

SAFETY DATA SHEET**SECTION I -- IDENTIFICATION OF SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING**

TRADE NAME: ICE FYGHTER D™
MANUFACTURER: Midwest Industrial Supply, Inc
1101 3rd Street SE
Canton, OH 44707
EMERGENCY PHONE NUMBER: 330-456-3121
RECOMMENDED USE: Conveyor Belt Anti-icing Agent
CHEMICAL NAME: Diethylene glycol based winter agent
SYNONYMS: De-icer

SECTION II -- HAZARDS IDENTIFICATION

CLASSIFICATION: Acute Oral Toxicity
SIGNAL WORD: Warning

Pictograms

HAZARD STATEMENT(S): Harmful if swallowed, 4
May cause damage to organs (kidneys) through prolonged or repeated exposure, 2

PRECAUTIONARY STATEMENT(S):

Prevention: Do not breathe mist/vapor/spray.
Wash hands and exposed skin thoroughly after handling.
Do not eat, drink, or smoke when using this product.
Wear eye and face protection.

Response: If swallowed, call a doctor/poison control if you feel unwell.
Rinse mouth.
If exposed or concerned, call a doctor or poison control.

Storage: Store locked up.

Disposal: Dispose of contents/container per local, state, and federal laws.

OTHER HAZARDS: None

SECTION III -- COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS #	WT %
Diethylene glycol	111-46-6	< 60%



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Urea	57-13-6	< 5%
Water	7732-18-5	> 35%
Alpha olefin sulfonate	68439-57-6	< 1%
Proprietary ingredients	Non-hazardous	< 1%

SECTION IV -- FIRST AID MEASURES

INHALATION:	Move to fresh air if effects occur, and get medical attention.
SKIN:	Flush with large amount of water, or wash with soap and water. Seek medical attention if irritation persists.
EYES:	Flush eyes with flowing water for at least 15 minutes. Get medical attention.
INGESTION:	Induce vomiting if large amounts are ingested. Consult medical personnel. (Never give fluids or induce vomiting if patient is unconscious or having convulsions.)
NOTE TO PHYSICIAN:	No specific antidote. Supportive care. Treatment based on the judgement of the physician in response to reactions of the patient. Repeated, excessive exposure may aggravate pre-existing liver and kidney disease.
RECOMMENDATION TO FIREFIGHTERS ON SPECIAL PROTECTIVE EQUIPMENT OR PRECAUTIONS:	Wear self-contained breathing apparatus and turn out gear.

SECTION V -- FIREFIGHTING MEASURES

EXTINGUISHING MEDIUM:	Water fog, dry foam, CO ₂ , dry chemical. DO NOT use direct water stream.
SPECIAL FIREFIGHTING PROCEDURES:	Avoid breathing vapors or fumes. Wear self-contained breathing apparatus and turn out gear.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	None
SPECIAL HAZARDS:	None

SECTION VI -- ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:	Chemical splash goggles and impervious gloves
SPILL AND LEAK PROCEDURES:	Dike and control spill. Transfer liquid to containers for recovery or disposal. Keep spills out of municipal sewers and open bodies of water.

SECTION VII -- HANDLING AND STORAGE

STORAGE:	Keep in a cool, dry, ventilated storage area and in closed containers.
HANDLING:	Practice reasonable caution to avoid skin and eye contact. Avoid breathing vapors from hot material. Trace quantities of ethylene oxide (EO) may be present in this product. While the trace quantities could accumulate in headspace areas of storage transport vessels, they are not expected to create a



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condition which will result in EO concentrations greater than 0.5 ppm (8 hour TWA) in the breathing zone of the workplace for appropriate applications. OSHA has established a permissible exposure limit of 1.0 ppm (8 hour TWA) for EO. (Code of Federal Regulations Part 1910.1047 of Title 29.)

SECTION VIII -- EXPOSURE CONTROL/PERSONAL PROTECTION

VENTILATION:	Good general ventilation should be sufficient. Local exhaust ventilation may be necessary for some operations.
RESPIRATORY PROTECTION:	If respiratory irritation is experienced, use an approved air-purifying respirator.
EYE PROTECTION:	Chemical splash goggles recommended
PROTECTIVE CLOTHING:	Impervious gloves recommended

SECTION IX -- PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Odor:	Slight odor
Vapor Density:	N/D
Solubility in Water:	Complete
Relative Density:	1.05-1.07
Melting/Freezing Point:	N/D
VOC Content:	60%
Viscosity:	N/D
Flashpoint:	N/A
Flammable Limits LEL:	N/D
Flammable Limits UEL:	N/D
Odor Threshold:	N/D
Initial Boiling Point/Range:	>100°C (212°F)
Vapor Pressure:	N/D
Evaporation Rate:	N/D
pH:	6-8
Octanol/Water Coefficient:	N/D
Decomposition Temperature:	N/D
Flammability (solid/gas):	N/A
Auto Ignition Temperature:	N/D

SECTION X -- STABILITY AND REACTIVITY

REACTIVITY:	N/D
CHEMICAL STABILITY:	Stable

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CHEMICAL INCOMPATIBILITY:	Oxidizing materials
HAZARDOUS DECOMPOSITION PRODUCTS:	Burning produces normal products of combustion; carbon dioxide, carbon monoxide, and water.
HAZARDOUS POLYMERIZATION:	Does not occur.
CONDITIONS TO AVOID:	Heat, sparks, and open flame

SECTION XI -- TOXICOLOGICAL INFORMATION

Toxicological testing has not been done on ICE FIGHTER D™, however, the toxicological information below is the result of testing on Diethylene Glycol.

Acute toxicity

Acute oral toxicity: Acute toxicity estimate : 1,120 mg/kg
Assessment: The component/mixture is moderately toxic after single ingestion.

Acute inhalation toxicity: LC50 (rat): > 4.6 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity: LD50 (rabbit): 11,890 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Species: Human
Method: Patch Test 24 Hrs.
Result: No skin irritation

Serious eye damage/eye irritation

Species: rabbit
Result: No eye irritation

Respiratory or skin sensitisation

Test Type: Maximisation Test (GPMT)
Species: guinea pig
Result: Does not cause skin sensitisation.

Germ cell mutagenicity

Genotoxicity in vitro: Test Type: Ames test
Test species: Salmonella typhimurium

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Metabolic activation: with and without metabolic activation
Result: negative

Genotoxicity in vivo: Test Type: In vivo micronucleus test
Test species: mouse
Cell type: Bone marrow
Application Route: Intraperitoneal
Exposure time: Single
Result: negative

Germ cell mutagenicity- Assessment: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carcinogenicity

Species: rat
Application Route: Oral
Exposure time: 108 wks
NOAEL: 1,210 mg/kg body weight
Result: did not display carcinogenic properties
Carcinogenicity - Assessment: No evidence of carcinogenicity in animal studies.

Reproductive toxicity

Effects on fertility: Test Type: Two-generation study
Species: rat
Application Route: Oral
Fertility: NOAEL: 2,200 mg/kg body weight
Result: No reproductive effects.

Effects on foetal development: Species: rabbit
Application Route: Oral
Duration of Single Treatment: 30 d
Teratogenicity: NOAEL: 1,000 mg/kg body weight

Reproductive toxicity - Assessment: No evidence of adverse effects on sexual function and fertility, and on development, based on animal experiments.

Repeated dose toxicity

Species: rat
NOAEL: 10,000 mg/kg
Application Route: Oral

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Exposure time: 4 wks
Number of exposures: daily

SECTION XII -- ECOLOGICAL INFORMATION

Ecotoxicity

Toxicity to fish: LC50 (Pimephales promelas (fathead minnow)): 75,200 mg/l
Exposure time: 96 h
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates:

EC50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 24 h
Test Type: static test

Toxicity to algae:

EC50 (Pseudokirchneriella subcapitata (Selenastrum capricornutum)): 6,500 - 13,000 mg/l
End point: Growth rate
Exposure time: 96 h
Test Type: static test
Remarks: Information given is based on data obtained from similar substances.

Persistence and degradability

Biodegradability: aerobic
Inoculum: Activated sludge, domestic, adaption not specified
Concentration: 45 mg/l
Biodegradation: 90 - 100 %
Exposure time: 28 d
GLP: yes
Remarks: Readily biodegradable

Bioaccumulative potential

Partition coefficient: n-octanol/water: log Pow: -1.98

SECTION XIII -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

Consult your local authorities for regulations. Preferred waste management: recycle or reuse, incinerate with energy recovery, disposal in a licensed facility. Disposal facility should be compliant with state, local and federal government regulations.



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SECTION XIV -- TRANSPORTATION INFORMATION

DOT HAZARDOUS MATERIAL DESCRIPTION: Not regulated
PROPER SHIPPING NAME: ICE FYGHTER D™
UN NUMBER: N/D
HAZARD CLASS/PACKAGING GROUP: None
LABELS REQUIRED: None

SECTION XV -- REGULATORY INFORMATION

NFPA RATING:	Health:	1	HMIS RATING:	Health:	1
	Flammability:	1		Flammability:	1
	Instability:	0		Physical Hazard:	0
				PPE:	B

EPA SARA Title III hazard class:
OSHA HCS hazard class: Acute Oral Toxicity
EPA SARA Title III Section 313 (40CFR372): None

SECTION XVI -- OTHER INFORMATION

LATEST REVISION:
ABBREVIATIONS AND SYMBOLS:

N.D. Not Determined N.A. Not Applicable N.T. Not Tested
< Less Than > More Than