

Issuing Date 20-Nov-2023

Revision Date 20-Nov-2023

Revision Number 1

1. Identification

Product identifier

Product Name Advantage MCPA Ester 600 EC

Other means of identification

Product Code(s) PMRA Reg. No.: 35018

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use Herbicide

Restrictions on use Use only as directed on product label

Details of the supplier of the safety data sheet

Supplier Address

Advantage Crop Protection Inc.
620 4th Avenue East
Regina, Saskatchewan, Canada
Phone: 1888 931 2530

Emergency telephone number

Emergency telephone For Emergency Medical Assistance (Human or Animal) contact Rocky Mountain Poison Control at 866-767-5040
For Chemical Emergency Assistance (Spill, Leak, Fire or Accident) contact CHEMTREC at 800-424-9300 (North America) or 703-527-3887 (International)

2. Hazard(s) identification

Classification

Flammable liquids	Category 4
Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1

Label elements

Danger

Hazard statements

Combustible liquid
Harmful if swallowed
Harmful in contact with skin

Harmful if inhaled
Causes serious eye damage
May cause an allergic skin reaction

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Wear protective gloves, protective clothing, eye protection and face protection
Avoid breathing vapors or mists
Use only outdoors or in a well-ventilated area
Contaminated work clothing should not be allowed out of the workplace
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

Precautionary Statements - Response**Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor

Skin

IF ON SKIN: Wash with plenty of water and soap
Call a POISON CENTER or doctor if you feel unwell
Take off contaminated clothing and wash it before reuse
If skin irritation or rash occurs: Get medical advice and attention

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing
Call a POISON CENTER or doctor if you feel unwell

Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell
Rinse mouth

Fire

In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

Precautionary Statements - Storage

Store in a well-ventilated place

Precautionary Statements - Disposal

Dispose of contents and container to an approved waste disposal plant

Other information

Causes mild skin irritation. Very toxic to aquatic life with long lasting effects.

Unknown acute toxicity

- 6.539 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
- 6.539 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 6.539 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

3. Composition/information on ingredients**Substance**

Not applicable.

Mixture

Chemical name	CAS No.	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
2-Ethylhexyl (4-chloro-2-methylphenoxy)acetate	29450-45-1	90 - 99	-	
Tristyrylphenol ethoxylates	99734-09-5	1 - 5	-	
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs., calcium salts	84989-14-0	1 - < 3	-	
Isobutyl alcohol	78-83-1	1 - < 3	-	

4. First-aid measures

Description of first aid measures

- General advice** Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
- Inhalation** Remove to fresh air. Get medical attention immediately if symptoms occur. If symptoms persist, call a physician. If breathing has stopped, give artificial respiration. Get medical attention immediately.
- Eye contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical attention.
- Skin contact** Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. May cause an allergic skin reaction. If symptoms persist, call a physician.
- Ingestion** Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get medical attention.
- Self-protection of the first aider** Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid breathing vapors or mists. Use personal protective equipment as required. See section 8 for more information.

Most important symptoms and effects, both acute and delayed

- Symptoms** Burning sensation. Itching. Rashes. Hives. Prolonged contact may cause redness and irritation. Coughing and/ or wheezing. Difficulty in breathing.
- Effects of Exposure** See Section 11 for additional Toxicological Information.

Indication of any immediate medical attention and special treatment needed

- Note to physicians** May cause sensitization in susceptible persons. Treat symptomatically.

5. Fire-fighting measures

- Suitable Extinguishing Media** Dry chemical, CO2, water spray or regular foam.
- Unsuitable extinguishing media** None known based on information supplied.
- Specific hazards arising from the chemical** Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Product is or contains a sensitizer. May cause sensitization by skin contact.

Hazardous combustion products May emit toxic fumes under fire conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Yes.

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Take precautionary measures against static discharges. Do not touch or walk through spilled material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid breathing vapors or mists.

Other information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Do not touch or walk through spilled material. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Use personal protection equipment. Do not breathe vapor or mist. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Use with local exhaust ventilation. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. In case of insufficient ventilation, wear suitable respiratory equipment. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Keep out of the reach of children. Store locked up.

8. Exposure controls/personal protection

Control parameters

Exposure Limits

Chemical name	Alberta	British Columbia	Ontario	Quebec
---------------	---------	------------------	---------	--------

Isobutyl alcohol 78-83-1	TWA: 50 ppm TWA: 152 mg/m ³	TWA: 50 ppm	TWA: 50 ppm	TWA: 50 ppm TWA: 152 mg/m ³
-----------------------------	---	-------------	-------------	---

Chemical name	Manitoba	New Brunswick	Newfoundland and Labrador	Nova Scotia
Isobutyl alcohol	TWA: 50 ppm	TWA: 50 ppm	TWA: 50 ppm	TWA: 50 ppm

Chemical name	Nunavut	Prince Edward Island	Saskatchewan	Yukon
Isobutyl alcohol	TWA: 50 ppm STEL: 60 ppm	TWA: 50 ppm	TWA: 50 ppm STEL: 60 ppm	TWA: 50 ppm TWA: 150 mg/m ³ STEL: 75 ppm STEL: 225 mg/m ³

Appropriate engineering controls

Engineering controls Showers
 Eyewash stations
 Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Hand protection Wear suitable gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance Transparent liquid
Physical state Liquid
Color Light brown
Odor Ester
Odor threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	3.61	solution (1 %)
Melting point / freezing point		No data available
Initial boiling point and boiling range		No data available
Flash point	81 °C / 177.8 °F	
Evaporation rate		No data available
Flammability		No data available
Flammability Limit in Air		
Upper flammability or explosive limits		No data available

Lower flammability or explosive limits		No data available
Vapor pressure		No data available
Relative vapor density		No data available
Relative density	1.06 mg/L	
Water solubility		No data available
Solubility in other solvents		No data available
Partition coefficient		No data available
Autoignition temperature		No data available
Decomposition temperature		No data available
Kinematic viscosity		No data available
Dynamic viscosity	27.1 - 27.7 mPa s	@ 20 °C
Other information		
Explosive properties	No information available.	
Oxidizing properties	No information available.	
Softening point	No information available	
Molecular weight	No information available	
VOC content	No information available	
Liquid Density	No information available	
Bulk density	No information available	

10. Stability and reactivity

Reactivity	None under normal use conditions.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Heat, flames and sparks. Incompatible materials.
Incompatible materials	Strong acids, Strong bases, Oxidizing agents.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available. Harmful by inhalation. (based on components).
Eye contact	Specific test data for the substance or mixture is not available. Causes serious eye damage. May cause irreversible damage to eyes.
Skin contact	Specific test data for the substance or mixture is not available. May cause sensitization by skin contact. Causes mild skin irritation. Harmful in contact with skin. (based on components). Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. May be absorbed through the skin in harmful amounts.
Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Redness. Burning. May cause blindness. Itching. Rashes. Hives. Prolonged contact may
-----------------	--

cause redness and irritation. Coughing and/ or wheezing.

Acute toxicity

Harmful if swallowed. Harmful by skin contact. Harmful by inhalation.

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document:

- ATEmix (oral) 1,395.84 mg/kg
- ATEmix (dermal) 1,184.20 mg/kg
- ATEmix (inhalation-dust/mist) 1.62 mg/l

Unknown acute toxicity

- 6.539 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
- 6.539 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 6.539 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
2-Ethylhexyl (4-chloro-2-methylphenoxy)acetate 29450-45-1	= 1300 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 5.05 mg/L (Rat) 4 h
Isobutyl alcohol 78-83-1	= 2460 mg/kg (Rat)	= 3400 mg/kg (Rabbit)	> 18.18 mg/L (Rat) 6 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

- Skin corrosion/irritation** Classification based on data available for ingredients. Causes mild skin irritation.
- Serious eye damage/eye irritation** Classification based on data available for ingredients. Causes burns. Causes serious eye damage.
- Respiratory or skin sensitization** May cause an allergic skin reaction.
- Germ cell mutagenicity** No information available.
- Carcinogenicity** No information available.
- Reproductive toxicity** No information available.
- STOT - single exposure** No information available.
- STOT - repeated exposure** No information available.
- Aspiration hazard** No information available.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
2-Ethylhexyl (4-chloro-2-methylphenoxy)acetate 29450-45-1	EC50: =0.46mg/L (72h, Pseudokirchneriella subcapitata) EC50: =0.43mg/L (96h, Pseudokirchneriella subcapitata)	LC50: 3.2 - 4.6mg/L (96h, Lepomis macrochirus) LC50: =3.2mg/L (96h, Oncorhynchus mykiss) LC50: >0.55mg/L (96h,	-	EC50: =0.29mg/L (48h, Daphnia magna)

Isobutyl alcohol 78-83-1	-	Lepomis macrochirus) LC50: =375mg/L (96h, Pimephales promelas) LC50: 1370 - 1670mg/L (96h, Pimephales promelas) LC50: 1480 - 1730mg/L (96h, Lepomis macrochirus) LC50: 1120 - 1520mg/L (96h, Oncorhynchus mykiss)	-	EC50: =1300mg/L (48h, Daphnia magna) EC50: 1070 - 1933mg/L (48h, Daphnia magna)
-----------------------------	---	---	---	--

Persistence and degradability No information available.

Bioaccumulation

Component Information

Chemical name	Partition coefficient
2-Ethylhexyl (4-chloro-2-methylphenoxy)acetate 29450-45-1	4.49
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs., calcium salts 84989-14-0	6
Isobutyl alcohol 78-83-1	1

Mobility No information available.

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. Transport information

TDG Not regulated

IATA Not regulated in quantities less than 5 liter per individual container. See IATA SP A197

UN number or ID number UN3082

UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.

Transport hazard class(es) 9

Packing group III

IATA Technical Name 2-Ethylhexyl (4-chloro-2-methylphenoxy)acetate

Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (2-Ethylhexyl (4-chloro-2-methylphenoxy)acetate), 9, III

Special Provisions A97, A158, A197

ERG Code 9L

IMDG Not regulated in quantities less than 5 liter per individual container. See IMDG 2.10.2.7

UN number or ID number UN3082

UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Transport hazard class(es) 9

Packing group	III
IMDG Technical Name	2-Ethylhexyl (4-chloro-2-methylphenoxy)acetate
Description	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-Ethylhexyl (4-chloro-2-methylphenoxy)acetate), 9, III, Marine pollutant
Special Provisions	274, 335, 969
EmS-No.	F-A, S-F

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

Contact supplier for inventory compliance status

16. Other information

NFPA	Health hazards 3	Flammability 2	Instability 0	Special hazards -
HMIS	Health hazards 3	Flammability 2	Physical hazards 0	Personal protection X

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend

- SVHC: Substances of Very High Concern for Authorization:
- PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances
- vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances
- STOT: Specific Target Organ Toxicity
- ATE: Acute Toxicity Estimate
- LC50: 50% Lethal Concentration
- LD50: 50% Lethal Dose

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	Sk*	Skin designation
**	Hazard Designation	+	Sensitizers

Key literature references and sources for data used to compile the SDS

- U.S. Environmental Protection Agency ChemView Database
- European Food Safety Authority (EFSA)
- EPA (Environmental Protection Agency)
- Acute Exposure Guideline Level(s) (AEGl(s))
- U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
- U.S. Environmental Protection Agency High Production Volume Chemicals
- Food Research Journal
- Hazardous Substance Database
- International Uniform Chemical Information Database (IUCLID)
- Japan GHS Classification
- Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
- NIOSH (National Institute for Occupational Safety and Health)
- National Library of Medicine's ChemID Plus (NLM CIP)
- U.S. National Toxicology Program (NTP)
- New Zealand's Chemical Classification and Information Database (CCID)
- Organization for Economic Co-operation and Development Environment, Health, and Safety Publications

Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Issuing Date 20-Nov-2023
Revision Date 20-Nov-2023
Revision Note Initial Release.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet