



# Safety Data Sheet

Issue Date: 31-Jul-2008

Revision Date: 30-Oct-2015

Version 2

## 1. IDENTIFICATION

### Product Identifier

**Product Name** Galigan 2E

### Other means of identification

**SDS #** ADAMA-029

**Registration Number(s)** EPA Reg. No. 66222-28  
**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 pesticide 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** Amber liquid

**Physical State** Liquid

**Odor** Aromatic Solvent like

### Classification

|   |             |
|---|-------------|
| Acute Toxicity – Inhalation (Dusts/Mists) | Category 4  |
| Eye Damage/ Irritation                    | Category 2  |
| Reproductive toxicity                     | Category 1B |
| Aspiration toxicity                       | Category 1  |
| Flammable Liquids                         | Category 4  |

### Signal Word

**Danger**

### Hazard Statements

Harmful if inhaled  
Causes serious eye irritation  
May damage fertility or the unborn child  
May be fatal if swallowed and enters airways

Combustible liquid

**Precautionary Statements - Prevention**

Avoid breathing dusts/mists  
 Use only outdoors or in a well-ventilated area  
 Wear eye/face protection  
 Obtain special instructions before use  
 Do not handle until all safety precautions have been read and understood  
 Use personal protective equipment as required  
 Keep away from heat/sparks/open flames/hot surfaces. — No smoking

**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  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.  
 If eye irritation persists: Get medical advice/attention  
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
 Do not induce vomiting  
 IN CASE OF FIRE: Use CO<sub>2</sub>, dry chemical, or foam for extinction

**Precautionary Statements - Storage**

Store locked up  
 Store in a well-ventilated place. Keep cool

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Other Hazards**

Toxic to aquatic life with long lasting effects

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name        | CAS No      | Weight-% |
|----------------------|-------------|----------|
| Oxyfluorfen          | 42874-03-3  | 22.2     |
| Proprietary Solvent  | Proprietary | <60      |
| Proprietary Additive | Proprietary | <10      |

\*\*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****General Advice**

When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment. If exposed or concerned: Get medical advice/attention.

**Eye Contact**

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

|                     |   |
|---------------------|---|
| <b>Skin Contact</b> | Wash off immediately with plenty of water for at least 15 minutes. Consult a physician if necessary.    |
| <b>Inhalation</b>   | Give oxygen if breathing is difficult. If breathing has stopped, call 911, give artificial respiration. |
| <b>Ingestion</b>    | Immediately call a poison center or doctor/physician. Do not induce vomiting.                           |

**Most important symptoms and effects**

|                 |   |
|-----------------|---|
| <b>Symptoms</b> | Causes mild skin irritation. Inhalation may cause irritation of respiratory tract. Prolonged breathing of vapors may cause nausea, headache, weakness and/or dizziness. Ingestion may cause irritation of the gastrointestinal tract, cramps, vomiting or diarrhea. Aspiration of material into lungs can cause chemical pneumonitis, which can be fatal. |
|-----------------|---|

**Indication of any immediate medical attention and special treatment needed**

|                           |  |
|---------------------------|--|
| <b>Notes to Physician</b> | Treat symptomatically. If the product is ingested, probable mucosal damage may contraindicate the use of gastric lavage. |
|---------------------------|--|

**5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**

Foam. Carbon dioxide (CO<sub>2</sub>). Dry chemical. Water spray (fog).

**Unsuitable Extinguishing Media** Not determined.

**Specific Hazards Arising from the Chemical**

Combustible liquid. Vapors may travel to source of ignition and flash back. Vapors may form explosive mixtures with air.

**Hazardous Combustion Products** Chlorides. Fluorides. Nitrogen oxides (NO<sub>x</sub>).

**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.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

|                                  |  |
|----------------------------------|--|
| <b>Personal Precautions</b>      | Wear protective clothing as described in Section 8 of this safety data sheet. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.     |
| <b>Environmental Precautions</b> | 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**

|                                |   |
|--------------------------------|---|
| <b>Methods for Containment</b> | Prevent further leakage or spillage if safe to do so.   |
| <b>Methods for Clean-Up</b>    | Cover liquid spill with sand, earth or other non-combustible absorbent material. Sweep up and shovel into suitable containers for disposal. Dispose of in accordance with federal, state and local regulations. |

## 7. HANDLING AND STORAGE

### Precautions for safe handling

#### **Advice on Safe Handling**

Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Do not eat, drink or smoke when using this product.

### Conditions for safe storage, including any incompatibilities

#### **Storage Conditions**

Keep container tightly closed and store in a cool, dry and well-ventilated place. Keep out of the reach of children. Do not contaminate water, food, or feed by storage or disposal. Keep/store only in original container. Store at ambient conditions. Do not transport or store below 0° C/ 32° F. Protect from freezing. Store locked up.

#### **Packaging Materials**

Do not reuse container.

#### **Incompatible Materials**

Oxidizing agents. Acids. Alkalis.

## 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**

Wear safety glasses with side shields (or goggles).

#### **Skin and Body Protection**

Wear appropriate clothing to prevent repeated or prolonged skin contact. Wear long-sleeved shirt, long pants, and shoes plus socks. Use chemical resistant gloves, such as P.V.C., butyl-rubber, nitrile-rubber, or neoprene.

#### **Respiratory Protection**

NIOSH-approved respirator or mask in the absence of adequate ventilation.

#### **General Hygiene Considerations**

Handle in accordance with good industrial hygiene and safety practice. Wash face, hands and any exposed skin thoroughly after handling. Take off all contaminated clothing and wash it before reuse. 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

|                       |              |                       |                       |
|-----------------------|--------------|-----------------------|-----------------------|
| <b>Physical State</b> | Liquid       | <b>Odor</b>           | Aromatic Solvent like |
| <b>Appearance</b>     | Amber liquid | <b>Odor Threshold</b> | Not determined        |
| <b>Color</b>          | Amber        |                       |                       |

| <u>Property</u>              | <u>Values</u>                | <u>Remarks • Method</u> |
|------------------------------|------------------------------|-------------------------|
| pH                           | 5.0-7.0                      |                         |
| Melting Point/Freezing Point | Not determined               |                         |
| Boiling Point/Boiling Range  | Not determined               |                         |
| Flash Point                  | 71 °C / 160 °F               |                         |
| Evaporation Rate             | Not determined               |                         |
| Flammability (Solid, Gas)    | Liquid-not applicable        |                         |
| Upper Flammability Limits    | 7% by volume                 |                         |
| Lower Flammability Limit     | 0.8% by volume               |                         |
| Vapor Pressure               | Not determined               |                         |
| Vapor Density                | Not determined               |                         |
| Specific Gravity             | 1.08                         | @ 24°C/75°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            | 10.51 mm <sup>2</sup> /s cSt | @ 22°C                  |
| Explosive Properties         | Not determined               |                         |
| Oxidizing Properties         | Not determined               |                         |
| Bulk Density                 | 240 g/L (2lb/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

Keep out of reach of children.

### Incompatible Materials

Oxidizing agents. Acids. Alkalis.

### Hazardous Decomposition Products

Chlorides. Fluorides. Nitrogen oxides (NO<sub>x</sub>).

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### **Product Information**

#### **Eye Contact**

Avoid contact with eyes.

#### **Skin Contact**

May be harmful in contact with skin. Causes mild skin irritation.

#### **Inhalation**

Harmful if inhaled.

#### **Ingestion**

Do not taste or swallow.

**Component Information**

| Chemical Name        | Oral LD50            | Dermal LD50             | Inhalation LC50                     |
|----------------------|----------------------|-------------------------|-------------------------------------|
| Proprietary Solvent  | > 5000 mg/kg ( Rat ) | > 2000 mg/kg ( Rabbit ) | > 590 mg/m <sup>3</sup> ( Rat ) 4 h |
| Proprietary Additive | = 3598 mg/kg ( Rat ) | = 8 g/kg ( Rabbit )     | = 3.1 mg/L ( Rat ) 4 h              |

**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** This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

**Reproductive toxicity** May damage fertility or the unborn child.

**Aspiration hazard** May be fatal if swallowed and enters airways.

**Product Information (Numerical measures of toxicity)**

**Acute Oral LD50 (Rat):** >2,500 mg/kg

**Acute Dermal LD50 (Rabbit):** >2,000 mg/kg

**Acute Inhalation LC50 (Rat):** >2.02 mg/L (4-hr)

**Eye Irritation:** Severely irritating.

**Dermal Irritation:** Mildly irritating.

**Dermal Sensitization:** Not a skin sensitizer.

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

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 by cleaning or equipment or disposal of equipment washwaters. This product is highly toxic to aquatic invertebrates, aquatic plants, wildlife, and fish. Use with care when applying in areas frequented by wildlife or adjacent to any body of water or wetland area. Do not apply when weather conditions favor drift or erosion from target areas.

**Component Information**

| Chemical Name        | Algae/aquatic plants                        | Fish  | Toxicity to microorganisms | Crustacea                          |
|----------------------|---|---|----------------------------|------------------------------------|
| Proprietary Solvent  | 2.5: 72 h Skeletonema costatum mg/L EC50    | 19: 96 h Pimephales promelas mg/L LC50 static<br>2.34: 96 h Oncorhynchus mykiss mg/L LC50<br>1740: 96 h Lepomis macrochirus mg/L LC50 static<br>45: 96 h Pimephales promelas mg/L LC50 flow-through<br>41: 96 h Pimephales promelas mg/L LC50 |                            | 0.95: 48 h Daphnia magna mg/L EC50 |
| Proprietary Additive | 500: 72 h Desmodesmus subspicatus mg/L EC50 | 832: 96 h Lepomis macrochirus mg/L LC50 static<br>1072: 96 h Pimephales promelas mg/L LC50 static<br>1400: 96 h Poecilia reticulata mg/L LC50 static  |                            | 4897: 48 h Daphnia magna mg/L EC50 |

**Persistence/Degradability**

Not determined.

**Bioaccumulation**

Not determined.

**Mobility**

| Chemical Name        | Partition Coefficient |
|----------------------|-----------------------|
| Proprietary Solvent  | 6.1                   |
| Proprietary Additive | -0.46                 |

**Other Adverse Effects**

Not determined

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

END USERS MUST DISPOSE OF ANY UNUSED PRODUCT AS PER THE LABEL RECOMMENDATIONS.

Pesticide wastes are acutely hazardous. 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 at the nearest EPA Regional Office for guidance.

Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

**Contaminated Packaging**

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

**14. TRANSPORT INFORMATION****DOT**

Package less than 119 Gallons (450 Lt): Not regulated

Package over 119 Gallons (450 Lt):

UN3082, Environmentally Hazardous Substance, liquid, n.o.s. (oxyfluorfen), 9, PG III, Marine Pollutant

**IATA**

UN 3082, Environmentally Hazardous Substance, liquid, n.o.s. (oxyfluorfen)

**IMDG****UN/ID No**

UN3082

**Proper Shipping Name**

Environmentally Hazardous Substance, liquid, n.o.s. (oxyfluorfen)

**Hazard Class**

9

**Packing Group**

III

**Marine Pollutant**

This product contains a chemical which is listed as a marine pollutant according to IMDG/IMO

**15. REGULATORY INFORMATION****International Inventories****TSCA**

All ingredients are listed or exempt from listing on Chemical Substance Inventory

**Legend:**

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

**US Federal Regulations****SARA 311/312 Hazard Categories**

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

**SARA 313**

| Chemical Name        | CAS No      | Weight-% | SARA 313 - Threshold Values % |
|----------------------|-------------|----------|-------------------------------|
| Proprietary Additive | Proprietary | 8.8-9.8  | 1.0                           |

**US State Regulations****California Proposition 65**

This product contains the following Proposition 65 chemicals.

| Chemical Name        | California Proposition 65 |
|----------------------|---------------------------|
| Proprietary Additive | Developmental             |

**U.S. State Right-to-Know Regulations**

| Chemical Name        | New Jersey | Massachusetts | Pennsylvania |
|----------------------|------------|---------------|--------------|
| Proprietary Additive | X          | X             | X            |

**EPA Pesticide Registration Number** 66222-28**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: Warning

Causes substantial but temporary eye injury. Harmful if swallowed or absorbed through the skin. Do not get in eyes or on clothing. Avoid contact with skin. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove contaminated clothing and wash clothes before reuse.

**Difference between SDS and EPA pesticide label**

| Signal Word                       | Warning                                     | Danger                                   |
|-----------------------------------|---|--|
| Acute toxicity - Oral             | Harmful if swallowed                        | N/A                                      |
| Acute toxicity - Dermal           | Harmful if absorbed through the skin        | N/A                                      |
| Acute toxicity – Inhalation       | N/A   | Harmful if inhaled                       |
| Serious eye damage/eye irritation | Causes substantial but temporary eye injury | Causes serious eye irritation            |
| Reproductive toxicity             | N/A   | May damage fertility or the unborn child |
| Aspiration Hazard                 | N/A   | May be fatal if swallowed and enters air |



**16. OTHER INFORMATION**

|                    |                       |                     |                         |                            |
|--------------------|-----------------------|---------------------|-------------------------|----------------------------|
| <b><u>NFPA</u></b> | <b>Health Hazards</b> | <b>Flammability</b> | <b>Instability</b>      | <b>Special Hazards</b>     |
|                    | 2                     | 2                   | 0                       | None                       |
| <b><u>HMIS</u></b> | <b>Health Hazards</b> | <b>Flammability</b> | <b>Physical Hazards</b> | <b>Personal Protection</b> |
|                    | 2                     | 2                   | 0                       | See section 8              |

**Issue Date:** 31-Jul-2008  
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**Revision Note:** Updated format from 24-Jul-2014

**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**