Safety Data Sheet (SDS)

Issue Date: 01-Apr-2021 **Revision Date: 01-Apr-2021** **Version 1**

1. IDENTIFICATION

Product identifier

Product Name **MCPA 2 EH Ester 600**

Other means of identification

SDS # ADAMA-304

Registration Number(s) 31669 (Pest Control Products Act)
UN/ID No UN3082

Recommended use of the chemical and restrictions on use

Recommended Use Herbicide.

Details of the supplier of the safety data sheet

Registrant
ADAMA Agricultural Solutions Canada Ltd.
300-191 Lombard Avenue
Winnipeg, Manitoba R3B 0X1
1-855-264-6262

Emergency telephone number

Emergency Telephone For fire, spill and/or leak contact INFOTRAC:
1-800-535-5053 (North America) 1-352-323-3500 (International)
For medical emergencies and health/safety inquiries, contact ProPharma Group:
1-877-250-9291

2. HAZARDS IDENTIFICATION

This chemical is a product registered under the *Pest Control Products Act* (PCPA) of Canada and is subject to certain labeling requirements under federal law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-PCPA registered chemicals. Please see Section 15 for additional information. This product has been classified according to Canada's *Hazardous Product Regulations* (WHMIS 2015).

Appearance: Off-white liquid **Physical state:** Liquid **Odor:** Characteristic

Classification

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation	Category 4
Acute toxicity - Dermal	Category 5

Hazard Pictogram (s)

Signal Word **WARNING**

Hazard statements Harmful if swallowed
Harmful if inhaled
May be harmful in contact with skin

Precautionary Statements - Prevention
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product

Precautionary Statements - Response
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of water and soap
Take off contaminated clothing and wash before reuse
If skin irritation or rash occurs: Get medical advice/attention
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth
Do NOT induce vomiting
IN CASE OF FIRE: Use water spray, dry chemical, carbon dioxide, or alcohol resistant foam

Precautionary Statements - Storage
Store in a well-ventilated place
Keep cool
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Other hazards
Very toxic to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
MCPA, 2-ethylhexyl ester	29450-45-1	89-94
Petroleum Distillates, Hydrotreated light	64742-47-8	1-3

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

4. FIRST AID MEASURES

Description of first aid measures

General Advice	In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). First aider: Pay attention to self-protection.
Eye Contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Skin Contact	IF ON SKIN: Wash with plenty of water and soap. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention.
Inhalation	If symptoms are experienced, remove source of contamination or move victim to fresh air.
Ingestion	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.
Self-Protection of the First Aider	Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms Harmful if inhaled. Harmful if swallowed. High concentrations of MCPA may cause severe irritation to the eyes. Symptoms of overexposure to MCPA could include slurred speech, twitching, jerking and spasms, drooling, low-blood pressure and unconsciousness.

Indication of any immediate medical attention and special treatment needed

Notes to Physician This product contains petroleum distillates. DO NOT INDUCE VOMITTING. Vomiting may cause aspiration pneumonia. No specific antidote. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Dry chemical, CO_2, water spray or alcohol-resistant foam.

Unsuitable Extinguishing Media Do not use direct water stream. May spread fire.

Specific Hazards Arising from the Chemical
Combustible material.

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. Hydrogen chloride. Carbon monoxide. Carbon dioxide.

Protective equipment and precautions for firefighters
Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Eliminate ignition sources. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage.

Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protective equipment as required.

For Emergency Responders Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up Take up mechanically, placing in appropriate containers for disposal. For waste disposal, see section 13 of the SDS.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Use personal protection recommended in Section 8. Avoid breathing vapors or mists. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Do not contaminate water, food or feed by storage, disposal or by cleaning equipment. Open and handle container with care. Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

Conditions for safe storage, including any incompatibilities

Storage Conditions May be stored at any temperature, but protect from freezing. Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children. Keep/store only in original container. Do not use food or drink containers for mixing or storage. Keep away from food, drink and animal feeding stuffs. Minimize sources of ignition, such as static build-up, heat, spark or flame.

Incompatible Materials None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

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.

Appropriate engineering controls

Engineering Controls Use only with adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Use splash goggles or face shield when contact may occur.

Skin and Body Protection Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Natural rubber ("latex"). 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..

Long sleeved shirt, long pants, socks and shoes suggested as minimum work clothing. Coveralls or a chemical-resistant apron should also be worn when open pouring from containers greater than 5L. Use other equipment appropriate to specific situations.

Respiratory Protection Ensure adequate ventilation, especially in confined areas. Wear an appropriate NIOSH/MSHA approved respirator if ventilation is inadequate.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Promptly remove all contaminated clothing and wash

it before reuse. Launder or discard contaminated clothing. Discard contaminated leather articles. Wash face, hands and any exposed skin thoroughly after handling.
Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid	**Odor**	Phenolic
Appearance	Clear, amber liquid	**Odor Threshold**	Not determined

Property	**Values**	**Remarks • Method**
pH	4.3 (1% aqueous solution)	
Melting Point/Freezing Point	< -25°C	
Boiling Point/Boiling Range	Decomposes before boiling	
Flash Point	> 100°C	Pensky-Martens Closed Cup
Evaporation Rate	NA	
Flammability (Solid, Gas)	Liquid-Not applicable	
Flammability Limits in Air		
Upper Flammability Limits	NA	
Lower Flammability Limit	NA	
Vapor Pressure	5.7 x 10^{-3} mm Hg @25°C	
Vapor Density	NA	
Relative Density	1.064 g/mL	(Water = 1)
Water Solubility	Product is emulsifiable in water	
Solubility in other solvents	NA	
Partition Coefficient	See section 12 for more information	
Auto-ignition Temperature	NA	
Decomposition Temperature	> 220°C	
Kinematic Viscosity	58.4 cP @20C	
Dynamic Viscosity	Not determined	
Explosive Properties	Not an explosive	
Oxidizing Properties	Not oxidizing	

Other information

NA	NA

10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions.

Chemical stability
Stable under normal conditions.

Possibility of hazardous reactions
None under normal processing. Hazardous polymerization does not occur.

Conditions to Avoid
Heat, flames and sparks. Extremes of temperature and direct sunlight.

Incompatible materials
Avoid contact with oxidizing materials, strong acids and strong bases.

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: Hydrogen chloride. Nitrogen oxides Carbon oxides. Toxic gases are released during decomposition.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact Avoid contact with eyes. May cause eye irritation, generally of minimal degree. Causes redness and tearing

Skin Contact Avoid contact with skin. May be harmful if absorbed through skin. May cause skin irritation, generally of minimal degree

Inhalation Harmful if inhaled. Vapors could cause coughing, burning, headache, dizziness, respiratory irritation and symptoms similar to those from ingestion.

Ingestion Harmful if swallowed. May cause dizziness, temporary loss of muscle coordination, nausea, vomiting, abdominal pain, decreased blood pressure, fatigue, muscle weakness, muscle spasms

Component Information

Chemical name	Oral LD_{50}	Dermal LD_{50}	Inhalation LC_{50}
Petroleum Distillates, Hydrotreated light	>5000 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	>5000 mg/m^3 (Rat) 4 h
MCPA, 2-ethylhexyl ester	1793 mg/kg (Rat)	>2,000 mg/kg (Rabbit)	> 4.5 mg/m^3 (Rat) 4 h

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Please see section 4 of this SDS for symptoms.

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

Carcinogenicity The International Agency for Research on Cancer (IARC) lists exposure to chlorophenoxy herbicides as possibly carcinogenic to humans (Group 2B), the category for limited evidence for carcinogenicity in humans. MCPA was not carcinogenic to rats or mice in lifetime feeding studies. Products similar to the hydrocarbon component are not considered to be mutagenic and are unlikely to cause tumors.

Chemical Name	ACGIH	IARC	NTP	OSHA
MCPA		Group 2B		

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen
IARC (International Agency for Research on Cancer)
Group 2B - Possibly Carcinogenic to Humans
NTP (National Toxicology Program)
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Numerical measures of toxicity

Acute Inhalation LC_{50} (Rat): >2.64 mg/m^3 (Rat)
Acute Oral LD_{50} (Rat): 1046 mg/kg (Rat)
Acute Dermal LD_{50} (Rat): >2,000 mg/kg (Rat)
Eye Irritation: Mildly irritating to the eye (Rabbit)
Dermal Irritation: Slightly irritating to skin (Rabbit)
Dermal Sensitization: Not a sensitizer

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects.

Component Information

Chemical name	Algae/aquatic plants	Fish	Crustacea
MCPA, 2-ethylhexyl ester	72 h EC_{50}: *Raphidocelis subcapitata* (green algae) 0.46 mg/L	96 h LC_{50}: *Lepomis macrochirus* (bluegill sunfish) 3.2 - 4.6 mg/L flow-through	48 h EC_{50}: *Daphnia magna* (water flea) 0.29 mg/L

	96 h EC_{50}: *Raphidocelis subcapitata* (green algae) 0.43 mg/L	96 h LC_{50}: *Lepomis macrochirus* 0.55 mg/L static 96 h LC_{50}: *Oncorhynchus mykiss* (rainbow trout) 3.2 mg/L flow-through	
Petroleum Distillates, Hydrotreated light	72 h EC_{50}: *Skeletonema costatum* (Marine centric diatom) 2.5 mg/L	96 h LC_{50}: *Pimephales promelas* (fathead minnow) 41 mg/L 96 h LC_{50}: *Pimephales promelas* 19 mg/L LC50 static 96 h LC_{50}: *Pimephales promelas* 45 mg/L flow-through 96 h LC_{50}: *Lepomis macrochirus* 1740 mg/L static 96 h LC_{50}: *Oncorhynchus mykiss* 2.34 mg/L	48 h EC_{50}: *Daphnia magna* 0.95 mg/L

Persistence/Degradability
MCPA 2-EH ester rapidly hydrolyzes to parent MCPA acid. MCPA is microbially degraded with typical half-life (ester and acid) of 5 to 20 days. Persistent in anaerobic environments.

Bioaccumulation
Negligible

Mobility
Moderate to high mobility potential, but rapidly degraded

Other Adverse Effects
No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected.

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes Do not contaminate water, food, or feed by storage or disposal. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

Contaminated Packaging Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your 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

Note The transport classification(s) and information provided in this section are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by mode of transportation, container volume and package sizes. The transportation of materials and related activities are subject to all applicable laws, rules and requirements of regional and/or country regulations. Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

UN number UN3082
Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s. (MCPA 2-EHE: 2-Methyl-4-Chlorophenoxyacetic Acid 2-Ethylhexyl Ester)
Transport hazard class(es) 9
Packing Group III
Marine Pollutant Yes

<119 Gal (450 Liters): Not regulated when transported on land by motor vehicle or rail car in non-bulk containers.
≥119 Gal (450 Liters): REGULATED
Refer to 49 CFR §171.4, 172.101 Appendix A & 173.132(b)(3)

IATA

UN number	UN3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s. (MCPA 2-EHE: 2-Methyl-4-Chlorophenoxyacetic Acid 2-Ethylhexyl Ester)
Transport hazard class(es)	9
Packing Group	III
Marine Pollutant	Yes

IMDG

UN number	UN3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s. (MCPA 2-EHE: 2-Methyl-4-Chlorophenoxyacetic Acid 2-Ethylhexyl Ester)
Transport hazard class(es)	9
Packing Group	III
Marine Pollutant	Yes

TDG .

UN number	UN3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s. (MCPA 2-EHE: 2-Methyl-4-Chlorophenoxyacetic Acid 2-Ethylhexyl Ester)
Hazard class	9
Packing Group	III
Marine Pollutant	Yes Section 1.45.1 of the TDG Regulations provides an exemption from documentation and safety marks only for this product and only when transported by road or railway vehicle

Marine Pollutants assigned UN number 3077 and 3082 in single or combination packaging containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 Kg or less for solids may be transported as non-dangerous goods as provided in section 2.10.2.7 of IMDG code, IATA special provision A197, and ADR/RID special provision 375.

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL / NDSL	EINECS / ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Petroleum Distillates, Hydrotreated light	X	X	X		X	X	X	X
MCPA, 2-ethylhexyl ester			X		X			X

Legend:

TSCA *- United States Toxic Substances Control Act Section 8(b) Inventory*

DSL/NDSL *- Canadian Domestic Substances List/Non-Domestic Substances List*

EINECS/ELINCS *- European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*

ENCS *- Japan Existing and New Chemical Substances*

IECSC *- China Inventory of Existing Chemical Substances*

KECL *- Korean Existing and Evaluated Chemical Substances*

PICCS *- Philippines Inventory of Chemicals and Chemical Substances*

AICS *- Australian Inventory of Chemical Substances*

Canadian Domestic Substances List (DSL): This product contains chemical substance(s) exempt from CEPA DSL Inventory requirements. It is regulated as a pesticide subject to Pest Control Products Act (PCPA) requirements.

US Federal Regulations

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations
This product does not contain substances regulated by state right-to-know regulations.

CANADIAN REGULATIONS

There are Canada-specific environmental requirements for handling, use and disposal of this pest control product that are indicated on the product label.

Hazardous Products Regulations Information:
This product has been classified in accordance with the amended *Hazardous Products Act* (HPA) and the Hazard Criteria of the *Hazardous Products Regulations* (HPR), and the SDS contains all the information required by the HPR.

Hazardous Products Act Information:
Pest control products, as defined in subsection 2(1) of the *Pest Control Products Act* (PCPA), are excluded from the application of the *Hazardous Products Act* (that is, pest control products are exempt from the supplier labelling and SDS requirements of the *Hazardous Products Act and Regulations*). This product is exempt under WHMIS 2015 but has voluntarily been classified according to the WHMIS 2015 standard.

***Pest Control Products Act* Registration Number:** 31669
Read the approved label, authorized under the *Pest Control Products Act*, prior to using or handling the pest control product.

Product Statement
This chemical is a pest control product registered and regulated by Health Canada's Pest Management Regulatory Agency (PMRA) 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, and for workplace labels of non-PCPA registered chemicals. Read the approved label, authorized under the *Pest Control Products Act*, prior to using or handling the pest control product. The following is the hazard information required on the pest control product label:

PCPA Label Hazard Communications
WARNING POISON
HARMFUL OR FATAL IF SWALLOWED
KEEP OUT OF THE REACH OF CHILDREN

Avoid contact with skin, eyes and clothing. Wash concentrate from skin or eyes IMMEDIATELY. After use, wash hands and other exposed skin. Avoid breathing spray mist.

Difference between SDS and *Pest Control Products Act* label

	PCPA	**SDS**
Signal Word	Warning Poison	Warning
Acute toxicity - Oral	Harmful or fatal if swallowed	Harmful if swallowed
Acute toxicity – Inhalation	Avoid breathing spray mist	Harmful if inhaled
Acute toxicity – Dermal	Avoid contact with skin and clothing	May be harmful if absorbed through skin.
Serious Eye Damage/Eye Irritation	Avoid contact with eyes	May cause eye irritation
Skin Corrosion/Irritation	Avoid contact with skin and clothing	May cause skin irritation

16. OTHER INFORMATION

NFPA	**Health Hazards**	**Flammability**	**Instability**	**Special Hazards**
	2	1	0	Not determined
HMIS	**Health Hazards**	**Flammability**	**Physical hazards**	**Personal Protection**
	Not determined	Not determined	Not determined	See Section 8

HMIS/NFPA HAZARD INDEX

0 - Minimal	1 - Slight	2 - Moderate	3 - Serious	4 - Severe

GHS HAZARD INDEX
Category 1 - Most Severe
Category 5 - Least Severe

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Revision Note:	New GHS Format

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