

MATERIAL SAFETY DATA SHEETS

FOR ABSOLUTE:

ODYSSEY WDG HERBICIDE

PLUS

**LONTREL DRY SOLUBLE
GRANULAR HERBICIDE**

Safety Data Sheet

ODYSSEY

Revision date : 2013/01/07
Version: 4.0

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(30271689/SDS_CPA_CA/EN)

1. Product and Company Identification

Company

BASF Canada Inc.
100 Milverton Drive
Mississauga, ON L5R 4H1, CANADA

24 Hour Emergency Response Information

CANUTEC (reverse charges): (613) 996-6666
BASF HOTLINE: (800) 454-COPE (2673)

Molecular formula:	C15 H19 N3 O3 ; C15 H19 N3 O4
Chemical family:	imidazole derivative
PCP # 25111	
Synonyms:	imazethapyr ; imazamox

2. Hazards Identification

Emergency overview

WARNING:
Contains the allergen sulfite(s).
Causes eye irritation.
CAUSES SKIN IRRITATION.
May cause eye damage.
KEEP OUT OF REACH OF CHILDREN.

State of matter: solid
Colour: off-white to tan
Odour: odourless

Potential health effects

Acute toxicity:
Harmful if swallowed.

Irritation / corrosion:
May cause slight irritation to the eyes. May cause slight irritation to the respiratory tract. Prolonged contact with the product can result in skin irritation.

Sensitization:
Skin sensitizing effects were not observed in animal studies.

Medical conditions aggravated by overexposure:
Individuals with pre-existing diseases of the respiratory system, skin or eyes may have increased susceptibility to excessive exposures.

Potential environmental effects

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Aquatic toxicity:

There is a high probability that the product is not acutely harmful to fish. There is a high probability that the product is not acutely harmful to aquatic invertebrates. Very toxic (acute effect) to aquatic plants.

Degradation / environmental fate:

Not readily biodegradable (by OECD criteria).

3. Composition / Information on Ingredients

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Hazardous ingredients</u>
114311-32-9	35.0 %	Imazamox
81335-77-5	35.0 %	Imazethapyr
13463-67-7	>= 0.1 - <= 1.0 %	Titanium dioxide
14808-60-7	>= 0.1 - <= 1.0 %	crystalline silica

4. First-Aid Measures

General advice:

First aid providers should wear personal protective equipment to prevent exposure. Remove contaminated clothing. Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or physician for treatment advice. Have the product container or label with you when calling a poison control center or doctor or going for treatment.

If inhaled:

Remove the affected individual into fresh air and keep the person calm.

If on skin:

Rinse skin immediately with plenty of water for 15 - 20 minutes.

If in eyes:

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

If swallowed:

Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Do not induce vomiting. Have person sip a glass of water if able to swallow.

Note to physician

Antidote: No known specific antidote.
Treatment: Treat symptomatically.

5. Fire-Fighting Measures

Flash point:	not applicable
Autoignition:	not applicable
Lower explosion limit:	not determined
Upper explosion limit:	not determined
Self-ignition temperature:	not self-igniting

Suitable extinguishing media:

water spray, dry powder, foam, carbon dioxide

Hazards during fire-fighting:

carbon monoxide, carbon dioxide, nitrogen oxide, nitrogen dioxide, Hydrocarbons,
If product is heated above decomposition temperature, toxic vapours will be released. The substances/groups of substances mentioned can be released if the product is involved in a fire.

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Protective equipment for fire-fighting:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

Evacuate area of all unnecessary personnel. Contain contaminated water/firefighting water. Do not allow to enter drains or waterways.

6. Accidental release measures

Personal precautions:

Avoid dust formation. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

Environmental precautions:

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater.

Cleanup:

Avoid raising dust. Sweep/shovel up. Place into suitable containers for reuse or disposal in a licensed facility. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

7. Handling and Storage

Handling

General advice:

No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift.

Protection against fire and explosion:

Avoid dust formation. Dust can form an explosive mixture with air. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy. Electrical equipment should conform to national electric code. Ground all transfer equipment properly to prevent electrostatic discharge. Electrostatic discharge may cause ignition.

Storage

General advice:

Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect containers from physical damage. Protect against contamination.

Storage incompatibility:

General advice: Segregate from foods and animal feeds.

8. Exposure Controls and Personal Protection

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.

Advice on system design:

Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

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Personal protective equipment

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:

Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards.

Eye protection:

Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles).

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:

Wear long sleeved work shirt and long work pants in addition to other stated personal protective equipment. Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice. Personal protective equipment should be decontaminated prior to reuse. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Take off immediately all contaminated clothing. Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift. No eating, drinking, smoking or tobacco use at the place of work. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

Form:	granules	
Odour:	odourless	
Odour threshold:	No data available.	
Colour:	off-white to tan	
pH value:	2.9	
Melting point:	164 - 165 °C	
Boiling point:		The product is a non-volatile solid., not applicable
Vapour pressure:		negligible
Bulk density:	529 - 609 kg/m ³	
Vapour density:		not determined
Solubility in water:		(20 °C) dispersible

10. Stability and Reactivity

Conditions to avoid:

Avoid all sources of ignition: heat, sparks, open flame. Avoid prolonged storage. Avoid electro-static discharge. Avoid contamination. Avoid prolonged exposure to extreme heat. Avoid extreme temperatures. This product may form an explosive mixture if: 1. the dust is suspended in the atmosphere as a dust cloud AND 2. the concentration of the dust is above the lower explosion limit (LEL) AND 3. the limiting oxygen concentration (LOC) is exceeded.

Substances to avoid:

strong acids, strong bases, strong oxidizing agents

Hazardous reactions:

The product is chemically stable.

Hazardous polymerization will not occur. No hazardous reactions if stored and handled as prescribed/indicated.

Decomposition products:

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Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:

Possible thermal decomposition products:

carbon monoxide, carbon dioxide, nitrogen oxide, nitrogen dioxide, Hydrocarbons

Stable at ambient temperature. If product is heated above decomposition temperature toxic vapours may be released.

Corrosion to metals:

Corrosive effects to metal are not anticipated.

Oxidizing properties:

not fire-propagating

Not an oxidizer.

11. Toxicological information

Acute toxicity

Oral:

Type of value: LD50

Species: rat

Value: > 5,000 mg/kg

Inhalation:

Type of value: LC50

Species: rat

Value: > 27.2 mg/l

Exposure time: 1 h

Dermal:

Type of value: LD50

Species: rat

Value: > 4,000 mg/kg

Type of value: LD50

Species: rat

Value: > 2,000 mg/kg

Irritation / corrosion

Skin:

Species: rabbit

Result: non-irritant

Method: Primary skin irritation test

Eye:

Species: rabbit

Result: non-irritant

Sensitization:

Skin sensitization test

Species: guinea pig

Skin sensitizing effects were not observed in animal studies.

Repeated dose toxicity

Information on: crystalline silica

Assessment of repeated dose toxicity:

This product may contain greater than 0.1% crystalline silica. Repeated exposure to high concentrations results in silicosis, a lung disease characterized by coughing, difficult breathing, wheezing, scarring of the lungs, and repeated, non-specific chest illnesses.

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Genetic toxicity

Information on: imazamox
No mutagenic effect was found in various tests with microorganisms and mammals.

Information on: imazethapyr
No mutagenic effect was found in various tests with microorganisms and mammals.

Carcinogenicity

Information on: imazamox
In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.

Information on: imazethapyr
In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.

Reproductive toxicity

Information on: imazamox
The results of animal studies gave no indication of a fertility impairing effect.

Information on: imazethapyr
The results of animal studies gave no indication of a fertility impairing effect.

Development:

Information on: imazamox
No indications of a developmental toxic / teratogenic effect were seen in animal studies.

Information on: imazethapyr
No indications of a developmental toxic / teratogenic effect were seen in animal studies.

12. Ecological Information

Fish

Information on: imazamox
Acute:
Oncorhynchus mykiss/LC50 (96 h): = > 122 ppm

Information on: imazethapyr
Acute:
OPP 72-1 (EPA-Guideline) static
Oncorhynchus mykiss/LC50 (96 h): 340 mg/l

Aquatic invertebrates

Information on: imazamox
Acute:
Daphnia magna/EC50: >122 ppm

Information on: imazethapyr
Acute:
Daphnia magna/LC50 (48 h): > 1,000 mg/l

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Aquatic plants

Information on: imazamox
Toxicity to aquatic plants:
algae/EC50 (120 h): > 0.037 mg/l

Information on: imazethapyr
Toxicity to aquatic plants:
OECD Guideline 201 static
green algae/EC50 (96 h): 71 mg/l
swollen duckweed/EC50 (14 d): 0.01 mg/l

Non-Mammals

Information on: imazamox
Other terrestrial non-mammals:
mallard duck/LC50: > 5,572 ppm
Honey bee/LD50: > 100 ug/bee

Information on: imazethapyr

Degradability / Persistence Biological / Abiological Degradation

Evaluation: Not readily biodegradable (by OECD criteria).

Information on: imazethapyr
Test method: DIN ISO 11266, soil
Method of analysis: CO₂ formation relative to the theoretical value
Degree of elimination: approx. 1 - 2 % (28 d)

Information on: imazamox
Test method: OECD 301B; ISO 9439; 92/69/EEC, C.4-C
Method of analysis: CO₂ formation relative to the theoretical value
Degree of elimination: approx. 30 %

Bioaccumulation

Information on: imazethapyr

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Information on: imazamox
OECD-Guideline 305
sunfish, bluegill Bioconcentration factor < 1
Does not accumulate in organisms.

13. Disposal considerations

Waste disposal of substance:

See product label for disposal and recycling instructions.

Container disposal:

Rinse the container or liner as needed for disposal. Add rinsate to spray tank. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers. Consult the product label for additional details.

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14. Transport Information

Land transport

TDG

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Hazard class: 9
Packing group: III
ID number: UN 3077
Hazard label: 9, EHSM
Marine pollutant: YES
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(contains IMAZETHAPYR)

Air transport

IATA/ICAO

Hazard class: 9
Packing group: III
ID number: UN 3077
Hazard label: 9, EHSM
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(contains IMAZETHAPYR)

15. Regulatory Information

Federal Regulations

Registration status:

Chemical DSL, CA released; restriction on quantity / not listed

Crop Protection DSL, CA released / exempt

WHMIS does not apply to this product.

THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CPR AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.

16. Other Information

Recommended use: herbicide

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

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MSDS Prepared by:

BASF NA Product Regulations

msds@basf.com

BASF HOTLINE (800) 454 – COPE (2673)

MSDS Prepared on: 2013/01/07

END OF DATA SHEET

Product Name: Lontrel* SG Herbicide**Issue Date:** 2014.04.03

Dow AgroSciences Canada Inc. 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

Lontrel* SG Herbicide

COMPANY IDENTIFICATION

Dow AgroSciences Canada Inc.
A Subsidiary of The Dow Chemical Company
Suite 2100, 450 1st Street SW
Calgary, AB T2P 5H1
Canada

For MSDS updates and Product Information: 800-667-3852**Prepared By:** Prepared for use in Canada by EH&S, Hazard Communications.
Revision 2014.04.03**Customer Information Number:** 800-667-3852
solutions@dow.com**EMERGENCY TELEPHONE NUMBER****24-Hour Emergency Contact:** 613-996-6666**Local Emergency Contact:** 613-996-6666

2. Hazards Identification

Emergency Overview**Color:** Off-white**Physical State:** Granules**Odor:** Odorless**Hazards of product:**

Toxic fumes may be released in fire situations. Slipping hazard.

Potential Health Effects

Eye Contact: Solid or dust may cause irritation or corneal injury due to mechanical action.

Skin Contact: Brief contact is essentially nonirritating to skin.

Skin Absorption: Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Inhalation: No adverse effects are anticipated from single exposure to dust. For respiratory irritation: No data available.

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.

Aspiration hazard: Based on physical properties, not likely to be an aspiration hazard.

3. Composition/information on ingredients

Component	CAS #	Amount W/W
Clopyralid Potassium Salt	58509-83-4	75.0 %
Balance	Not available	25.0 %

Amounts are presented as percentages by weight.

4. First-aid measures**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 center 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 center 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 center or doctor for treatment advice.

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 center or doctor. Never give anything by mouth to an unconscious person.

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

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 center or doctor, or going for treatment.

5. Fire Fighting Measures**Suitable extinguishing media**

Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam.

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: Hydrogen chloride. Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: Container may rupture from gas generation in a fire situation. Dense smoke is produced when product burns.

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. Move container from fire area if this is possible without hazard. 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). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

See Section 9 for related Physical Properties

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Spilled material may cause a slipping hazard. 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: 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 out of reach of children. Do not swallow. Avoid breathing dust 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. Do not store near food, foodstuffs, drugs or potable water supplies.

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
Sulfuric acid	CAD AB OEL	TWA	1 mg/m ³
	CAD AB OEL	STEL	3 mg/m ³

CAD ON OEL	TWAEV	1 mg/m3
CAD ON OEL	STEV	3 mg/m3
ACGIH	TWA	0.2 mg/m3
	Thoracic fraction.	
CAD ON OEL	TWAEV	0.2 mg/m3
	Thoracic fraction.	
CAD BC OEL	TWA	0.2 mg/m3
OEL (QUE)	TWA	1 mg/m3
OEL (QUE)	STEL	3 mg/m3
Dow IHG	TWA Total	0.2 mg/m3

Consult local authorities for recommended exposure limits.

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.

Personal Protection

Eye/Face Protection: Use safety glasses (with side shields). If there is a potential for exposure to particles which could cause eye discomfort, wear 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. Examples of preferred glove barrier materials include: Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). 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, in dusty atmospheres, use an approved particulate respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands 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.

9. Physical and Chemical Properties

Appearance

Physical State	Granules
Color	Off-white
Odor	Odorless
Odor Threshold	Odorless
pH	6.9 (@ 5 %) CIPAC MT 75.2 (5% aqueous solution)
Melting Point	No test data available
Freezing Point	Not applicable
Boiling Point (760 mmHg)	Not applicable
Flash Point - Closed Cup	Not applicable

Evaporation Rate (Butyl Acetate = 1)	Not applicable
Flammability (solid, gas)	No <i>Flammability (solids)</i>
Flammable Limits In Air	Lower: No test data available Upper: No test data available
Vapor Pressure	Not applicable
Vapor Density (air = 1)	Not applicable
Specific Gravity (H2O = 1)	Not applicable
Solubility in water (by weight)	soluble in water
Partition coefficient, n-octanol/water (log Pow)	No data available for this product.
Autoignition Temperature	No test data available
Decomposition Temperature	No test data available
Dynamic Viscosity	Not applicable
Kinematic Viscosity	Not applicable
Explosive properties	No <i>EEC A14</i>
Oxidizing properties	No <i>EU Method A.17 (Oxidizing Properties (Solids))</i>
Liquid Density	Not applicable
Bulk Density	0.72 g/ml <i>Loose Volumetric</i>

10. Stability and Reactivity

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical stability

Thermally stable at typical use temperatures.

Possibility of hazardous reactions

Polymerization will not occur.

Conditions to Avoid: Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems.

Incompatible Materials: Avoid contact with: Acid chlorides. Halogenated hydrocarbons. Halogens. Flammable hydrogen may be generated from contact with metals such as: Zinc. Tin.

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. Toxic gases are released during decomposition.

11. Toxicological Information

Acute Toxicity

Ingestion

As product: LD50, rat 4,298 mg/kg

Dermal

As product: LD50, rat > 2,000 mg/kg
No deaths occurred at this concentration.

Inhalation

As product: The LC50 has not been determined.
For similar material(s): LC50, 4 h, Aerosol, rat > 0.16 mg/l
Maximum attainable concentration. No deaths occurred at this concentration.

Eye damage/eye irritation

Solid or dust may cause irritation or corneal injury due to mechanical action.

Skin corrosion/irritation

Brief contact is essentially nonirritating to skin.

Sensitization**Skin**

As product: Did not cause allergic skin reactions when tested in guinea pigs.

Respiratory

No relevant data found.

Repeated Dose Toxicity

No relevant data found.

Chronic Toxicity and Carcinogenicity

No relevant data found.

Developmental Toxicity

No relevant data found.

Reproductive Toxicity

No relevant data found.

Genetic Toxicology

No relevant data found.

12. Ecological Information

Toxicity

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Aquatic Plant Toxicity

ErC50, *Pseudokirchneriella subcapitata* (green algae), Growth rate inhibition, 72 h: > 100 mg/l

Toxicity to Above Ground Organisms

contact LD50, *Apis mellifera* (bees): > 250 ug/bee

Toxicity to Soil Dwelling Organisms

LC50, *Eisenia fetida* (earthworms), 14 d: > 1,500 mg/kg

Persistence and Degradability**Data for Component: Clopyralid Potassium Salt**

For similar active ingredient(s): Clopyralid. Material is expected to biodegrade only very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

Bioaccumulative potential**Data for Component: Clopyralid Potassium Salt**

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

Mobility in soil**Data for Component: Clopyralid Potassium Salt**

Mobility in soil: For similar active ingredient(s): Clopyralid., Potential for mobility in soil is very high (Koc between 0 and 50).

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

TDG Small container
NOT REGULATED

TDG Large container
NOT REGULATED

IMDG
NOT REGULATED

ICAO/IATA
NOT REGULATED

15. Regulatory Information

CEPA - Domestic Substances List (DSL)

All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

Hazardous Products Act Information: CPR Compliance

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Hazardous Products Act Information: WHMIS Classification

This product is exempt under WHMIS.

Pest Control Products Act Registration number: 27306

National Fire Code of Canada

Not applicable

16. Other Information

Hazard Rating System

NFPA	Health	Fire	Reactivity
	0	1	0

Recommended Uses and Restrictions

Identified uses

Product use: Herbicide for use in manufacturing, formulating or repackaging

Revision

Identification Number: 55562 / 1023 / Issue Date 2014.04.03 / Version: 4.0

DAS Code: EF-797

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

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
VOL/VOL	Volume/Volume

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