

MATERIAL SAFETY DATA SHEET

Galigan® 2E

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1. IDENTIFICATION

Product name: Galigan® 2E
Chemical name of active ingredient(s): Oxyfluorfen: 2-chloro-1-(3-ethoxy-4-nitrophenoxy)-4-(trifluoromethyl) benzene
Manufacturer: Makhteshim Agan of North America, Inc.
4515 Falls of Neuse Road, Suite 300
Raleigh, NC 27609
Phone: 919-256-9300
For fire, spill, and/or leak emergencies, contact Infotrac: Phone: 1-800-535-5053
For medical emergencies and health and safety inquiries, contact Prosar: Phone: 1-877-250-9291

2. COMPOSITION/INFORMATION ON INGREDIENTS

Common Name	CAS NO.	%	OSHA PEL	ACGIH TLV	OTHER	NTP/IARC/OSHA (Carcinogen)
Oxyfluorfen	42874-03-3	22.2	NA	NA	NA	NA
N-Methyl-2-pyrrolidone	872-50-4	8-10	NA	NA	NA	NA
Aromatic petroleum hydrocarbons containing:						
Naphthalene	91-20-3	<8%	50 mg/m ³ (TWA)	52 mg/m ³ (TWA)	NA	IARC: 2B* NTP: 2**

*IARC 2B: The agent is possibly carcinogenic to humans.

**NTP 2: Substances or groups of substances, and medical treatments which may reasonably be anticipated to be carcinogens.

3. HAZARDOUS IDENTIFICATIONS

PHYSICAL PROPERTIES

Appearance: Amber liquid

Odor: Aromatic (solvent-type odor)

EMERGENCY OVERVIEW: 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.

PRIMARY ROUTES OF ENTRY: Ingestion, skin/eye contact, inhalation.

DELAYED EFFECTS:

Repeated overexposure to the active ingredient in this material can cause liver damage.

Prolonged or repeated exposure to naphtha can cause liver damage and kidney damage.

Prolonged or repeated exposure to N-Methyl pyrrolidone can cause possible adverse reproductive effects.

EFFECTS AND SYMPTOMS OF EXPOSURE:

Inhalation: Product causes headache, dizziness, nausea, vomiting, and cramps. Inhalation of solvent vapor or mist can cause irritation of the nose, throat, and lungs, headache, nausea, dizziness, drowsiness, loss of coordination, stupor, and unconsciousness.

Ingestion: Product causes headache, dizziness, nausea, vomiting, and cramps.

Skin Contact: Product is irritating to skin. N-Methyl pyrrolidone may be absorbed through intact skin. Material can cause severe skin irritation. Prolonged or repeated skin contact can cause defatting and drying of the skin, which can lead to irritation and dermatitis, skin sensitization in susceptible individuals.

Eye Contact: Irritating to eyes

4. FIRST AID

FIRST AID MEASURES

IF SWALLOWED: • Call a poison control center or doctor immediately for treatment advice.

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	<ul style="list-style-type: none">• Have person sip a glass of water if able to swallow.• Do not induce vomiting unless told to do so by a poison control center or doctor.• Do not give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15-20 minutes.• Call a poison control center or doctor for treatment advice.
IF IN EYES:	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15-20 minutes.• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.• Call a poison control center or doctor for treatment advice.
IF INHALED:	<ul style="list-style-type: none">• Move person to fresh air.• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.• Call a poison control center or doctor for further treatment advice.
Have the product container or label with you when calling a poison control center or doctor or going for treatment.	
NOTE TO PHYSICIAN: Contains petroleum distillate; vomiting may cause aspiration pneumonia. Symptoms of exposure through inhalation or ingestion include headache, dizziness, nausea, vomiting, and cramps. Symptoms from eye or skin contact include irritation. Remove victim from area of exposure. Wash off remaining material with plenty of water. Probable mucosal damage may contraindicate the use of gastric lavage. Treat symptomatically and give supportive therapy. There is no specific antidote.	

5. FIRE FIGHTING MEASURES

FLASH POINT: 71°C (160° F)

EXPLOSION PROPERTIES: Naphtha (vapors)-may form explosive mixture with air

LOWER EXPLOSION LIMIT: 0.8 % by volume

UPPER EXPLOSION LIMIT: 7% by volume

EXTINGUISHING MEDIA: Foam, CO₂, dry chemical, water spray

FIRE & EXPLOSION HAZARDS: Flashback may occur along vapor trail.

HAZARDOUS THERMAL DECOMPOSITION PRODUCTS: Chloride compounds, fluoride compounds, and nitrogen oxides.

FIRE-FIGHTING EQUIPMENT: Use positive-pressure self-contained breathing apparatus and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO TAKE FOR SPILLS/LEAKS: Keep away from all ignition sources. Ventilate the spill area. Avoid breathing vapor. Use MSHA/NIOSH self-contained breathing apparatus or air-line respirator for large spills in confined areas. Dike the spill with inert material (sand, earth, etc.) and transfer the liquid or solid diking material to separate containers for recovery or disposal. Remove the contaminated clothing promptly and wash exposed skin areas with soap and water. Wash clothing before reuse. Keep spill out of all sewers and open bodies of water.

PERSONAL PRECAUTIONS: Wear suitable protective clothing. See Section 8 for recommendations. If exposed to material during clean up, see Section 4 for First Aid recommendations. Thoroughly wash body areas that come into contact with this product.

ENVIROMENTAL PRECAUTIONS: Keep spills and cleaning runoff out of municipal sewers and open bodies of water. Do not discharge into drains or the environment. Note: Spills on porous surfaces can contaminate groundwater.

7. HANDLING AND STORAGE

Do not contaminate water, food, or feed by storage or disposal.

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PRECAUTIONS TO BE TAKEN IN HANDLING: KEEP OUT OF REACH OF CHILDREN. Do not get in eyes, on skin, or clothing. Avoid breathing vapor and spray mist. Users should wash hands before eating, drinking, using tobacco, or using the toilet. For handling relative to the end-use of this product, read the product label.

PRECAUTIONS TO BE TAKEN IN STORAGE: Store in original container in a dry storage area. Keep away from freezing.

STORAGE TEMPERATURE (MIN/MAX): Normal ambient temperatures. Store above 32° F.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT. FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

EYE PROTECTION: Protective eyewear.

SKIN PROTECTION: Coveralls over short-sleeved shirt and short pants, shoes plus socks. Chemical-resistant headgear for overhead exposures. Chemical-resistant apron when cleaning equipment, mixing or loading.

HAND PROTECTION: Chemical-resistant gloves, such as barrier laminate or Viton = 14 mils.

RESPIRATOR REQUIREMENTS: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use a NIOSH-approved air-purifying respirator.

ADDITIONAL PROTECTIVE MEASURES: Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS:

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

EXPOSURE GUIDELINES: Refer to Section 2.

ENGINEERING CONTROLS: Provide general and/or local ventilation to control airborne levels below the exposure guidelines.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTIES

Appearance: Amber liquid

Odor: Aromatic (solvent-type odor)

DENSITY: 1.08 (24°C)

pH: 5.33

FLASH POINT: 71°C (160° F)

VISCOSITY: 10.51 mm²/s (cSt)(22°C)

10. STABILITY AND REACTIVITY

STABILITY: Not subject to polymerization.

INCOMPATIBILITY: Oxidizing agents, acids, alkali.

HAZARDOUS DECOMPOSITION PRODUCTS: Chloride compounds, fluoride compounds, nitrogen oxides

HAZARDOUS REACTIONS: None.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY/IRRITATION STUDIES:

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

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

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Acute Inhalation LC50 (Rat): > 2.02 mg/L(4-hr.)
Eye Irritation (Rabbit): Severely irritating.
Dermal Irritation (Rabbit): Moderately irritating.
Dermal Sensitization: Not a skin sensitizer

12. ECOLOGICAL INFORMATION

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 of 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.

13. DISPOSAL CONSIDERATIONS:

PRODUCT DISPOSAL: 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 at the nearest EPA regional office for guidance.

CONTAINER DISPOSAL: Dispose of product containers, waste containers, and residues according to label instructions and local, state, and federal health and environmental regulations.

14. TRANSPORT INFORMATION:

DOT CLASSIFICATION:

Not regulated

INTERNATIONAL TRANSPORTATION:

IMO (vessel):

UN 3082, Environmentally Hazardous Substance, Liquid, N.O.S. (oxyfluorfen), 9, PG III, Marine Pollutant

IATA (air):

Not regulated

15. REGULATORY INFORMATION:

SARA TITLE III CLASSIFICATION:

Section 302: Not applicable.
Section 311/312: Acute health hazard (immediate)
Chronic health hazard (delayed)
Section 313: Oxyfluorfen (22.2%) CAS#: 42874-03-3
N-Methyl-2-pyrrolidone (8-10%) CAS#: 872-50-4
Naphthalene (< 8%) CAS#: 91-20-3

CA PROPOSITION 65: This product contains a material (naphthalene) known to the State of California to cause cancer. This product contains a material (n-methyl-2-pyrrolidone) known to the State of California to cause developmental toxicity.

CERCLA RQ: Naphthalene 100 lbs. (1,250 lbs/625 gals of product)

RCRA CLASSIFICATION: 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.

TSCA STATUS: The ingredients of this product are listed on the TSCA inventory or are exempt.

16. OTHER INFORMATION:

HAZARD RATINGS	NFPA	HMIS	
HEALTH:	2	2	0 LEAST
FLAMMABILITY:	2	2	1 SLIGHT
REACTIVITY:	0	0	2 MODERATE

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- 3 HIGH
- 4 SEVERE

MSDS Date: 7-31-08; Supercedes MSDS dated 1-28-04. Changes made to all sections.

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