



Interprovincial Cooperative Limited

CLOVITOX PLUS

MATERIAL SAFETY DATA SHEET

1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Clovitox Plus*
Product Use: Phenoxy (Broadleaf) Herbicide
Product Number: 24336

Manufacturer /Supplier: INTERPROVINCIAL COOPERATIVE LTD.
945 Marion St.
Winnipeg, Manitoba
R2J 0K7 www.ipco.ca

Effective Date: January 01/2012

This product is regulated under authority of the Pest Control Products Act

2: HAZARD IDENTIFICATION

Effects of Overexposure:

Route of Exposure: Inhalation, eye contact, skin contact, ingestion.
Inhalation: A single exposure to vapors is not likely to be hazardous.
Eye Contact: May cause severe irritation with corneal injury, which may result in permanent impairment of vision, even blindness.
Skin Contact: May cause skin irritation.
Ingestion: Moderately toxic; May cause gastrointestinal irritation and ulceration

3: COMPOSITION AND INFORMATION ON INGREDIENTS

COMPONENT	CAS NUMBER	% (W/W)
(4-chloro-2-methylphenoxy) acetic acid	94-74-6	2.36 – 2.43
4-(4-chloro-2-methylphenoxy) butyric acid	94-81-5	34.35 – 35.38
Other ingredients		62.19 – 63.26

Ingredients not listed are proprietary or non-hazardous

4: FIRST AID MEASURES

Inhalation: Move victim to fresh air. Give artificial respiration ONLY if breathing has stopped. Give cardiopulmonary resuscitation (CPR) if there is no breathing AND no pulse. Obtain medical attention IMMEDIATELY.

Ingestion: If swallowed, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person.

Skin: Flush skin with running water, and then continue flushing with running water for 5 - 10 minutes. Start flushing while removing contaminated clothing. If irritation persists, repeat flushing. Obtain medical attention IMMEDIATELY.

Eyes: In case of contact, immediately flush eyes with plenty of water for 5 - 10 minutes and get medical attention.

Emergency Medical Care: Treatment based on judgment of the physician in response to reaction of the patient. There is no specific antidote.

In case of emergency call CANUTEC at 613-885-6666

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5: FIRE-FIGHTING MEASURES

Unusual Fire & Explosion Hazards:	Noxious fumes may be formed under fire conditions. Contain water from fire fighting to prevent entry into water supplies.
Extinguishing Media:	Carbon Dioxide, Foam, Water Fog, and Dry Chemical. (But not SODA DRY POWDER)
Special Oxidizing Material Hazards:	Not Established
Hazardous Combustion Products:	Noxious (HCl & Amines) fumes under fire conditions.
Special Fire Fighting Procedures:	Use water spray to cool fire exposed containers or structures. Use self-contained breathing apparatus and protective clothing.

6: ACCIDENTAL RELEASE MEASURES

In case of spillage, absorb with inert material and dispose of in accordance with applicable regulations.

7: HANDLING AND STORAGE

Store in a cool, well-ventilated area. Keep away from heat, sparks and filling of containers. Keep away from children; prevent contact with eyes, skin, and clothing. Do not store near fertilizers, foodstuffs, seed, insecticides or fungicides.

Do not contaminate irrigation ditches or domestic water supplies. If this happens notify police and local authorities.

8: EXPOSURE CONTROLS AND PERSONAL PROTECTION**Exposure Limits:**

(4-Chloro-2-methylphenoxy) acetic acid

LD50-ORAL: 737 mg/kg Rat

LD50-DERMAL: > 2000 mg/kg Rabbit

T.L.V. (ACGIH): 15 mg/m³ (MCPA Acid)

4-(4-chloro-2-methylphenoxy) butyric acid

LD50-ORAL: 680 mg/kg Rat

LD50-DERMAL: > 2000 mg/kg Rabbit

T.L.V. (ACGIH): Not Established

LC50: Not Established

Special Engineering Controls: Local exhaust ventilation required.

Eye Protection: CSA approved safety glasses with side shields or goggles.

Respiratory Protection: No respiratory protection needed unless mist generated, then a NIOSH/MSHA toxic mist mask suggested.

Hand and Arm: PVC or rubber gloves.

Feet: Rubber boots.

Body: Coveralls.

Other Personal Protection: Recommendations listed above indicate the type of equipment which will provide protection against overexposure to this product. Conditions of use, adequacy of engineering or other control measures, and actual exposures will dictate the need for specific protective devices at your workplace.

9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

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Appearance & Odour:	Brown, Fishy Odour
Specific Gravity:	(@ 20 ⁰ c): 1.1633
Vapour density:	Not established
Solubility in water:	Miscible
Solubility in liquids:	Not established
Freezing point:	- 3 ⁰ c
% volatile by volume:	Not applicable
Boiling point:	100 ⁰ c
Odour threshold (ppm):	Not established
Coefficient of water/oil distribution:	Not applicable
Vapour pressure:	Not established
Evaporation rate:	Not Established
pH:	11.5 – 12.0
Viscosity:	34.4 cps at 20°C
Flash Point & Method:	(°C): > 100 (Tag Closed Cup)
Flammable Limits (% in air):	Lower: Not Applicable Upper: Not Applicable
Autoignition Temperature	Not Applicable

10: STABILITY AND REACTIVITY

Decomposition Temp:	Not Established
Stability:	Stable under normal conditions.
Materials to Avoid:	Acids, oxidizing agents
Hazardous Decomposition Products:	Hydrogen Chloride and nitrogen oxides may be formed under fire conditions
Hazardous Polymerization or Condensation:	Will not occur.
Conditions to Avoid:	Elevated temperatures, product may boil then burn.

11: TOXICOLOGICAL INFORMATION

Skin Absorption:	Acute dermal LD50 (Rat)	>5000 mg/kg.
Ingestion:	Acute oral LD50 (rat)	1212 mg/kg.
Inhalation:	LC50	Not Established
Chronic Health Hazards:	Excessive exposure may cause liver, kidney, gastrointestinal and muscle effects. Signs and symptoms of excessive exposure may be nausea, vomiting, abdominal cramps and diarrhea.	
Chronic Effects/ Carcinogenicity:	The International Agency for Research on Cancer (IARC) lists exposure to chlorophenoxy herbicides as a class 2B carcinogen, the category for limited evidence for carcinogenicity in humans. Newer rat and mouse lifetime feeding studies did not show carcinogenic potential for MCPA.	
Reproductive Toxicity:	Testicular effects have been noted in animal studies on MCPB and MCPA. Lower male fertility has been observed in animal studies on MCPA.	
Developmental Toxicity:	MCPB did not cause developmental toxicity in rabbits at doses toxic to mother animals. MCPA studies in laboratory animals have shown decreased fetal body weights and delayed development in the offspring at doses toxic to mother animals.	
Genotoxicity:	MCPB was not mutagenic in series of well documented studies. For MCPA, there have been some positive and some negative studies, but the weight of evidence is that the substance is not mutagenic.	

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12: ECOLOGICAL INFORMATION**Data are from studies conducted on MCPB sodium salt**

96-Hour LC50 (mg/L): 4.3 (Rainbow Trout)

96-Hour LC50 (mg/L): 14 (Bluegill)

48-Hour EC50 (mg/L): 50 (Daphnia)

Oral LD50 (mg/kg): 282 (Bobwhite Quail)

Dietary LC50 (ppm): > 5000 (Mallard Duck)

Chemical Fate Information: Both MCPB sodium and MCPA potassium rapidly dissociate to parent acids in the environment. In soil, they are microbially degraded with typical half-lives of approximately 10 to 14 days.

13: DISPOSAL CONSIDERATIONS

Dispose of waste materials in an approved incinerator or waste treatment/disposal facility in accordance with applicable regulations. Do not dispose of wastes in local sewer or with normal waste.

14: TRANSPORT INFORMATION

This product is Not Regulated under regulations of the Transport of Dangerous Goods Act.

15: REGULATORY INFORMATION

Pest Control Products Act

Registration Number: 24336

For Information Phone: 204-233-3461

MSDS Status/

Revised Sections:

Replaces MSDS Dated: September 01, 2009

16: OTHER INFORMATION

WHMIS Ratings:

D2B

Notice:

The enclosed information is supplied as a customer service and is provided in good faith. Although it has been based on data drawn from sources deemed to be reliable, IPCO cannot guarantee its accuracy and assumes no responsibility for conditions resulting from its use.

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