



E-2 HERBICIDE

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Issue date: 10/8/2024 Version: 1.0

SECTION 1: Identification

Identification

Product form : Mixture
Trade name : E-2 HERBICIDE : EPA
Other means of identification Reg. No.: 228-442

Recommended use and restrictions on use

Recommended use : Herbicide
Restrictions on use : All other uses not recommended above

Supplier

Nufarm Americas, Inc.
11901 South Austin Avenue
Alsip, IL 60803
United States
T 1-800-345-3330
www.nufarm.com

Emergency telephone number

Emergency number : For Hazardous Materials or Dangerous Goods Incident Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night: 1-800-424-9300 (Toll Free, USA) / 703-527-3887 (Virginia, USA)
CCN 16105

SECTION 2: Hazard(s) identification

Classification of the substance or mixture

GHS US classification

Acute toxicity (oral) Category 4	Harmful if swallowed
Skin corrosion/irritation Category 2	Causes skin irritation
Serious eye damage/eye irritation Category 2A	Causes serious eye irritation
Full text of H statements : see section 16	

GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US)



Signal word (GHS US)

: Warning

Hazard statements (GHS US)

: Harmful if swallowed

Causes skin irritation

Causes serious eye irritation

Precautionary statements (GHS US)

: Wash hands, forearms and face thoroughly after handling.

Do not eat, drink or smoke when using this product.

Wear protective clothing, eye protection, face protection.

If swallowed: Call a poison center or doctor if you feel unwell.

Rinse mouth.

If on skin: Wash with plenty of soap and water.

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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If eye irritation persists: Get medical advice/attention.
Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Other hazards which do not result in classification

No additional information available

Unknown acute toxicity (GHS US)

No additional information available

SECTION 3: Composition/Information on ingredients

Substances

Name	Product identifier	%	GHS US classification
Dimethylamine Salt of 2,4-Dichlorophenoxyacetic Acid	CAS-No.: 2008-39-1	38.3 – 40.7	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412
Solvent naphtha (petroleum), heavy arom.; Kerosine - unspecified, [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C9 through C16 and boiling in the range of approximately 165 °C to 290 °C (330 °F to 554 °F).]	CAS-No.: 64742-94-5	5.9 – 6.5	Asp. Tox. 1, H304 Aquatic Chronic 2, H411
fluroxypyr-meptyl (ISO), methylheptyl, O-(4-amino-3,5-dichloro-6-fluoro-2-pyridyloxy) acetate	CAS-No.: 81406-37-3	5.6 – 6.2	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
dicamba (ISO), 2,5-dichloro-6-methoxybenzoic acid, 3,6-dichloro-2-methoxybenzoic acid	CAS-No.: 1918-00-9	3.9 – 4.3	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Aquatic Chronic 3, H412

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

Description of first aid measures

First-aid measures general	: First aider: Pay attention to self-protection. Never give anything by mouth to an unconscious person. Give artificial respiration if necessary. Induce artificial respiration with mask fitted with one-way valve or other suitable device but not mouth-to-mouth.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.
First-aid measures after skin contact	: Wash skin with plenty of water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
First-aid measures after eye contact	: 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.
First-aid measures after ingestion	: Rinse mouth out with water. If the person is fully conscious, make him/her drink water (8 ounces / 240mL). Never give an unconscious person anything to drink. Do NOT induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Call a poison center/doctor/physician if you feel unwell.

Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: May cause moderate irritation.

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Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects after ingestion	: Ingestion may cause nausea and vomiting. Depression of the central nervous system, headaches, dizziness, drowsiness, loss of coordination.
Most Important Symptoms/Effects	: Harmful if swallowed. Causes serious eye irritation. Irritation of the respiratory tract.

Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

Specific hazards arising from the chemical

Fire hazard	: No fire hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released. Thermal decomposition may produce : Hydrogen chloride. Carbon dioxide. Carbon monoxide. Nitrogen oxides.

Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Prevent fire-fighting water from entering environment.
Protection during firefighting	: Self-contained breathing apparatus.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

General measures	: Evacuate area. Do not take actions involving personal risks. Avoid all personal contact including breathing in the mist, spray, vapors. Stop leak if safe to do so. Absorb spillage to prevent material-damage. Notify authorities if product enters sewers or public waters.
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For non-emergency personnel

Protective equipment	: Wear the recommended personal protective equipment.
Emergency procedures	: Evacuate the danger area. If outdoors, move to an area upwind of the danger area. If possible without taking personal risks, remove ignition sources, ventilate area. Prevent other non-emergency personnel from entering the danger area.

For emergency responders

Protective equipment	: Wear the recommended personal protective equipment.
Emergency procedures	: Evacuate personnel to a safe area. Ventilate spillage area.

Environmental precautions

Do not let the product reach soil, drains, sewers, or surface and ground water.

Methods and material for containment and cleaning up

For containment	: Contain with non-combustible inert absorbent.
Methods for cleaning up	: Take up in non-combustible inert absorbent and place into container for disposal. Contaminated absorbent material may pose the same hazard as the spilled product. Decontaminate surfaces and equipment with water and detergent. Until a sufficient level of dilution is achieved, the decontamination water may pose the same hazards as the product. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

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Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

SECTION 7: Handling and storage

Precautions for safe handling

Precautions for safe handling	: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Use only outdoors or in a well-ventilated area.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities

Storage conditions	: Store locked up. Keep only in the original container in a cool, well ventilated place away from : Heat sources. Do not freeze.
Incompatible materials	: Strong acids, strong bases and strong oxidants.

SECTION 8: Exposure controls/personal protection

Control parameters

No additional information available

Appropriate engineering controls

Appropriate engineering controls	: Use general ventilation, local exhaust ventilation, or process enclosure to keep the airborne concentrations below the permissible exposure limits. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
Environmental exposure controls	: Avoid release to the environment. Take measures to reduce or limit air emissions and releases to soil and the aquatic environment.

Individual protection measures/Personal protective equipment

Personal protective equipment:

Personal protective equipment should be chosen according to national standards and in discussion with the supplier of the protective equipment.

Hand protection:

Protective gloves. Wear suitable gloves resistant to chemical penetration

Eye protection:

Chemical goggles or face shield

Skin and body protection:

Long sleeved protective clothing. Chemical resistant safety shoes. Chemical-resistant headgear for overhead exposures

Respiratory protection:

If vapors or mists exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state	: Liquid.
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Color	: Amber
Odor	: Mild Amine-like
Odor threshold	: No data available
pH	: 5.5 – 8
Melting point	: -4 °C /25° F
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 110 °C /230° F
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: 1.169 @ 25° C/77° F
Solubility	: Soluble.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 51.6 cP @ 25° C/77° F
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

SECTION 10: Stability and reactivity

Reactivity:	: The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reactions known under normal conditions of use.
Conditions to avoid	: None under recommended storage and handling conditions (see section 7).
Incompatible materials	: Strong acids. Strong bases. Oxidizing agents.
Hazardous decomposition products	: Thermal decomposition generates: Under normal conditions of storage and use, hazardous decomposition products should not be produced. Nitrogen oxides. Carbon dioxide. Carbon monoxide.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

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LD50 oral rat	1750 mg/kg
LD50 dermal rat	> 2000 mg/kg
Skin corrosion/irritation	: Causes skin irritation. Irritating to rabbits on cutaneous application pH: 5.5 – 8
Serious eye damage/irritation	: Causes serious eye irritation. Severely irritating to rabbits on ocular application pH: 5.5 – 8
Respiratory or skin sensitization	: Not classified. No sensitizing reaction was observed for guinea pigs

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Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: May cause moderate irritation.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects after ingestion	: Ingestion may cause nausea and vomiting. Depression of the central nervous system, headaches, dizziness, drowsiness, loss of coordination.
Most Important Symptoms/Effects	: Harmful if swallowed. Causes serious eye irritation. Irritation of the respiratory tract.

SECTION 12: Ecological information

Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects.

Persistence and degradability

No additional information available

Bioaccumulative potential

No additional information available

Mobility in soil

No additional information available

Other adverse effects

No additional information available

SECTION 13: Disposal considerations

Disposal methods

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Dispose of this material and its container at hazardous or special waste collection point. Refer to all applicable national, international and local regulations or provisions.
Ecological waste information	: Avoid release to the environment.

SECTION 14: Transport information

DOT:

< 89 Gallons per complete package:

Not regulated

≥ 89 Gallons per complete package:




UN 3082, Environmentally hazardous substances, liquid, n.o.s., (Mixture of 2,4-D DMA, Fluroxypyr MHE, and Dicamba) 9, III, RQ

In accordance with DOT / IMDG / IATA

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DOT	IMDG	IATA
UN number		
3082	3082	3082
Proper Shipping Name		
Environmentally hazardous substances, liquid, n.o.s. (Mixture of 2,4-D DMA, Fluroxypyr MHE, and Dicamba)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Mixture of 2,4-D DMA, Fluroxypyr MHE, and Dicamba)	Environmentally hazardous substance, liquid, n.o.s. (Mixture of 2,4-D DMA, Fluroxypyr MHE, and Dicamba)
Transport hazard class(es)		
9	9	9
		
Packing group		
III	III	III
Environmental hazards		
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes
No supplementary information available		

Special precautions for user

DOT	
UN-No.(DOT)	: UN3082
DOT Packaging Exceptions (49 CFR 173.xxx)	: 155
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203
DOT Packaging Bulk (49 CFR 173.xxx)	: 241
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: No Limit
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: No Limit
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

IMDG

Special provision (IMDG)	: 274, 335, 969
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: LP01, P001
Packing provisions (IMDG)	: PP1
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1, TP29
EmS-No. (Fire)	: F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	: S-F - SPILLAGE SCHEDULE Foxtrot - WATER-SOLUBLE MARINE POLLUTANTS
Stowage category (IMDG)	: A

IATA

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y964
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 964
PCA max net quantity (IATA)	: 450L

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CAO packing instructions (IATA) : 964
CAO max net quantity (IATA) : 450L
ERG code (IATA) : 9L

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:		
Dimethylamine Salt of 2,4-Dichlorophenoxyacetic Acid	CAS-No. 2008-39-1	38.3 – 40.7%
fluroxypyr-meptyl (ISO), methylheptyl, O-(4-amino-3,5-dichloro-6-fluoro-2-pyridyloxy) acetate	CAS-No. 81406-37-3	5.6 – 6.2%
dicamba (ISO), 2,5-dichloro-6-methoxybenzoic acid, 3,6-dichloro-2-methoxybenzoic acid	CAS-No. 1918-00-9	3.9 – 4.3%
Trade Secret	CAS-No. Trade Secret	Trade Secret%

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.		
Dicamba Acid	CAS-No. 1918-00-9	3.9 – 4.3%

Dicamba Acid (1918-00-9)	
CERCLA RQ	1000 lb

FIFRA Labelling	
EPA Registration Number	228-442
This chemical is a pesticide product registered by the U.S. 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.	

15.2. International regulations

CANADA

Dimethylamine Salt of 2,4-Dichlorophenoxyacetic Acid (2008-39-1)	
Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)	

Fluroxypyr Acid (81406-37-3)	
Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)	

Dicamba Acid (1918-00-9)	
Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)	

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Solvent Naptha (Petroleum), Heavy Aromatic (64742-94-5)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Dimethylamine Salt of 2,4-Dichlorophenoxyacetic Acid (2008-39-1)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Fluroxypyr Acid (81406-37-3)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Dicamba Acid (1918-00-9)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Solvent Naptha (Petroleum), Heavy Aromatic (64742-94-5)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of hazard classes and H-statements

H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.