



AGRO TECHNIC PTE. LTD.

32 ANG MO KIO INDUSTRIAL PARK 2, #01-01/02, SING INDUSTRIAL COMPLEX
SINGAPORE 569510 TEL: 64821828, 64821890, 64814038 FAX: 64812631
E-mail: agro@agrotech.com.sg Website: www.agrofog.com
CO REG. NO.: 198102315E GST REG. NO.: M2-0044553-8

AFX FOGGING SOLUTION

Safety Data Sheet

Date: June 2023

I. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : AFX Fogging Solution

Supplier : Agro Technic Pte Ltd

Supplier's Address : 32 Ang Mo Kio Industrial Park 2
#01-01/02 Sing Industrial Complex
Singapore 569510

Contact Number : +65 6482 1828

Fax Number : +65 6481 2631

II. HAZARDS IDENTIFICATION

GHS Classification : Acute oral toxicity : category 4

GHS label elements
Symbol(s)



Signal words : Warning

GHS Hazard statements : **Health Hazards**

H302 Harmful if swallowed

Environmental Hazards

Not classified as an environmental hazard under GHS criteria.

GHS Precautionary statements : **Prevention**

P264 Wash hand thoroughly after handling

P270 Do not eat, drink or smoke when using this product

Response

P301+P312 **If swallowed** : call a poison center or doctor/physician if you feel unwell

P303+P362 **If on skin** : take off contaminated clothing and wash before reuse.

P304+P340 **If inhaled** : Remove to fresh air and keep at rest in a position comfortable for breathing.



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P305+P351 **If in eyes** : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

+P338

Disposal

P501 Dispose of contents and container to appropriate waste site or reclaimer in accordance with local and national regulations.

III. COMPOSITION / INFORMATION ON INGREDIENTS

Identification of the substance : 2,2-Oxydiethanol
Chemical Family : Glycol
Synonyms : Diglycol, Dihydroxydiethyl Ether
Molecular Formula : CH₂OHC₂H₄OCH₂OH
Molecular Weight : 106.12
CAS Number : 111-46-6
UN Number : -
EC Number : 203-872-2

IV. FIRST AID MEASURES

General Advice : When symptoms persist or in all cases of doubt seek medical advice.
Inhalation : Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.
Skin Contact : Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.
Eye Contact : Flush eyes with water while holding eyelids open. Rest eyes for 30 minutes. If redness, burning, blurred vision, or swelling persist, transport to the nearest medical facility for additional treatment.
Ingestion : If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

V. FIRE - FIGHTING MEASURES

Flash Point : 123.9°C
Auto-ignition Temperature : 228.9°C
Explosive Limits : 1.5%



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Extinguishing Media	: Alcohol-resistant foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Inappropriate Extinguishing Media	: Do not water in a jet
Fire Fighting Procedures	: Containers exposed to intense heat from fires should be cooled with large quantities of water. Evacuate the area of all non-essential personnel.
Special Protective Equipment for Fire-Fighter	: Wear self-contained breathing apparatus with full face mask and protective clothing.

VI. ACCIDENTAL RELEASE MEASURES

Personal Precautions	: Isolate area. Keep unnecessary people away from the area. Avoid skin and eye contact and do not breathe the vapors. Do not smoke and do not generate sparks.
Environment Precautions	: Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers. Use appropriate containment to avoid environmental contamination.
Methods for Cleaning Up	: Contain and recover liquid when possible. Collect liquid in an appropriate container or absorb with an inert material (e.g. vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust.

VII. HANDLING AND STORAGE

Handling	: Avoid breathing of or contact with material. Use local exhaust extraction over processing area. Handle and open container with care in a well-ventilated area. Do not empty into drains. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Handling Temperature: Ambient. 60°C maximum.
Storage	: Tanks must be clean, dry and rust-free. Keep container tightly closed. Must be stored in a diked (bunded) well-ventilated area, away from sunlight, ignition sources and other sources of heat. Cleaning, inspection and maintenance of storage tanks is a specialist operation which requires the implementation of strict procedures and precautions. Drums should be stacked to a maximum of 3 high. Storage Temperature: Ambient. 60°C maximum.



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VIII. EXPOSURE CONTROL / PERSONAL PROTECTION

- Exposure standards : American Industrial Hygiene Association (AIHA)
Diethylene Glycol : TWA - 11 mg/m³
TWA is The time weighted average concentration for a normal 8-hour workday and a 40-hour workweek, to which nearly all workers may be repeatedly exposed, day after day, without adverse effect.
- Respiratory Protection : If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Where air-filtering respirators are unsuitable (e.g. airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapours.
- Skin and Body Protection : Wear protective gloves and clean body-covering clothing.
- Eye Protection : Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

IX. PHYSICAL AND CHEMICAL PROPERTIES

- Form : Liquid
- Appearance and Odor : Clear liquid, slight sweet odor
- Boiling Point Range : 243°C
- Freezing Point : -8.5°C
- Flash Point : 123.9°C
- Auto-ignition Temperature : 228.9°C
- Vapour Pressure : 0.01 mmHg @ 20°C
- Specific Gravity : 1.12 (20°C)
- Water Solubility : Complete



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X. STABILITY AND REACTIVITY

Stability	: Stable under ordinary conditions of use and storage.
Conditions to avoid	: High temperature
Incompatible Materials	: Strong oxidizing agents. Strong acids. Strong bases.
Hazardous Polymerization	: Will not occur
Hazardous Decomposition Products	: Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquid and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

XI. TOXICOLOGICAL INFORMATION

Acute Toxicity

Acute Oral Toxicity	: LD50 rat : 12565 mg/kg
Acute Dermal Toxicity	: LD50 rabbit : 11890 mg/kg

Effects on Human

Inhalation	: Repeated inhalation of vapours and mists is expected to cause irritation of the respiratory tract.
Eye	: May cause irritation
Skin	: May cause irritation
Ingestion	: Symptoms of exposure to this compound include nausea and vomiting. Other symptoms include headache, anuria, narcosis, cyanosis, tachypnea, tachycardia, hypotension, stupor, prostration, hypoglycemia and unconsciousness. Exposure can cause alcohol intoxication, muscle tenderness, pulmonary edema, convulsions and death. It can also cause degenerative changes in the kidneys and liver, central nervous system depression, nephrotoxicity, abdominal pain, weakness, respiratory failure, cardiovascular collapse, hypocalcemic tetany (rare), metabolic acidosis (rare), acute renal failure and brain damage.

XII. ECOLOGICAL INFORMATION

Persistence and Degradability	: Product is Inherently biodegradable. Oxidises rapidly by photo-chemical reactions in air.
Ecotoxicity	: Toxicity to fish: low toxicity: LC/EC/IC50 > 1000 mg/l Toxicity to aquatic invertebrates: low toxicity: LC/EC/IC50 > 1000 mg/l Toxicity to Algae : expected to have low toxicity: LC/EC/IC50 > 1000 mg/l Toxicity to microorganisms: low toxicity :LC/EC/IC50 > 1000 mg/l
Bioaccumulation	: Does not have the potential to bioaccumulate significantly.
Mobility	: Dissolves in water. If product enters soil, it will be highly mobile and may contaminate groundwater.



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XIII. DISPOSAL CONSIDERATIONS

- Substance : This material must be contained and not disposed to sewerage systems, drains or waterways. It is prohibited to dispose its waste to the environment, without prior treatment in accordance with government regulation
- Container : Dispose of all waste containers and used drums in accordance with local authority guidelines. Empty containers must be decontaminated by rinsing with water. Non-returnable containers should be de-gassed prior to disposal. Waste containers can either be reused for the same material or disposed in accordance with government regulation.
- Local Regulation : Suitable for incineration by approved agent under controlled conditions if permitted by local authorities, otherwise disposal must be in accordance with local waste and environmental authority requirements.

XIV. TRANSPORTATION INFORMATION

This material is not classified as dangerous

XV. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

- Related Regulations : **SS586 : 2008**
- Standard on Hazard communication for hazardous chemicals and dangerous goods:
 - Part 1 : Transport of DGs
 - Part 2 : GHS of Classification & Labelling
 - Part 3 : Preparation of SDS
 - AVA - The Control of Plants (Regulation of Pesticides) Rule
 - MOM - The Workplace Safety and Health Act, the Workplace Safety and Health (General Provisions) Regulations and the Workplace Safety and Health (Risk Management) Regulations.
 - MPA - The Maritime & Port Authority of Singapore (Dangerous Goods, Petroleum and Explosives) Regulations 2005.
 - NEA - The Environmental Protection and Management Act and the Environment Protection and Management (Hazardous Substances) Regulations, and the Control of Vectors and Pesticides Act.
 - SCDF - The Fire Safety Act and the Fire Safety (Petroleum and Flammable Materials) Regulations 2005.
 - SPF - The Arms and Explosives Act, the Arms and Explosives (Explosives) Rules, and the Arms and Explosives (Explosive Precursors) Rules 2007.



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XVI. OTHER INFORMATION

Abbreviation	:	EC ₅₀	Half Maximum Effective Concentration
		LC ₅₀	Lethal Concentration and Time
		LD ₅₀	Median Lethal Dose
		TWA	Time Weighted Averages

Disclaimer

The information contained in this Safety Data Sheet is intended to assist in the use of the above product without risk to safety or health and is based on current knowledge and experience. This information relates only to the specific material designed and may not be valid for such material used in combination with any other materials or in any process. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.