



**Assert 300 SC Herbicide
Safety Data Sheet**

Issue Date: 2017-12-13

Supersedes Date: 2017-05-17

{Reserved}

1. Identification

Product Name: Assert 300 SC Herbicide

PCP Registration No.: 21032

Refer to the approved product label for handling and use instructions.

Product Type: Herbicide

Supplier: Nufarm Agriculture Inc.
Suite 350, 2618 Hopewell Place NE
Calgary, Alberta, T1Y 7J7, Canada
1-800-868-5444

Telephone Numbers: 24 Hour Emergency Response Number, Chemtrec, 1-800-424-9300.
For medical emergencies, ProPharma Group, 1-877-325-1840.
For product and use information, Nufarm Agriculture Inc.,
1-800-868-5444.

2. Hazard Identification

Classified according to UN GHS Version 5.

Physical Hazards:

None

Health Hazards:

Acute toxicity (Oral)	Category 5
Acute toxicity (Dermal)	Category 5
Acute toxicity (Inhalation)	Category 5
Eye irritation	Category 2A
Skin sensitizer	Category 1B

Environmental Hazards:

Hazardous to aquatic environment, acute Category 3

Signal Word:

WARNING

Hazard Statements:

May be harmful if swallowed. May be harmful in contact with skin. May be harmful if inhaled. Causes serious eye irritation. May cause an allergic skin reaction. Harmful to aquatic life.



Precautionary Statements:

Causes eye irritation. Wear goggles or face shield during mixing/loading.

May be harmful if swallowed, in contact with skin or inhaled. Do not eat, drink or smoke when using this product.

Wear a long-sleeved shirt, long pants, socks, shoes and chemical-resistant gloves. Rinse gloves before removal. After use, wash hands and other exposed skin. Remove and wash contaminated clothing before reuse.

Avoid breathing spray mist. Use only outdoors or in a well-ventilated area.

3. Composition / Information on Ingredients
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Hazardous Components	CAS No.	Wt. %
Imazamethabenz-methyl	81405-85-8	27-29
Chemical Synonyms: methyl (±)-2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-4-methylbenzoate and methyl (±)-2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-methylbenzoate		

Other ingredients are considered non-hazardous.

Content as Expressed on Product Label
Imazamethabenz-methyl ... 300 g ester/L
Contains 1,2-benzisothiazolin-3-one at 0.027% as a preservative

4. First Aid Measures

If swallowed, call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

If on skin or clothing, 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.

In case of eye contact, hold eye 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 eye. Call a poison control centre or doctor for treatment advice.

If inhaled, move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

Take container, label or product name and Pest Control Product Registration Number with you, when seeking medical attention.

5. Fire-fighting Measures

Extinguishing Media: Water fog, alcohol foam, carbon dioxide, dry chemical.
Special Firefighting Procedures: Firefighters should wear self-contained breathing apparatus and full protective clothing when fighting chemical fires. Minimize and contain water runoff.
Flash Point:..... >100 C
Conditions of Flammability: None
Hazardous Decomposition Products:... Under fire conditions, may produce gases such as nitrogen oxides and carbon oxides.
National Fire Protection Association (NFPA) Hazard Rating:
Rating for this product: Health: 1 Flammability: 1 Reactivity: 0
Hazards Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

6. Accidental Release Measures

Use safety equipment and procedures appropriate to the size of the spill. Keep unnecessary people away. Avoid runoff to natural waters and sewers. Surround and absorb spills with inert material such as perlite, sawdust, clay granules, vermiculite, sand or dirt. Contain all affected material in a closed, labeled container for proper disposal. Isolate from other waste materials. Clean contaminated area such as hard surfaces with detergent and water, collecting cleaning solution for proper disposal. Large spills to soil or similar surfaces may necessitate removal of top soil.

7. Handling and Storage

Handling: Avoid contact with skin, eyes and clothing. Wear goggles or face shield during mixing/loading. Wear a long-sleeved shirt, long pants, socks, shoes and chemical-resistant gloves. Rinse gloves before removal. After use, wash hands and other exposed skin. Remove and wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Avoid breathing spray mist. Use only outdoors or in a well-ventilated area.
Storage: Store the container tightly closed away from seeds, fertilizer, plants and foodstuffs. Store between 0C and 35C. DO NOT freeze. Shake well before using.

8. Exposure Controls / Personal Protection

Engineering Controls: Use only outdoors or in a well-ventilated area.
Personal Protective Equipment: Goggles or face shield, long-sleeved shirt, long pants, socks, shoes and chemical-resistant gloves. Rinse gloves before removal.

Exposure Guidelines:

Component	TWA*	STEL**	Reference/Note
Imazamethabenz-methyl	NE	NE	None found

*Time-weighted Average, 8-hour unless otherwise noted.

**Short Term Exposure Limit

NE = Not Established

Refer to approved product label for additional exposure control guidance.

9. Physical and Chemical Properties

NOTE: Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification. If no value is determined for the formulation, the value listed is the most relevant value of the predominant ingredient(s).

Appearance (physical state, colour, etc.)	cream-coloured viscous liquid
Odour	none noticeable
Odour threshold	not available
pH	5.5 – 7.0 (undiluted)
Melting point / Freezing point	not available
Initial boiling point and boiling range	not available
Flash point	>100C
Evaporation rate	not available
Flammability (solids, gases)	not applicable
Upper / Lower flammability or explosive limits	not available
Vapour pressure	2.1 x 10 ⁻³ mPa at 25C (imazamethabenz-methyl)
Vapour density	not available
Relative density	1.07
Solubility(ies)	2200 mg/kg in water (imazamethabenz-methyl)
Partition coefficient: n-octanol/water	logP = 1.9 (imazamethabenz-methyl)
Autoignition temperature	not available
Decomposition temperature	not available
Viscosity	1000-3000 cP

10. Stability and Reactivity

Reactivity: Not reactive.

Chemical Stability: Stable under normal handling and storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Excessive heat. Do not store near heat or flame.

Incompatible Materials: Avoid contact with strong acidic, basic or oxidizing agents.

Hazardous Decomposition Products: Under fire conditions, may produce gases such as nitrogen oxides and carbon oxides.

11. Toxicological Information

Likely routes of exposure: Inhalation, ingestion, skin and eye contact.

Eye contact: Causes serious eye irritation.

Skin contact: May cause skin irritation, generally of minimal degree.

Ingestion: May be harmful if swallowed. No significant adverse health effects are expected if only small amounts are swallowed.

Inhalation: May be harmful if inhaled.

Medical Conditions Aggravated by Exposure: Skin exposure may aggravate preexisting skin conditions. Inhalation of mist may aggravate preexisting respiratory conditions.

Toxicological Data:

Acute oral LD₅₀ (mg/kg) >2000 (Rat, combined male & female)
Acute dermal LD₅₀ (mg/kg) >4000 (Rat, combined male & female)
Acute inhalation LC₅₀ (mg/l) 6.53 (Rat, male & female, 4-hour, nose-only exposure)
Skin corrosion/irritation Tested as slightly irritating to skin (Rabbit)
Serious eye damage/irritation Tested as severely irritating to the eye (Rabbit)
Respiratory or skin sensitization ... Considered as a contact dermal sensitizer (Guinea pig)
Germ cell mutagenicity Imazamethabenz-methyl shows no evidence of genotoxicity.
Carcinogenicity Imazamethabenz-methyl shows no evidence of carcinogenicity.
Reproductive toxicity Imazamethabenz-methyl is not considered a reproductive toxin.

12. Ecological Information

Ecotoxicity:

Data are from laboratory studies conducted on imazamethabenz-methyl technical.

Aquatic Invertebrate: 48-Hour EC₅₀ (mg/L) >100 (*Daphnia*)
Fish: 96-Hour LC₅₀ (mg/L) >100 (Rainbow Trout), >8.4 (Bluegill Sunfish, 7-day)
Algae: EC₅₀ (mg/L) 100 (*Selenastrum*), 26.9 (*Anabaena*)
Birds: Oral LD₅₀ (mg/kg) >2150 (Bobwhite Quail, Mallard Duck); 8-Day Dietary LC₅₀ >5000 ppm (Bobwhite Quail, Mallard Duck)
Bees: Contact LD₅₀ >100 µg/bee

Persistence and Degradability: Imazamethabenz-methyl is slightly to moderately persistent in soil. Field studies demonstrate a half-life of 21-137 days. Degradation by hydrolysis is slow at pH 5 but rapid at pH 9. Biotransformation in aerobic soil is more rapid in warm, moist soil than cold, wet soil. The major degradation product is imazamethabenz-methyl acid.

Mobility in Soil: Imazamethabenz-methyl and its acid have the potential to leach in low organic soils. Field studies have not demonstrated any significant leaching.

Bioaccumulation Potential: Negligible.

13. Disposal Considerations

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Disposal should be made in accordance with federal, provincial and local regulations.

Do not reuse container for any purpose. If applicable, return container in accordance with return program. If a recyclable container, dispose of at a container collection site. Contact local distributor, dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site, triple or pressure rinse the empty container adding rinsings to spray tank, and make container unsuitable for further use. If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

14. Transport Information

Canadian TDG Description (Road & Rail):

Not regulated for transport by road/rail.

United States:

DOT Description:

Not Regulated

IMDG

Not Regulated

IATA

Not Regulated

15. Regulatory Information

Pest Control Products Act Registration Number: 21032

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

This chemical is a pest control product registered by Health Canada Pest Management Regulatory Agency and is subject to certain labelling requirements under the *Pest Control Products Act*. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. Following is the hazard information required on the pest control product label:



CAUTION POISON
WARNING - EYE IRRITANT

WHMIS exempt.

16. Other Information

This Safety Data Sheet (SDS) is designed to comply with the Globally Harmonized System (GHS) of classification, and the *Hazardous Products Regulations*.

This SDS provides important health, safety and environmental information for employers, employees, emergency responders and others handling large quantities of the product in

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activities generally other than product use. The product labeling provides that information specifically for product use as intended.

Company and published information is used in the development of this SDS. The information herein is presented in good faith and believed accurate at the date of publication. However, no warranty, expressed or implied, is given.

Revisions to the last issue: Addition of PMRA guidance info to Section 15.

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