



# ICE FREE SWITCH<sup>®</sup> (DEGPG)

1101 3rd Street  
Southeast  
Canton, OH 44707 USA  
330.456.3121  
800.321.0699  
www.midwestind.com

## SAFETY DATA SHEET

### SECTION I -- IDENTIFICATION OF SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

**TRADE NAME:** ICE FREE SWITCH<sup>®</sup> DEGPG  
**MANUFACTURER:** Midwest Industrial Supply, Inc  
1101 3rd Street SE  
Canton, OH 44707  
**EMERGENCY PHONE NUMBER:** 330-456-3121  
**RECOMMENDED USE:** Railroad switch points, plates, and rail anti-icer  
**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% |



# ICE FREE SWITCH<sup>®</sup> (DEGPG)

1101 3rd Street  
Southeast  
Canton, OH 44707 USA  
330.456.3121  
800.321.0699  
www.midwestind.com

## SAFETY DATA SHEET

|                         |               |        |
|-------------------------|---------------|--------|
| Urea                    | 57-13-6       | < 20%  |
| Water                   | 7732-18-5     | < 30%  |
| Sodium hydroxide        | 1310-73-2     | < .01% |
| Proprietary ingredients | Non-hazardous | < 10%  |

### SECTION IV -- FIRST AID MEASURES

|   |   |
|---|---|
| <b>INHALATION:</b>  | Move to fresh air if effects occur, and get medical attention.  |
| <b>SKIN:</b>  | Flush with large amount of water, or wash with soap and water. Seek medical attention if irritation persists.   |
| <b>EYES:</b>  | Flush eyes with flowing water for at least 15 minutes. Get medical attention.   |
| <b>INGESTION:</b>   | Induce vomiting if large amounts are ingested. Consult medical personnel. (Never give fluids or induce vomiting if patient is unconscious or having convulsions.)   |
| <b>NOTE TO PHYSICIAN:</b>   | 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. |
| <b>RECOMMENDATION TO FIREFIGHTERS ON SPECIAL PROTECTIVE EQUIPMENT OR PRECAUTIONS:</b> | Wear self-contained breathing apparatus and turn out gear.  |

### SECTION V -- FIREFIGHTING MEASURES

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

### SECTION VI -- ACCIDENTAL RELEASE MEASURES

|                                   |   |
|-----------------------------------|---|
| <b>PERSONAL PRECAUTIONS:</b>      | Chemical splash goggles and impervious gloves   |
| <b>SPILL AND LEAK PROCEDURES:</b> | 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

|                  |   |
|------------------|---|
| <b>STORAGE:</b>  | Keep in a cool, dry, ventilated storage area and in closed containers.  |
| <b>HANDLING:</b> | 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 |



# ICE FREE SWITCH<sup>®</sup> (DEGPG)

1101 3rd Street  
Southeast  
Canton, OH 44707 USA  
330.456.3121  
800.321.0699  
www.midwestind.com

## SAFETY DATA SHEET

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

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

### SECTION IX -- PHYSICAL AND CHEMICAL PROPERTIES

|                                     |               |
|-------------------------------------|---------------|
| <b>Physical State:</b>              | Liquid        |
| <b>Odor:</b>                        | Slight odor   |
| <b>Vapor Density:</b>               | N/D           |
| <b>Solubility in Water:</b>         | Complete      |
| <b>Relative Density:</b>            | 1.15-1.19     |
| <b>Melting/Freezing Point:</b>      | N/D           |
| <b>VOC Content:</b>                 | 60%           |
| <b>Viscosity:</b>                   | N/D           |
| <b>Flashpoint:</b>                  | N/A           |
| <b>Flammable Limits LEL:</b>        | N/D           |
| <b>Flammable Limits UEL:</b>        | N/D           |
| <b>Odor Threshold:</b>              | N/D           |
| <b>Initial Boiling Point/Range:</b> | 245°C (473°F) |
| <b>Vapor Pressure:</b>              | < 0.01        |
| <b>Evaporation Rate:</b>            | N/D           |
| <b>pH:</b>                          | 7 - 9         |
| <b>Octanol/Water Coefficient:</b>   | N/D           |
| <b>Decomposition Temperature:</b>   | N/D           |
| <b>Flammability (solid/gas):</b>    | N/A           |
| <b>Auto Ignition Temperature:</b>   | N/D           |

### SECTION X -- STABILITY AND REACTIVITY

|                            |        |
|----------------------------|--------|
| <b>REACTIVITY:</b>         | N/D    |
| <b>CHEMICAL STABILITY:</b> | Stable |



# ICE FREE SWITCH® (DEGPG)

1101 3rd Street  
Southeast  
Canton, OH 44707 USA  
330.456.3121  
800.321.0699  
www.midwestind.com

## SAFETY DATA SHEET

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

### SECTION XI -- TOXICOLOGICAL INFORMATION

Toxicological testing has not been done on ICE FREE SWITCH® DEGPG, 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



# ICE FREE SWITCH<sup>®</sup> (DEGPG)

1101 3rd Street  
Southeast  
Canton, OH 44707 USA  
330.456.3121  
800.321.0699  
www.midwestind.com

## SAFETY DATA SHEET

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



# ICE FREE SWITCH<sup>®</sup> (DEGPG)

1101 3rd Street  
Southeast  
Canton, OH 44707 USA  
330.456.3121  
800.321.0699  
www.midwestind.com

## SAFETY DATA SHEET

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.



# ICE FREE SWITCH<sup>®</sup> (DEGPG)

1101 3rd Street  
Southeast  
Canton, OH 44707 USA  
330.456.3121  
800.321.0699  
www.midwestind.com

## SAFETY DATA SHEET

### SECTION XIV -- TRANSPORTATION INFORMATION

**DOT HAZARDOUS MATERIAL DESCRIPTION:** Not regulated as dangerous goods  
**PROPER SHIPPING NAME:** ICE FREE SWITCH<sup>®</sup> DEGPG  
**UN NUMBER:** Not regulated as dangerous goods  
**HAZARD CLASS/PACKAGING GROUP:** None  
**LABELS REQUIRED:** None

### SECTION XV -- REGULATORY INFORMATION

|                     |               |   |                     |                  |   |
|---------------------|---------------|---|---------------------|------------------|---|
| <b>NFPA RATING:</b> | Health:       | 1 | <b>HMIS RATING:</b> | 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:** 7-Jan-16

#### ABBREVIATIONS AND SYMBOLS:

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