



Credit 45 Herbicide Safety Data Sheet

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{Reserved}

1. Identification

Product Name: Credit 45 Herbicide

PCP Registration No.: 29124

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 (Inhalation) Category 4
Eye irritation Category 2A

Environmental Hazards:

Hazardous to aquatic environment, acute Category 2

Signal Word:

WARNING

Hazard Statements:

Harmful if inhaled. Causes serious eye irritation. Toxic to aquatic life.



Precautionary Statements:

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

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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

Hazardous Components	CAS No.	Wt. %
glyphosate-isopropylammonium	38641-94-0	49-52
Chemical Synonyms: glyphosate IPA salt; N-(phosphonomethyl)glycine isopropylamine salt		

Other ingredients are considered non-hazardous.

Content as Expressed on Product Label

Glyphosate, present as isopropylamine salt ... 450 g a.e./L

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:..... >98.9 C

Conditions of Flammability: None

Hazardous Decomposition Products: ... This product reacts with galvanized steel or unlined steel (except stainless steel) to produce hydrogen gas that may form a highly combustible gas mixture which could flash or explode. Decomposition under fire conditions may produce gases such as oxides of carbon, nitrogen and phosphorous.

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National Fire Protection Association (NFPA) Hazard Rating:

Rating for this product: Health: 2 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. May be stored at any temperature.

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
glyphosate-isopropylammonium	N/E	N/E	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).

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Appearance (physical state, colour, etc.)	clear amber liquid
Odour	faint amine-like odour
Odour threshold	not available
pH	4.72 (1% dilution)
Melting point / Freezing point	not available
Initial boiling point and boiling range	not available
Flash point	>98.9C
Evaporation rate	not available
Flammability (solids, gases)	not applicable
Upper / Lower flammability or explosive limits	not available
Vapour pressure	not available
Vapour density	not available
Relative density	1.2 @ 25C
Solubility(ies)	soluble in water
Partition coefficient: n-octanol/water	not available
Autoignition temperature	not available
Decomposition temperature	~220C (glyphosate)
Viscosity	156 cP @ 25C

10. Stability and Reactivity

Reactivity: This product reacts with galvanized steel or unlined steel (except stainless steel) to produce hydrogen gas that may form a highly combustible gas mixture which could flash or explode.

Chemical Stability: Stable under normal handling and storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur. This product can react with caustic (basic) materials to liberate heat. This is not a polymerization but rather a chemical neutralization in an acid base reaction.

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

Incompatible Materials: Avoid contact with strong acidic, basic or oxidizing agents. This product reacts with galvanized steel or unlined steel (except stainless steel) to produce hydrogen gas that may form a highly combustible gas mixture which could flash or explode.

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

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.

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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) >5000 (Rat, female)
Acute dermal LD₅₀ (mg/kg) >2000 (Rat, male & female)
Acute inhalation LC₅₀ (mg/l) >2.09 (Rat, male & female, 4-hour, whole body exposure)
Skin corrosion/irritation Slightly irritating to skin (Rabbit)
Serious eye damage/irritation Moderately irritating to the eye (Rabbit)
Respiratory or skin sensitization ... Not considered as a contact dermal sensitizer (Guinea pig)
Germ cell mutagenicity Glyphosate shows no evidence of genotoxicity.
Carcinogenicity The International Agency for Research on Cancer (IARC) lists exposure to glyphosate as probably carcinogenic to humans (Group 2A), on the basis of limited evidence in humans and some evidence in animals (2015). Other regulatory agencies classify glyphosate as non-carcinogenic.
Reproductive toxicity Animal reproduction studies with glyphosate indicate there is no increased sensitivity of the young relative to maternal animals.

12. Ecological Information

Ecotoxicity:

Data are from laboratory studies conducted on glyphosate IPA salt unless otherwise noted.

Aquatic Invertebrate: 48-Hour EC₅₀ (mg/L) 930 (*Daphnia*)
Fish: 96-Hour LC₅₀ (mg/L) >1000 (Rainbow Trout, Bluegill Sunfish), 97 (Fathead minnow), 130 (Channel catfish)
Algae: 72-Hour EC₅₀ (mg/L) 73-166 (*Scenedesmus*)
Birds: Oral LD₅₀ (mg/kg) >3851 (Bobwhite Quail) (glyphosate acid); 5-Day Dietary LC₅₀ >4640 mg/kg diet (quail and ducks) (glyphosate acid)
Bees: Oral and Contact LD₅₀ >100 µg/bee (glyphosate acid)

Persistence and Degradability: Glyphosate is degraded microbially to aminomethyl phosphonic acid (AMPA), which is further degraded to simpler molecules. Representative field soil half-lives range from 1 to 130 days depending on soil and climatic conditions.

Mobility in Soil: Glyphosate and AMPA are strongly adsorbed to soil. Essentially immobile.

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

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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:

Non Regulated

IMDG

Non Regulated

IATA

Non Regulated

15. Regulatory Information

Pest Control Products Act Registration Number: 29124

OPAC Schedule: 4

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 – SKIN AND 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*.

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