



Safety Data Sheet

Issue Date: 19-Jan-2018

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Version 1

1. IDENTIFICATION

Product Identifier

Product Name

Postscript

Other means of identification

SDS #

ADAMA-244

Registration Number(s)

EPA Reg No 66222-271

Recommended use of the chemical and restrictions on use

Recommended Use

EPA registered pesticide.

Details of the supplier of the safety data sheet

Manufacturer Address

Makhteshim Agan of North America, Inc. (d/b/a ADAMA)
3120 Highwoods Blvd., Suite 100
Raleigh, NC 27604
1-919-256-9300

Emergency Telephone Number

Emergency Telephone (24 hr)

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:
1-877-250-9291

2. HAZARDS IDENTIFICATION

This chemical is a product registered by the Environmental Protection Agency 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-EPA registered chemicals. Please see Section 15 for additional EPA information.

Appearance Light yellow/amber liquid

Physical state Liquid

Odor Ammonia-like

Classification

This chemical does not meet the hazardous criteria set forth by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). However, this Safety Data Sheet (SDS) contains valuable information critical to the safe handling and proper use of this product. This SDS should be retained and available for employees and other users of this product.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%
Ammonium salt of imazamox: 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-(methoxymethyl)-3-pyridinecarboxylic acid*	247057-22-3	12.1
Inert ingredients++	Proprietary	87.9

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.

++ inert ingredients with exposure limits and/or additional regulatory data appear by name in subsequent sections of this SDS.

4. FIRST AID MEASURES

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

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.

Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Consult a physician if necessary.

Inhalation

Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician.

Ingestion

Do NOT induce vomiting. Rinse mouth. Drink plenty of water. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

Self-Protection of the First Aider Use personal protective equipment as required.

Most important symptoms and effects

Symptoms

Mildly irritating to the skin and eyes. May be harmful if swallowed.

Indication of any immediate medical attention and special treatment needed

Notes to Physician

Treat symptomatically and supportively.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Foam, dry chemical, carbon dioxide, or water spray.

Unsuitable Extinguishing Media No information available.

Specific Hazards Arising from the Chemical

Can burn in fire, releasing toxic gases such as oxides of nitrogen and carbon due to thermal decomposition. Spilled material that dries could potentially for dust with potential explosivity.

SPILLED MATERIAL MUST BE ABSORBED AND CLEANED UP IMMEDIATELY.

Protective equipment and precautions for firefighters

In the event of fire, wear self-contained breathing apparatus. In the event of fire and/or explosion do not breathe fumes. Minimize use of water to prevent environmental contamination.

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. Dike large spills using absorbent or impervious material such as clay or sand. Recover and contain as much free liquid as. 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.

Methods and material for containment and cleaning up

- Methods for Containment** Prevent further leakage or spillage if safe to do so.
FOR SMALL SPILLS: absorb with sand, vermiculite, or other inert absorbent. Place contaminated material in appropriate container for disposal.
FOR LARGE SPILLS: Dike large spills using absorbent or impervious material such as clay or sand. Recover and contain as much free liquid as possible for reuse. Allow absorbed material to solidify and scrape up for disposal.
- Methods for Clean-Up** After removal of absorbed material, clean contaminated area thoroughly with water. Pick up wash liquid with additional absorbent and place in an appropriate container for disposal. See Section 13 for additional disposal information.

7. HANDLING AND STORAGE

Precautions for safe handling

- Advice on Safe Handling** KEEP OUT OF REACH OF CHILDREN.
 Use personal protective equipment as required. Use only with adequate ventilation. When using do not eat, drink or smoke. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities

- Storage Conditions** KEEP FROM FREEZING. DO NOT store below 32°F. Store in a well-ventilated area in closed, original container when not in use. Keep away from food, feed stuffs, and drinking water.
- Incompatible Materials** Strong oxidizers. Do not store or mix in mild steel or aluminum containers. Avoid use with equipment using zinc, brass, or copper components.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Appropriate engineering controls

- Engineering Controls** Please refer to the product label. 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	Tight sealing safety goggles when working with concentrate.
Skin and Body Protection	Suitable protective clothing. Long-sleeved shirt and long pants. Shoes plus socks. Chemical resistant gloves made of any waterproof material.
Respiratory Protection	Refer to 29 CFR 1910.134 for respiratory protection requirements.
General Hygiene Considerations	When using do not eat, drink or smoke. Remove clothing immediately if pesticide gets inside and wash any exposed skin thoroughly. Discard clothing and other absorbent materials that have been drenched or heavily contaminated. Remove PPE immediately after handling product. Follow manufacturer's instructions for cleaning and maintaining PPE. Keep and wash PPE separately from other laundry. Wash hands, face, and any exposed skin thoroughly after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

Physical state	Liquid	Odor	Ammonia-like
Appearance	Light yellow/amber liquid	Odor Threshold	No data available
Color	Light yellow/amber		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	7.5-8.5	
Melting Point/Freezing Point	Not applicable	
Boiling Point/Boiling Range	No data available	
Flash Point	>115°C/239°F	
Evaporation Rate	Not applicable	
Flammability (Solid, Gas)	Liquid- not applicable	
Flammability Limits in Air		
Upper Flammability Limits	No data available	
Lower Flammability Limit	No data available	
Vapor Pressure	<1.3 x 10 ⁻² mPa (25°C) (Imazamox)	
Vapor Density	No data available	
Relative Density	1.01-1.05	
Water Solubility	No data available	
Solubility in other solvents	Not determined	
Partition Coefficient	Log P _{ow} = -1.03	
Auto-ignition Temperature	Not flammable	
Decomposition Temperature	No data available	
Kinematic Viscosity	Not applicable	
Dynamic Viscosity	2.1 Cst	
Explosive Properties	Not an explosive	
Oxidizing Properties	No data available	

10. STABILITY AND REACTIVITY

Reactivity
Not available.

Chemical Stability
Stable under normal conditions.

Possibility of Hazardous Reactions
None under normal processing.

Conditions to Avoid

Avoid prolonged storage at temperatures above 38°C (100°F)

Incompatible Materials

Strong oxidizers. Do not store or mix in mild steel or aluminum containers. Avoid use with equipment using zinc, brass, or copper components.

Hazardous Decomposition Products

Can burn in fire, releasing toxic gases such as oxides of nitrogen and carbon due to thermal decomposition. Spilled material that dries could potentially for dust with potential explosivity.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Eye Contact	Avoid contact with eyes.
Skin Contact	Avoid contact with skin.
Inhalation	Do not inhale.
Ingestion	Do not ingest.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
3-Pyridinecarboxylic acid, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-(methoxymethyl)- 114311-32-9	> 5000 mg/kg (Rat)	> 4000 mg/kg (Rabbit)	-
Propylene Glycol 57-55-6	= 20 g/kg (Rat)	= 20800 mg/kg (Rabbit)	-
Ammonium hydroxide 1336-21-6	= 350 mg/kg (Rat)	-	-

Information on physical, chemical and toxicological effects

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 Not carcinogenic.

Numerical measures of toxicity

Acute Oral LD50 (Rat): >5,000 mg/kg

Acute Dermal LD50 (Rabbit): >5,000 mg/kg

Acute Inhalation LC50 (Rat): >4.0 mg/L (4-hr)

Eye Irritation: Slightly irritating.

Dermal Irritation: non-irritating.

Dermal Sensitization: Not a skin sensitizer.

12. ECOLOGICAL INFORMATION

Ecotoxicity

This pesticide may be hazardous to plants outside the treated area. DO NOT apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark except as directed on the label. Off-site movement from spray drift, volatilization, and runoff may be hazardous to neighboring crops and vegetative habitat utilized for food and cover by wildlife and aquatic organisms. DO NOT contaminate water when disposing of equipment washwater or rinsate.

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Propylene Glycol 57-55-6	19000: 96 h Pseudokirchneriella subcapitata mg/L EC50	51400: 96 h Pimephales promelas mg/L LC50 static 41 - 47: 96 h Oncorhynchus mykiss mL/L LC50 static 51600: 96 h Oncorhynchus mykiss mg/L LC50 static 710: 96 h Pimephales promelas mg/L LC50	1000: 48 h Daphnia magna mg/L EC50 Static 10000: 24 h Daphnia magna mg/L EC50
Ammonium hydroxide 1336-21-6		8.2: 96 h Pimephales promelas mg/L LC50	0.66: 48 h water flea mg/L EC50 0.66: 48 h Daphnia pulex mg/L EC50

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Imazamox is moderately persistent with high mobility potential in soil depending on soil type.

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods**Disposal of Wastes**

Pesticides are toxic. Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

NON-REFILLABLE CONTAINERS: Do not reuse or refill this container. Offer for recycling, if available. Triple rinse or pressure rinse container promptly after emptying.

REFILLABLE CONTAINERS: Refill this container with Imazamox only. Do not reuse this container for any other purposes.

Refer to container label to determine if it is refillable and for complete cleaning and disposal instructions.

14. TRANSPORT INFORMATION

DOT

Not regulated

IATA

UN 3082, Environmentally Hazardous Substance, liquid, n.o.s. (Imazamox) 9, PG III

IMDG

UN 3082, Environmentally Hazardous Substance, liquid, n.o.s. (Imazamox) 9, PG III Marine Pollutant.

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL/NDSL	EINECS/E LINCS	ENCS	IECSC	KECL	PICCS	AICS
Ammonium salt of imazamox: 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-(methoxymethyl)-3-pyridinecarboxylic acid*	X	X	X	X	X	Present	X	X
Propylene Glycol	X	X	X	Present	X	Present	X	X
2-Ethyl Hexanol EO-PO Nonionic Surfactant	X	X			X	Present		X
Ammonium hydroxide	X	X	X	Present	X	Present	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

US Federal Regulations**CERCLA**

This material, as supplied, does contains the following 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).

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Ammonium hydroxide 1336-21-6	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains the following chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Ammonium hydroxide	1000 lb			X

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 contains the following substances regulated under applicable state right-to-know regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Propylene Glycol 57-55-6	X		X
Ammonium hydroxide 1336-21-6	X	X	X

EPA Pesticide Registration Number EPA Reg No 66222-271

EPA Statement

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

EPA Pesticide Label

Signal word: Caution

Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

Difference between SDS and EPA pesticide label

	EPA	OSHA
Signal Word	Caution	N/A
Acute toxicity- dermal	Harmful if absorbed through the skin	N/A

16. OTHER INFORMATION**NFPA****Health Hazards**

1

Flammability

0

Instability

0

Special Hazards

None

HMIS**Health Hazards**

1

Flammability

0

Physical hazards

0

Personal Protection

See section 8

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Revision Note: New 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