Dow AgroSciences (Australia) Ltd. encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. Product and Company Identification

Product Name

Grazon™ Extra Herbicide

COMPANY IDENTIFICATION

Dow AgroSciences (Australia) Ltd.
A Subsidiary of The Dow Chemical Company
ABN 24 003 771 659
Level 5
20 Rodborough Rd
Frenchs Forest, NSW 2086
Australia

Customer Information Number: 1800-700-096
auscustomerservice@dow.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 61 3 9663 2130
Local Emergency Contact: 1800 033 882
For advice, contact a doctor (at once) or the Australian Poisons Information Centre: 131 126

Transport Emergencies Only Dial 000

2. Hazards Identification

HAZARDOUS SUBSTANCES CLASSIFICATION: Classified as hazardous to health according to the criteria of the National Occupational Health and Safety Commission, Australia

Risk Phrases:
R36 – Irritating to eyes
R50 – Very toxic to aquatic organisms

Safety Phrases:
S2: Keep out of reach of children
S20/21: When using do not eat, drink or smoke
S24/25: Avoid contact with skin and eyes
S37/39: Wear suitable gloves and eye/face protection
S28: Avoid contact with skin; wash immediately with plenty of water
S3/9/49: Keep only in the original container in a cool, well-ventilated place
S35: The material and its container must be disposed of in a safe way
S29: Do not empty into drains
S61: Avoid release to the environment. Refer to special instructions in Section 6,7 and 13 below

3. Composition Information

Component	Amount	Classification:	CAS #
Triclopyr-2-butoxyethyl ester	36.1 %	Not classified.	64700-56-7
Picloram	8.7 %	Not classified.	1918-02-1
Aminopyralid	0.7 %	Not classified.	150114-71-9
Diethylene glycol monoethyl ether	> 30.0 - < 40.0 %	Not classified.	111-90-0

See Section 16 for full text of R-phrases.

4. First Aid Procedures

Consult the Poisons Information Centre (131126) or a doctor in every case of suspected chemical poisoning. Never give fluids or induce vomiting if a patient is unconscious or convulsing regardless of cause of injury. If breathing difficulties occur seek medical attention immediately. Description of first aid measures

Inhalation: Move person to fresh air; if effects occur, consult a physician.
Skin Contact: Wash skin with plenty of water.
Eye Contact: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist.
Ingestion: Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.

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.

Indication of immediate medical attention and special treatment needed

If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. The decision of whether to induce vomiting or not should be made by a physician. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. Fire Fighting Measures

Suitable extinguishing media

Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

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 fluoride. Carbon monoxide. Carbon dioxide.
Unusual Fire and Explosion Hazards: Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

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. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution

with water. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. 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.
See Section 9 for related Physical Properties

HAZCHEM: •2X

6. Accidental Release Measures

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.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.
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. Collect in suitable and properly labeled containers. Large spills: Contact Dow AgroSciences for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

7. Handling and Storage

Handling
General Handling: Keep away from heat, sparks and flame. Containers, even those that have been emptied, can contain vapors. 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 vapor or mist. Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Wash thoroughly after handling. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Storage
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.

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
Picloram	ACGIH	TWA	10 mg/m3
	AU OEL	TWA	10 mg/m3
Diethylene glycol monoethyl ether	AIHA WEEL	TWA	140 mg/m3 25 ppm
Triclopyr-2-butoxyethyl ester	Dow IHG	TWA	2 mg/m3 D-SEN
Aminopyralid	Dow IHG	TWA	10 mg/m3

It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposures should be considered.
A "skin" notation following the inhalation exposure guideline refers to the potential for dermal absorption of the material including mucous membranes and the eyes either by contact with vapors or by direct skin contact.

Personal Protection

Eye/Face Protection: Use chemical goggles.
Skin Protection: Wear clean, body-covering clothing.
Hand protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Use chemical resistant gloves classified under standard AS/NZS 2161.10: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to AS/NZS 2161.10) is recommended. When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to AS/NZS 2161.10) is recommended. 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.
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. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.
Ingestion: Avoid ingestion of even very small amounts; do not consume or store food or tobacco in the work area; wash hands and face before smoking or eating.

Engineering Controls

Ventilation: 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. Local exhaust ventilation may be necessary for some operations.

Other Information

Selection and use of personal protective equipment should be in accordance with the recommendations in one or more of the relevant Australian/New Zealand Standards, including:
AS/NZS 1336: Recommended practices for eye protection in the industrial environment.
AS/NZS 1337: Eye protectors for industrial applications.
AS/NZS 1715: Selection, use and maintenance of respiratory protective devices.
AS/NZS 2161: Occupational protective gloves.
AS/NZS 2210: Occupational protective footwear.
AS 2919: Industrial clothing.

9. Physical and Chemical Properties

Appearance	
Physical State	Liquid.
Color	Brown
Odor	Ester
Odor Threshold	No test data available
pH	No test data available
Melting Point	Not applicable
Freezing Point	No test data available
Boiling Point (760 mmHg)	200 °C *Estimated.* .

Flash Point - Closed Cup	82 °C *Closed Cup*
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammable Limits In Air	**Lower**: No test data available **Upper**: No test data available
Vapor Pressure	No test data available
Vapor Density (air = 1)	No test data available
Specific Gravity (H2O = 1)	1.148 *Unspecified*
Solubility in water (by weight)	emulsifiable
Autoignition Temperature	No test data available
Decomposition Temperature	
Dynamic Viscosity	No test data available
Kinematic Viscosity	No test data available
Liquid Density	1.148 g/cm3 *Literature*

10. Stability and Reactivity

Reactivity
No dangerous reaction known under conditions of normal use.

Chemical stability
Thermally stable at recommended temperatures and pressures.

Possibility of hazardous reactions
Polymerization will not occur.

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

Incompatible Materials: Avoid contact with: Acids. Bases. Oxidizers.

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: Carbon monoxide. Carbon dioxide. Hydrogen fluoride. Nitrogen oxides. Toxic gases are released during decomposition.

11. Toxicological Information

Acute Toxicity
Ingestion

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.
Single dose oral LD50 has not been determined. For similar material(s): LD50, rat, male > 3,383 mg/kg
Single dose oral LD50 has not been determined. For similar material(s): LD50, rat, female 2,525 mg/kg

Aspiration hazard

Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia.

Dermal

Prolonged skin contact is unlikely to result in absorption of harmful amounts.
The dermal LD50 has not been determined. Estimated. Based largely or completely on information for similar material(s). LD50, rabbit > 2,000 mg/kg

Inhalation

No adverse effects are anticipated from single exposure to vapor. No adverse effects are anticipated from single exposure to mist.
The LC50 has not been determined. Based largely or completely on information for similar material(s).
LC50, 4 h, rat > 5.0 mg/l

Eye damage/eye irritation
May cause moderate eye irritation. May cause corneal injury.

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

Sensitization
Skin
Prolonged or frequently repeated skin contact may cause allergic skin reactions in some individuals.

Repeated Dose Toxicity
In animals, effects have been reported on the following organs: For the active ingredient(s): Kidney. Liver. For the solvent(s): Blood. Kidney. Liver. Testes.

Chronic Toxicity and Carcinogenicity
For the active ingredient(s): For the solvent(s): Did not cause cancer in laboratory animals. For the minor component(s): In long-term animal studies with ethylene glycol butyl ether, small but statistically significant increases in tumors were observed in mice but not rats. The effects are not believed to be relevant to humans. If the material is handled in accordance with proper industrial handling procedures, exposures should not pose a carcinogenic risk to man.

Developmental Toxicity
For the active ingredient(s): Triclopyr butoxyethyl ester. Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals. For the active ingredient(s): Picloram. Aminopyralid. Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother. For the solvent(s): Did not cause birth defects in laboratory animals.

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 the active ingredient(s): Picloram. Aminopyralid. In animal studies, did not interfere with reproduction.

Genetic Toxicology
For the active ingredient(s): In vitro genetic toxicity studies were predominantly negative. Animal genetic toxicity studies were negative.

12. Ecological Information

Toxicity

Data for Component: **Triclopyr-2-butoxyethyl ester**

Material is very toxic to aquatic organisms (LC50/EC50/IC50 below 1 mg/L in the most sensitive species). Material is slightly toxic to birds on an acute basis (LD50 between 501 and 2000 mg/kg). Material is slightly toxic to birds on a dietary basis (LC50 between 1001 and 5000 ppm).

Fish Acute & Prolonged Toxicity
LC50, Lepomis macrochirus (Bluegill sunfish), flow-through test, 96 h: 0.36 mg/l
LC50, fish, 96 h: 0.310 mg/l
Aquatic Invertebrate Acute Toxicity
EC50, Daphnia magna (Water flea), 48 h, immobilization: 2.9 mg/l
Aquatic Plant Toxicity
ErC50, Pseudokirchneriella subcapitata (green algae), Growth rate inhibition, 96 h: > 3.00 mg/l
EbC50, diatom Navicula sp., biomass growth inhibition, 120 h: 0.193 mg/l
EbC50, Lemna gibba, biomass growth inhibition: 2.2 mg/l
Fish Chronic Toxicity Value (ChV)
rainbow trout (Oncorhynchus mykiss), NOEC:0.0263 mg/l
Aquatic Invertebrates Chronic Toxicity Value
Daphnia magna (Water flea), 21 d, number of offspring, NOEC: 1.6 mg/l
Toxicity to Above Ground Organisms
oral LD50, Colinus virginianus (Bobwhite quail): 735 mg/kg bodyweight.
dietary LC50, Colinus virginianus (Bobwhite quail): 1890 mg/kg diet.
oral LD50, Apis mellifera (bees): > 110 ug/bee
contact LD50, Apis mellifera (bees): > 100 ug/bee
Toxicity to Soil Dwelling Organisms
LC50, Eisenia fetida (earthworms), 14 d: > 521 mg/kg

Data for Component: **Picloram**

Material is toxic to aquatic organisms (LC50/EC50/IC50 between 1 and 10 mg/L in the most sensitive species). Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg).

Fish Acute & Prolonged Toxicity
LC50, Oncorhynchus mykiss (rainbow trout), static test, 96 h: 8.8 mg/l
Aquatic Invertebrate Acute Toxicity
EC50, Daphnia magna (Water flea), 48 h, immobilization: 44.2 mg/l
LC50, saltwater mysid Mysidopsis bahia, semi-static test, 96 h: 26.0 mg/l
Aquatic Plant Toxicity
ErC50, Pseudokirchneriella subcapitata (green algae), Growth rate inhibition, 72 h: > 78.7 mg/l
EC50, Lemna gibba, Growth inhibition, 14 d: 102 mg/l
Toxicity to Micro-organisms
EC50, activated sludge test (OECD 209), Respiration inhibition, 3 h: > 100 mg/l
Fish Chronic Toxicity Value (ChV)
rainbow trout (Oncorhynchus mykiss), flow-through test, 8 d, NOEC:0.55 mg/l
Aquatic Invertebrates Chronic Toxicity Value
Daphnia magna (Water flea), static test, 21 d, number of offspring, NOEC: 6.79 mg/l, LOEC: 13.5 mg/l
Toxicity to Above Ground Organisms
oral LD50, Anas platyrhynchos (Mallard duck): > 2510 mg/kg bodyweight.
oral LD50, Apis mellifera (bees): > 74 micrograms/bee
contact LD50, Apis mellifera (bees): > 100 micrograms/bee
Toxicity to Soil Dwelling Organisms
LC50, Eisenia fetida (earthworms), 14 d: > 5,000 mg/kg

Data for Component: **Aminopyralid**

Material is very toxic to aquatic organisms (LC50/EC50/IC50 below 1 mg/L in the most sensitive species). Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg). Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm).

Fish Acute & Prolonged Toxicity
LC50, Oncorhynchus mykiss (rainbow trout), 96 h: > 100 mg/l
Aquatic Invertebrate Acute Toxicity
EC50, Daphnia magna (Water flea), 48 h, immobilization: > 100 mg/l
EC50, eastern oyster (Crassostrea virginica), 96 h, shell growth inhibition: > 89 mg/l
Aquatic Plant Toxicity
ErC50, diatom Navicula sp., 72 h: 18 mg/l
EC50, Lemna gibba, 14 d: > 88 mg/l
ErC50, Other, 14 d: 0.363 mg/l
Toxicity to Micro-organisms
; Bacteria: > 1,000 mg/l
Fish Chronic Toxicity Value (ChV)
Pimephales promelas (fathead minnow), flow-through test, 36 d, growth, NOEC:1.36 mg/l
Cyprinodon variegatus (sheepshead minnow), NOEC:0.1 mg/l
Aquatic Invertebrates Chronic Toxicity Value
water flea Daphnia magna, NOEC: 100 mg/l
Toxicity to Above Ground Organisms
dietary LC50, Colinus virginianus (Bobwhite quail): > 5620 mg/kg diet.
oral LD50, Colinus virginianus (Bobwhite quail): > 2250 mg/kg bodyweight.
oral LD50, Apis mellifera (bees): > 120 micrograms/bee
contact LD50, Apis mellifera (bees): > 100 micrograms/bee
Toxicity to Soil Dwelling Organisms
LC50, Eisenia fetida (earthworms), 14 d: > 1,000 mg/kg

Data for Component: **Diethylene glycol monoethyl ether**

Material is not classified as dangerous to aquatic organisms (LC50/EC50/IC50/LL50/EL50 greater than 100 mg/L in most sensitive species).

Fish Acute & Prolonged Toxicity
LC50, Ictalurus catus (catfish), flow-through test, 96 h: 6,010 mg/l
Aquatic Invertebrate Acute Toxicity
LC50, Daphnia magna (Water flea), static test, 48 h, mortality: 1,982 mg/l

Aquatic Plant Toxicity
Based on information for a similar material: ErC50, Desmodesmus subspicatus (green algae), static test, Growth rate inhibition, 96 h: > 100 mg/l
Toxicity to Micro-organisms
EC10; Bacteria, 16 h: 4,000 mg/l

Persistence and Degradability

Data for Component: **Triclopyr-2-butoxyethyl ester**

Chemical degradation (hydrolysis) is expected in the environment. Material is expected to biodegrade only very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.
Stability in Water (1/2-life):
8.7 d; 25 °C; pH 7
OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
18 %	28 d	OECD 301B Test	fail

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
2.3E-11 cm3/s	5.6 h	Estimated.

Theoretical Oxygen Demand: 1.21 mg/mg

Data for Component: **Picloram**

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. Biodegradation may occur under aerobic conditions (in the presence of oxygen). Surface photodegradation is expected with exposure to sunlight.
Stability in Water (1/2-life):
> 1.8 y; 45 °C; pH 5 - 9;Measured
OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
1.95 %	28 d	OECD Test Guideline 301	fail

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
8.5E-13 cm3/s	12.5 h	Measured

Data for Component: **Aminopyralid**

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.
Stability in Water (1/2-life):
; 20 °C; pH 5 - 9;Stable
; 50 °C; pH 5 - 9;Stable
OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
19.5 %	28 d	OECD Test Guideline 301	fail

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
1.6646E-12 cm3/s	6.4 d	Estimated.

Data for Component: **Diethylene glycol monoethyl ether**

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% biodegradation in OECD test(s) for inherent biodegradability).
OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
90 %	28 d	OECD 301E Test	pass

> 90 %	5.5 d	OECD 302B Test	Not applicable

Bioaccumulative potential

Data for Component: **Triclopyr-2-butoxyethyl ester**

Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).
Partition coefficient, n-octanol/water (log Pow): 4.62
Bioconcentration Factor (BCF): 110; fish

Data for Component: **Picloram**

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient, n-octanol/water (log Pow): -1.92
Bioconcentration Factor (BCF): 0.54; Lepomis macrochirus (Bluegill sunfish)

Data for Component: **Aminopyralid**

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient, n-octanol/water (log Pow): -2.87

Data for Component: **Diethylene glycol monoethyl ether**

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient, n-octanol/water (log Pow): -0.54 Measured

Mobility in soil

Data for Component: **Triclopyr-2-butoxyethyl ester**

Mobility in soil: Calculation of meaningful sorption data was not possible due to very rapid degradation in the soil., For the degradation product:, Triclopyr., Potential for mobility in soil is very high (Koc between 0 and 50).
Henry's Law Constant (H): 2.9E-03 Pa*m3/mole.

Data for Component: **Picloram**

Mobility in soil: Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient, soil organic carbon/water (Koc): 35Data for Component: **Aminopyralid**

Mobility in soil: Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient, soil organic carbon/water (Koc): 14**Henry's Law Constant (H):** 9.61E-12 Pa*m3/mole.

Data for Component: **Diethylene glycol monoethyl ether**

Mobility in soil: Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient, soil organic carbon/water (Koc): 20 Estimated.
Henry's Law Constant (H): 2.22E-08 atm*m3/mole; 25 °C Estimated.

13. Disposal Considerations

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.

14. Transport Information

ROAD AND RAIL TRANSPORT:
Not dangerous goods under the ADG code when being transported in IBCs or other receptacles < 500 L (kg), (Special Provision AU01).

IMDG
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S
Technical Name: Contains Triclopyr-2-butoxyethyl Ester, Picloram
Hazard Class: 9 **ID Number:** UN 3082 **Packing Group:** PG III
Marine pollutant: Yes

ICAO/IATA
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S
Technical Name: Contains Triclopyr-2-butoxyethyl Ester, Picloram
Hazard Class: 9 **ID Number:** UN 3082 **Packing Group:** PG III
Environmental Hazard: Yes

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. 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.

15. Regulatory Information

APVMA Approval Number: 60830
Poison Schedule: 6

16. Other Information

Risk Phrases:
R36 – Irritating to eyes
R50 – Very toxic to aquatic organisms

Safety Phrases:
S2: Keep out of reach of children
S20/21: When using do not eat, drink or smoke
S24/25: Avoid contact with skin and eyes
S37/39: Wear suitable gloves and eye/face protection
S28: Avoid contact with skin; wash immediately with plenty of water
S3/9/49: Keep only in the original container in a cool, well-ventilated place
S35: The material and its container must be disposed of in a safe way
S29: Do not empty into drains
S61: Avoid release to the environment. Refer to special instructions in Section 6,7 and 13 below

Revision
Identification Number: 1004605 / 4069 / Issue Date 29.04.2014 / Version: Replaces Nov 2013
DAS Code: GF-1544
Revisions: Section 2 and 3.

Legend

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG	Dow Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation

Dow AgroSciences (Australia) Ltd. 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.