON ULTRA is crucial and for good results GARLON ULTRA must be applied to actively growing weeds.

APPLICATION

Broadcast Treatment
GARLON ULTRA should be applied through a tractor-mounted hydraulic sprayer provided it is in good working order and has been calibrated according to the manufacturers' recommendations.

Mixing
Fill the spray tank half full with water and add the required amount of GARLON ULTRA mixing well. Top up with water and continue agitation until the spray tank is full. Maintain agitation while spraying. Use the spray immediately.

Spray Volume
For overall application GARLON ULTRA should be used in a spray volume between 300L and 600L per hectare to give good coverage of the weeds. Higher water volumes are recommended where weed densities are high.

Spray Quality
Apply as a MEDIUM quality spray as defined by the BCPC system.

Spot Treatment
For localised treatment using a suitable lance from a knapsack or tractor mounted sprayer, use a solution of 150-200 mL of GARLON ULTRA depending on the target weed, per 10 litres of water. Woody weeds should be thoroughly wetted with the spray solution, but spraying until "run-off" will decrease activity. The use of flood jets is recommended to prevent drift. Care should be taken to avoid local overdosing. Woody weeds should not exceed 1 metre in height.

Dow AgroSciences Conditions of Supply
All goods supplied by us are of high grade and we believe them to be suitable but, as we cannot exercise control over their storage, handling, mixing or use, or the weather conditions before, during or after application which may affect the performance of the goods, all conditions and warranties, statutory or otherwise, as to the quality or fitness for any purpose of our goods are excluded. No responsibility will be accepted by us or re-sellers for any failure in performance, damage or injury whatsoever arising from their storage, handling, application or use. These conditions cannot be varied by our staff or agents whether or not they supervise or assist in the use of such goods.

Safety Data Sheet

This Safety Data Sheet does not form part of the approved product label.

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier
Product name: Garlon® Ultra Herbicide

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Plant Protection Product

1.3 Details of the supplier of the safety data sheet
COMPANY IDENTIFICATION
DOW AGROSCIENCES LIMITED
LATCHMORE COURT
BRAND STREET
HITCHIN
England
SG5 1NH
UNITED KINGDOM

Customer Information Number:

SDSQuestion@dow.com

1.4 EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: 00 31 115 694 982
Local Emergency Contact: 00 31 115 694 982

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008:
Eye irritation - Category 2 - H319
Specific target organ toxicity - single exposure - Category 3 - inhalation (vapour) - H335
For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification according to EU Directives 67/548/EEC or 1999/45/EC:
Repr.Cat.3 - R63
Dangerous for the environment - R52/53
For the full text of the R-phrases mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008:

Hazard pictograms

Signal word: WARNING

Hazard statements
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Supplemental Hazard Statements
EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary statements
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P280 Wear eye protection/ face protection.
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.
P337 + P313 If eye irritation persists: Get medical advice/ attention
P501 Dispose of contents/container to a licensed waste disposal contractor or collection site except for empty clean triple rinsed containers which can be disposed of as non-hazardous waste.

Contains Triclopyr Triethylamine Salt

2.3 Other hazards
no data available

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

This product is a mixture.

CASRN / EC-No. / Index-No.	REACH Registration Number	Concentration	Component	Classification: REGULATION (EC) No 1272/2008
CASRN 57213-69-1 **EC-No.** 260-625-1 **Index-No.** –	–	16.2%	Triclopyr Triethylamine Salt	Flam. Liq. - 3 - H226 Eye Irrit. - 2 - H319 STOT SE - 3 - H335
CASRN 566191-89-7 **EC-No.** Not available **Index-No.** –	–	2.2%	Aminopyralid Triisopropanolamine Salt	Not classified
CASRN 69029-39-6 **EC-No.** Polymer **Index-No.** –	–	< 1.0 %	Alkylphenol alkoxylate	Aquatic Chronic - 2 - H411

If present in this product, any not classified components disclosed above for which no country specific OEL value(s) is(are) indicated under Section 8, are being disclosed as voluntarily disclosed components.
For the full text of the H-Statements mentioned in this Section, see Section 16.

CASRN / EC-No. / Index-No.	Concentration	Component	Classification: 67/548/EEC
CASRN 57213-69-1 **EC-No.** 260-625-1 **Index-No.** –	16.2%	Triclopyr Triethylamine Salt	R10 Xi - R36/37
CASRN 566191-89-7 **EC-No.** Not available **Index-No.** –	2.2%	Aminopyralid Triisopropanolamine Salt	Not classified
CASRN 69029-39-6 **EC-No.** Polymer **Index-No.** –	< 1.0 %	Alkylphenol alkoxylate	N - R51/53

If present in this product, any not classified components disclosed above for which no country specific OEL value(s) is(are) indicated under Section 8, are being disclosed as voluntarily disclosed components.
For the full text of the R-phrases mentioned in this Section, see Section 16.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures
General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control centre or doctor for treatment advice.

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

Eye contact: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control centre or doctor for treatment advice. Suitable emergency eye wash facility should be available in work area.

Ingestion: 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 the poison control centre or doctor. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed: Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

4.3 Indication of any immediate medical attention and special treatment needed
Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control centre or doctor, or going for treatment.

SECTION 5. FIREFIGHTING MEASURES

5.1 Extinguishing media
Suitable extinguishing media: To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical or foam. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. General purpose synthetic foams (including AFFF type) or protein foams are preferred if available. Alcohol resistant foams (ATC type) may function.

Unsuitable extinguishing media: no data available

5.2 Special hazards arising from the substance or mixture
Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Nitrogen oxides. Hydrogen chloride. Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: This material will not burn until the water has evaporated. Residue can burn. May produce flash fire. If exposed to fire from another source and water is evaporated, exposure to high temperatures may cause toxic fumes.

5.3 Advice for firefighters
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical or foam. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to section 7, Handling, for additional precautionary measures. No smoking in area. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

6.2 Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

6.3 Methods and materials for containment and cleaning up: Contain spilled material if possible. Small spills: Absorb with materials such as: Clay. Dirt. Sand. Sweep up. Large spills: Contact Dow AgroSciences for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

6.4 Reference to other sections: References to other sections, if applicable, have been provided in the previous sub-sections.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling: Keep away from heat, sparks and flame. Containers, even those that have been emptied, can contain vapours. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Keep out of reach of children. Do not swallow. Avoid breathing vapour or mist. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Use with adequate ventilation.

7.2 Conditions for safe storage, including any incompatibilities: Store in a dry place. Store in original container. Keep container tightly closed when not in use. Do not store near food, foodstuffs, drugs or potable water supplies.

7.3 Specific end use(s): Refer to product label.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Triclopyr Triethylamine Salt	Dow IHG	TWA	2 mg/m3
	Dow IHG	TWA	SKIN, DSEN
Alkylphenol alkoxylate	Dow IHG	TWA	2 mg/m3

RECOMMENDATIONS IN THIS SECTION ARE FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

8.2 Exposure controls
Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations.

Individual protection measures
Eye/face protection: Use chemical goggles. Chemical goggles should be consistent with EN 166 or equivalent.
Skin protection
Hand protection: Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 4 or higher (breakthrough time greater than 120 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to EN 374) is recommended. Glove thickness alone is not a good indicator of the level of protection a glove provides against a chemical substance as this level of protection is also highly dependent on the specific composition of the material that the glove is fabricated from. The thickness of the glove must, depending on model and type of material, generally be more than 0.35 mm to offer sufficient protection for prolonged and frequent contact with the substance. As an exception to this general rule it is known that multilayer laminate gloves may offer prolonged protection at thicknesses less than 0.35 mm. Other glove materials with a thickness of less than 0.35 mm may offer sufficient protection when only brief contact is expected. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/ specifications provided by the glove supplier.

Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator.
Use the following CE approved air-purifying respirator: Organic vapor cartridge with a particulate pre-filter, type AP2.

Environmental exposure controls
See SECTION 7: Handling and storage and SECTION 13: Disposal considerations for measures to prevent excessive environmental exposure during use and waste disposal.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	
Physical state	Liquid.
Colour	Red to brown
Odour	Mild
Odour Threshold	No test data available
pH	7.3
Melting point/range	Not applicable
Freezing point	No test data available
Boiling point (760 mmHg)	No test data available
Flash point	**closed cup** 78.8 °C *Closed Cup*
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammability (solid, gas)	Not Applicable
Lower explosion limit	No test data available
Upper explosion limit	No test data available
Vapour Pressure	No test data available
Relative Vapour Density (air = 1)	No test data available
Relative Density (water = 1)	1.0528 *Unspecified*
Water solubility	Soluble
Partition coefficient: n-octanol/water	no data available
Auto-ignition temperature	*92/69/EEC A15* none below 400 degC
Decomposition temperature	No test data available
Dynamic Viscosity	< 3 mPa.s
Kinematic Viscosity	No test data available
Explosive properties	No
Oxidizing properties	No

9.2 Other information

Liquid Density	1.0528 g/cm3*Digital density meter*
Molecular weight	no data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity: No dangerous reaction known under conditions of normal use.

10.2 Chemical stability: Thermally stable at recommended temperatures and pressures.

10.3 Possibility of hazardous reactions: Polymerization will not occur.

10.4 Conditions to avoid: Active ingredient decomposes at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.

10.5 Incompatible materials: Avoid contact with: Oxidizers.

10.6 Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Hydrogen chloride. Nitrogen oxides. Toxic gases are released during decomposition.

SECTION 11. TOXICOLOGICAL INFORMATION

Toxicological information on this product or its components appear in this section when such data is available.

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity
Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

As product:
LD50, Rat, female, 3,752 mg/kg

Acute dermal toxicity
Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product:
LD50, Rat, > 5,000 mg/kg

Acute inhalation toxicity
Prolonged exposure is not expected to cause adverse effects. Based on the available data, respiratory irritation was not observed.

As product:
LC50, Rat, 4 Hour, dust/mist, > 5.34 mg/l No deaths occurred at this concentration.

Skin corrosion/irritation
Brief contact may cause skin irritation with local redness.

Serious eye damage/eye irritation
May cause moderate eye irritation.
May cause slight corneal injury.

Sensitization
Did not demonstrate the potential for contact allergy in mice.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Contains component(s) which are classified as specific target organ toxicant, single exposure, category 3.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
For similar active ingredient(s).
Triclopyr.
Aminopyralid.
In animals, effects have been reported on the following organs:
Kidney.
Liver.
Gastrointestinal tract.

Carcinogenicity
For similar active ingredient(s). Triclopyr. Aminopyralid. Did not cause cancer in laboratory animals.

Teratogenicity
For similar active ingredient(s). Triclopyr. Aminopyralid. Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

Reproductive toxicity
For similar active ingredient(s). Triclopyr. In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

For similar active ingredient(s). Aminopyralid. In animal studies, did not interfere with reproduction.

Mutagenicity
For similar active ingredient(s). Aminopyralid. Triclopyr. In vitro genetic toxicity studies were predominantly negative. Animal genetic toxicity studies were negative.

Aspiration Hazard
Based on available information, aspiration hazard could not be determined.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicological information on this product or its components appear in this section when such data is available.

12.1 Toxicity

Acute toxicity to fish
Material is toxic to aquatic organisms (LC50/EC50/IC50 between 1 and 10 mg/L in the most sensitive species).

LC50, Oncorhynchus mykiss (rainbow trout), flow-through test, 96 Hour, > 800 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), flow-through test, 48 Hour, > 800 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants
ErC50, diatom Navicula sp., 96 Hour, Growth rate inhibition, > 100 mg/l, Method Not Specified.

ErC50, Myriophyllum spicaturn, 14 d, > 1 mg/l

Toxicity to Above Ground Organisms
Material is slightly toxic to birds on an acute basis (LD50 between 501 and 2000 mg/kg).

oral LD50, Colinus virginianus (Bobwhite quail), 1839mg/kg bodyweight.

oral LD50, Apis mellifera (bees), 48 Hour, 133.0micrograms/bee

contact LD50, Apis mellifera (bees), 48 Hour, > 191.6micrograms/bee

Toxicity to soil-dwelling organisms
LC50, Eisenia fetida (earthworms), 14 d, > 0.3508 mg/kg

12.2 Persistence and degradability

Triclopyr Triethylamine Salt
Biodegradability: For similar active ingredient(s). Triclopyr. Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

Aminopyralid Triisopropanolamine Salt
Biodegradability: For similar material(s): Aminopyralid. Material is not readily biodegradable according to OECD/EEC guidelines.

Alkylphenol alkoxylate
Biodegradability: Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

12.3 Bioaccumulative potential

Triclopyr Triethylamine Salt
Bioaccumulation: For similar active ingredient(s). Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Aminopyralid Triisopropanolamine Salt
Bioaccumulation: For similar active ingredient(s). Aminopyralid. Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Alkylphenol alkoxylate
Bioaccumulation: No bioconcentration is expected because of the relatively high water solubility. May foam in water.

12.4 Mobility in soil

Triclopyr Triethylamine Salt
For similar active ingredient(s).
Potential for mobility in soil is very high (Koc between 0 and 50).

Aminopyralid Triisopropanolamine Salt
For similar active ingredient(s).
Aminopyralid.
Potential for mobility in soil is very high (Koc between 0 and 50).

Alkylphenol alkoxylate
No data available.

12.5 Results of PBT and vPvB assessment

Triclopyr Triethylamine Salt
This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Aminopyralid Triisopropanolamine Salt
This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Alkylphenol alkoxylate
This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

12.6 Other adverse effects

Triclopyr Triethylamine Salt
This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

Aminopyralid Triisopropanolamine Salt
No relevant data found.

Alkylphenol alkoxylate
This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

The definitive assignment of this material to the appropriate EWC group and thus its proper EWC code will depend on the use that is made of this material. Contact the authorized waste disposal services.

SECTION 14. TRANSPORT INFORMATION

Classification for ROAD and Rail transport (ADR/RID):

14.1 UN number	Not applicable
14.2 Proper shipping name	Not regulated for transport
14.3 Class	Not applicable
14.4 Packing group	Not applicable
14.5 Environmental hazards	Not considered environmentally hazardous based on available data.
14.6 Special precautions for user	No data available.

Classification for SEA transport (IMO-IMDG):

14.1 UN number	Not applicable
14.2 Proper shipping name	Not regulated for transport
14.3 Class	Not applicable
14.4 Packing group	Not applicable
14.5 Environmental hazards	Not considered as marine pollutant based on available data.
14.6 Special precautions for user	No data available.
14.7 Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

14.1 UN number	Not applicable
14.2 Proper shipping name	Not regulated for transport
14.3 Class	Not applicable
14.4 Packing group	Not applicable
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	No data available.

This information is not intended to convey all specific regulatory or operational requirements/ information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

SECTION 15. REGULATORY INFORMATION

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

REACh Regulation (EC) No 1907/2006
This product contains only components that have been either pre-registered, registered, are exempt from registration, are regarded as registered or are not subject to registration according to Regulation (EC) No. 1907/2006 (REACH)., The aforementioned indications of the REACH registration status are provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. It is the buyer´s/user´s responsibility to ensure that his/her understanding of the regulatory status of this product is correct.

Other regulations
Registration Number: MAPP 16211/ PCS NO. 04473

15.2 Chemical Safety Assessment
For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

SECTION 16. OTHER INFORMATION

Other information
The data given in this Safety Data Sheet are recognized as valid and approved by our company. The national Competent Authority has determined its classification based on other criteria. Our company abides by the applicable national decision and has therefore implemented the mandated classifications, however, the approved company data will still be presented.

Full text of H-Statements referred to under sections 2 and 3.

H226	Flammable liquid and vapour.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H411	Toxic to aquatic life with long lasting effects.

Full text of R-phrases referred to under sections 2 and 3

R10	Flammable.
R36/37	Irritating to eyes and respiratory system.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R63	Possible risk of harm to the unborn child.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) No 1272/2008
Eye Irrit. - 2 - H319 - On basis of test data.
STOT SE - 3 - H335 - Calculation method

Revision
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Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

Dow IHG	Dow Industrial Hygiene Guideline
SKIN, DSEN	Absorbed via Skin, Skin Sensitizer
TWA	Time Weighted Average (TWA):

Information Source and References
This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

DOW AGROSCIENCES LIMITED urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

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SAFETY PRECAUTIONS

Operator protection:
Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment:
WEAR SUITABLE PROTECTIVE GLOVES when handling the concentrate or contaminated surfaces.
WEAR SUITABLE PROTECTIVE COVERALLS, SUITABLE PROTECTIVE GLOVES AND RUBBER BOOTS when applying by hand-held equipment. However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection (UK only).
WHEN USING DO NOT EAT, DRINK OR SMOKE.
WASH CONCENTRATE from skin or eyes immediately.

Consumer protection:
DO NOT USE ON FOOD CROPS.

Environmental protection:
Extreme care must be taken to avoid spray drift onto non-crop plants outside of the target area.
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.
KEEP LIVESTOCK out of treated areas for at least 7 days or until foliage of any poisonous weeds such as ragwort has died and become unpalatable.

Storage and disposal:
KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.
RINSE CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinsing three times. Add washings to sprayer at time of filling and dispose of safely.

The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work (UK only).

PROFESSIONAL USE ONLY

TRIPLE RINSE, PUNCTURE AND INVERT TO DRY AT TIME OF USE

READ DIRECTIONS FOR USE ON ATTACHED LEAFLET.

PROTECT FROM FROST

1 Litre ℮

This label is compliant with the CPA Voluntary Initiative Guidance (UK only).

The Voluntary Initiative

Dow AgroSciences

(H)

Garlon® Ultra

HERBICIDE

Product Registration Number: MAPP 16211 / PCS No 04473

A soluble concentrate containing 12 g ae/litre aminopyralid (present as 23.08 g/litre aminopyralid triisopropanolammonium salt) + 120 g ae/litre triclopyr (present as 167.36 g/litre triclopyr triethylammonium).

For the control of a wide range of deep-rooted PERENNIAL, HERBACEOUS WEEDS and WOODY WEEDS on AMENITY GRASSLAND to include non-crop land such as motorway and railway embankments, roadsides and industrial areas (but excluding airfields).

Product Identifier according to Art.18 of Reg. (EC) No 1272/2008 [CLP]: GARLON®ULTRA, Triclopyr Triethylamine Salt

Warning
Causes serious eye irritation.
May cause respiratory irritation.
Avoid breathing mist/vapours/spray.
Wear protective eye/face protection.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site, except for empty clean containers which can be disposed of as non-hazardous waste.

To avoid risks to human health and the environment, comply with the instructions for use.

MAPP 16211/PCS No 04473

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IMPORTANT INFORMATION
FOR USE ONLY AS AN INDUSTRIAL HERBICIDE

Crops/Situations	Maximum Individual Dose	Maximum Total Dose
Amenity grassland	4.0 litres product per hectare	4.0 litres product per hectare per year

Do not use on airfields.
Do not use on land that will be grazed by livestock.
Do not use on land within one year of sowing seed.
Do not use on land where the vegetation will be cut for animal feed, fodder or bedding nor for composting or mulching within one calendar year of treatment.
Users must have received adequate instruction, training and guidance in the safe use of the product and must take all reasonable precautions to protect the health of human beings, creatures and plants and safeguard the environment.
Read the label before use. Using this product in a manner that is inconsistent with the label may be an offence. Follow the Code of Practice for Using Plant Protection Products.

Approval holder:
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