



Safety Data Sheet

Issue Date: 30-Jul-2013

Revision Date: 6-Nov-2015

Version 2

1. IDENTIFICATION

Product Identifier

Product Name Alias 4F

Other means of identification

SDS # ADAMA-078

Registration Number(s) Reg. No. 66222-156
UN/ID No UN3082

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 PROSAR:
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 Beige liquid

Physical State Liquid

Odor Mild pleasant odor

Classification

| | |
|---|-------------|
| Acute toxicity – Inhalation (Dusts/Mists) | Category 4 |
| Carcinogenicity | Category 1B |

Signal Word

Danger

Hazard Statements

Harmful if inhaled
May cause cancer

**Precautionary Statements - Prevention**

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Use personal protective equipment as required
 Avoid breathing dust/mist
 Use only outdoors or in a well-ventilated area

Precautionary Statements - Response

If exposed or concerned: Get medical advice/attention
 IF INHALED: Remove person to fresh air and keep comfortable for breathing
 Call a poison center/doctor if you feel unwell

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other Hazards

Very toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No | Weight-% |
|---------------|-------------|-----------|
| Imidacloprid | 138261-41-3 | 39.4-41.8 |

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.

4. FIRST-AID MEASURES

First Aid Measures

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| General Advice | When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment. |
| Eye Contact | Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Seek medical advice. |
| Skin Contact | Take off contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Call a poison control center or doctor for treatment advice. |
| Inhalation | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Give oxygen if breathing is difficult. If breathing has stopped, call 911, give artificial respiration. Seek medical attention for further treatment. |
| Ingestion | Do not induce vomiting, unless directed by medical personnel. Get immediate medical attention. If conscious, give 1 glass of water to dilute. Never give anything by mouth to an unconscious person. |

Most important symptoms and effects

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Foam. Carbon dioxide (CO₂). Dry chemical. Water spray (fog).

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Combustible material.

Hazardous Combustion Products Toxic gases may be formed by fire. Hydrogen chloride. Nitrogen oxides (NO_x).

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Evacuate area of unprotected personnel. Remain upwind of fire to avoid hazardous vapors and decomposition products. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Wear protective clothing as described in Section 8 of this safety data sheet. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

Environmental Precautions Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so. Dike far ahead of spill; use dry sand to contain the flow of material.

Methods for Clean-Up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Transfer contaminated absorbent, soil, and other materials to containers for disposal.

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. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash face, hands, and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Open and handle container with care. Do not contaminate water, food or feed by storage, disposal or by cleaning equipment.

Conditions for safe storage, including any incompatibilities

| | |
|-------------------------------|--|
| Storage Conditions | Keep container tightly closed and store in a cool, dry and well-ventilated place. Store locked up. Keep out of the reach of children. Store at ambient conditions. Keep/store only in original container. Do not use food or drink containers for mixing or storage. |
| Packaging Materials | Do not reuse container. |
| Incompatible Materials | None known. |

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 Use splash goggles or face shield when contact may occur.

Skin and Body Protection Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Viton or other impervious gloves are required. Long sleeve shirt, trousers, and safety shoes.

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.

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

| | | | |
|-------------------------------------|-----------------------|-------------------------|--------------------|
| Physical State | Liquid | Odor | Mild pleasant odor |
| Appearance | Beige liquid | Odor Threshold | Not determined |
| Color | Beige | | |
| Property | Values | Remarks • Method | |
| pH | 6.28 | @ 20 C | |
| Melting Point/Freezing Point | Not determined | | |
| Boiling Point/Boiling Range | Not determined | | |
| Flash Point | > 100 °C / > 212 °F | | |
| Evaporation Rate | Not determined | | |
| Flammability (Solid, Gas) | Liquid-not applicable | | |
| Upper Flammability Limits | Not determined | | |
| Lower Flammability Limit | Not determined | | |
| Vapor Pressure | Not determined | | |
| Vapor Density | Not determined | | |
| Specific Gravity | 1.161 | @ 20°C (68°F) | |
| Water Solubility | Not determined | | |
| Solubility in other solvents | Not determined | | |
| Partition Coefficient | Not determined | | |
| Auto-ignition Temperature | Not determined | | |
| Decomposition Temperature | Not determined | | |

| | |
|-----------------------------|----------------------------|
| Kinematic Viscosity | Not determined |
| Dynamic Viscosity | 287.343 @ 20°C |
| | 172.074 @ 40°C centistokes |
| Explosive Properties | Not determined |
| Oxidizing Properties | Not determined |
| Bulk Density | 9.48 lb/gal |

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid

See Sec. 7 Handling & Storage.

Incompatible Materials

None known.

Hazardous Decomposition Products

Hydrogen chloride. Nitrogen oxides (NOx).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact Avoid contact with eyes.

Skin Contact Avoid contact with skin.

Inhalation Harmful if inhaled.

Ingestion Do not ingest.

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 May cause cancer.

| Chemical Name | ACGIH | IARC | NTP | OSHA |
|-----------------------------|-------|----------|-----|------|
| Imidacloprid 138261-41-3 | | Group 2A | | X |

Legend

IARC (International Agency for Research on Cancer)

Group 2A - Probably Carcinogenic to Humans

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Product Information (Numerical measures of toxicity)**Acute Oral LD50 (Rat):** 4,690 mg/kg**Acute Dermal LD50 (Rabbit):** >5,050 mg/kg**Acute Inhalation LC50 (Rat):** >2.1 mg/L (4-hr)**Eye Irritation:** Minimally irritating.**Dermal Irritation:** Non-irritating.**Dermal Sensitization:** Not a skin sensitizer.**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Very toxic to aquatic life with long lasting effects. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area. This product is toxic to wildlife and highly toxic to aquatic invertebrates. This chemical demonstrates the properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Not determined

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS**Waste Treatment Methods****Disposal of Wastes**

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

Contaminated Packaging

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

California Hazardous Waste Status

| Chemical Name | California Hazardous Waste Status |
|-----------------------------|-----------------------------------|
| Imidacloprid 138261-41-3 | Toxic |

14. TRANSPORT INFORMATION**DOT**

Package smaller than 119 Gallons (450 Lt.): Not regulated

Package larger than 119 Gallons (450 Lt.):

UN3082 Environmentally hazardous substance, liquid, n.o.s. (Imidacloprid) 9, PG III, Marine pollutant.

IATA

UN3082 Environmentally hazardous substance, liquid, n.o.s. (Imidacloprid) 9, PG III,

IMDG**Marine Pollutant**

UN3082 Environmentally hazardous substance, liquid, n.o.s. (Imidacloprid) 9, PG III, Marine pollutant

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|-----------------------------------|
| 15. REGULATORY INFORMATION |
|-----------------------------------|

International Inventories

| Chemical Name | TSCA | DSL | NDSL | EINECS | ELINCS | ENCS | IECSC | KECL | PICCS | AICS |
|---------------|------|-----|------|--------|--------|------|-------|------|-------|------|
| Imidacloprid | | | | | | | 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**SARA 311/312 Hazard Categories**

| | |
|--|-----|
| Acute Health Hazard | Yes |
| Chronic Health Hazard | No |
| Fire Hazard | No |
| Sudden Release of Pressure Hazard | No |
| Reactive Hazard | No |

SARA 313

Not determined

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Not determined

EPA Pesticide Registration Number Reg. No. 66222-156

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 swallowed, absorbed through skin, or inhaled. Avoid contact with skin, eyes, or clothing. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

Difference between SDS and EPA pesticide label

| | EPA | OSHA |
|--------------------------------------|----------------------------------|--------------------|
| Signal Word | Caution | Danger |
| Acute toxicity - Oral | Harmful if swallowed | N/A |
| Acute toxicity - Dermal | Harmful if absorbed through skin | N/A |
| Acute toxicity - Inhalation (Vapors) | Harmful if inhaled | Harmful if inhaled |
| Carcinogenicity | N/A | May cause cancer |

16. OTHER INFORMATION**NFPA****Health Hazards****Flammability****Instability****Special Hazards**

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None

HMIS**Health Hazards****Flammability****Physical Hazards****Personal Protection**

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See section 8

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6-Nov-2015

Revision Note:

Updated format from 13-Jan-2015

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 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