

**MIDWEST INDUSTRIAL SUPPLY, INC.
P. O. BOX 8431
CANTON, OHIO 44711 U.S.A.**

Emergency Phone Numbers: 330-456-3121

**ZERO GRAVITY THIRD RAIL
ANTI-ICER/DEICER (DEG/PG)**

MATERIAL SAFETY DATA SHEET

Please replace any other MSDS for this product with the attached MSDS.

PRODUCT: Zero Gravity Third Rail Anti-Icer/Deicer (DEG/PG)

MSDS NUMBER: 2093

UPDATED EFFECTIVE DATE: January 5, 2005

PREVIOUS VERSION MSDS NUMBER: 2093

PREVIOUS VERSION DATE: all other versions

REASON FOR UPDATE: Updated to add pour point to data.

MIDWEST INDUSTRIAL SUPPLY, INC.
P. O. BOX 8431
CANTON, OHIO 44711 U.S.A.

Emergency Phone Numbers: 330-456-3121

ZERO GRAVITY THIRD RAIL ANTI-ICER/DEICER (DEG/PG)

MATERIAL SAFETY DATA SHEET

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

TRADE NAME: ZERO GRAVITY THIRD RAIL ANTI-ICER/DEICER (DEGPG)
CHEMICAL NAME: DIETHYLENE & PROPYLENE GLYCOL BASED WINTER AGENT
SYNONYMS: WINTER OPERATING AGENT
CHEMICAL FAMILY: GLYCOLS
MOLECULAR WEIGHT: N/A
FORMULA: DEG AND PG SOLUTION WITH PROPRIETARY (TRADE SECRET)
INGREDIENTS
CAS REGISTRY NO: PRODUCT A BLEND - NO NUMBER ASSIGNED.

SECTION II -- COMPOSITION/INFORMATION ON INGREDIENTS

<u>NAME</u>	<u>CAS REG. NO.</u>	<u>WT.%</u>
DIETHYLENE GLYCOL	111-46-6	>20%
PROPRIETARY INGREDIENTS	Trade Secret	<40%

SECTION III -- HAZARDS IDENTIFICATION

DIETHYLENE GLYCOL TOXIC

SECTION IV -- FIRST AID MEASURES

EYES: Flush eyes with flowing water at least 15 minutes, get medical attention.

INHALATION: Move to fresh air if effects occur, and get medical attention.

MIDWEST INDUSTRIAL SUPPLY, INC.
P. O. BOX 8431
CANTON, OHIO 44711 U.S.A.

Emergency Phone Numbers: 330-456-3121

ZERO GRAVITY THIRD RAIL ANTI-ICER/DEICER (DEG/PG)

MATERIAL SAFETY DATA SHEET

- SKIN:** Flush with large amount of water or wash with soap and water. Seek medical attention if irritation persists.
- 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.

SECTION V -- FIRE FIGHTING MEASURES

- FLASH POINT (TEST METHOD):** N/A
- EXTINGUISHING MEDIUM:** Water fog, dry foam, CO₂, 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

SECTION VI - ACCIDENTAL RELEASE MEASURES

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

MIDWEST INDUSTRIAL SUPPLY, INC.
P. O. BOX 8431
CANTON, OHIO 44711 U.S.A.

Emergency Phone Numbers: 330-456-3121

ZERO GRAVITY THIRD RAIL ANTI-ICER/DEICER (DEG/PG)

MATERIAL SAFETY DATA SHEET

SECTION VIII -- EXPOSURE CONTROL/PERSONAL PROTECTION

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

SECTION IX -- PHYSICAL AND CHEMICAL PROPERTIES

- BOILING/MELTING POINT @ 760 mm Hg:** 473°F 245°C
- POUR POINT:** -25°F (-31°C)
- VAPOR PRESSURE mm Hg @ 20°C:** <0.01
- SPECIFIC GRAVITY OR BULK DENSITY:** 1.04 to 1.08
- SOLUBILITY IN WATER:** Complete
- APPEARANCE:** Orange liquid
- ODOR:** Slight odor
- pH:** 7

SECTION X -- STABILITY AND REACTIVITY

- STABILITY:** Stable
- MATERIALS TO AVOID:** Oxidizing materials
- HAZARDOUS DECOMPOSITION PRODUCTS:** Burning produces normal products of combustion; carbon dioxide, carbon monoxide, water.
- HAZARDOUS POLYMERIZATION:** Does not occur

MIDWEST INDUSTRIAL SUPPLY, INC.
P. O. BOX 8431
CANTON, OHIO 44711 U.S.A.

Emergency Phone Numbers: 330-456-3121

ZERO GRAVITY THIRD RAIL ANTI-ICER/DEICER (DEG/PG)

MATERIAL SAFETY DATA SHEET

CONDITIONS TO AVOID: Heat, sparks, open flame.
CORROSIVE TO METAL: No
OXIDIZER: No

SECTION XI -- TOXICOLOGICAL INFORMATION

HMIS

Health: 1 Reactivity: 0
Flammability: 1 Special: -

NFPA

Health: 1 Reactivity: 0
Flammability: 1 Special: -

WARNING STATEMENT

DANGER: **HARMFUL OR FATAL IF SWALLOWED, CONTAINS
DIETHYLENE GLYCOL.
MAY CAUSE KIDNEY AND NERVOUS SYSTEM DAMAGE.
MAY CAUSE EYE IRRITATION.**

SECTION XI -- TOXICOLOGICAL INFORMATION (con't)

TOXICOLOGICAL DATA: Oral LD50 (rat) 20,760 mg/kg
 Primary skin irritant (rabbit); skin absorption LD50 13,300 mg/kg
 Primary eye irritant, practically non-irritating

EFFECTS OF OVEREXPOSURE:

ACUTE:

EYES: Essentially non-irritating to the eyes.

SKIN: Prolonged or repeated exposure is not likely to cause irritation.

INHALATION: At room temperature, exposures are likely due to physical properties;
higher temperatures may generate vapor levels sufficient to cause
adverse effects.

INGESTION: Single dose oral toxicity is moderate. The oral LD50 for rats is 20,760
mg/kg. Oral toxicity is expected to be moderate in humans even though

MIDWEST INDUSTRIAL SUPPLY, INC.
P. O. BOX 8431
CANTON, OHIO 44711 U.S.A.

Emergency Phone Numbers: 330-456-3121

ZERO GRAVITY THIRD RAIL ANTI-ICER/DEICER (DEG/PG)

MATERIAL SAFETY DATA SHEET

tests with animals show a lower degree of toxicity. Amounts ingested incidental to industrial handling are not likely to cause injury; however, ingestion of larger amounts may cause injury, even death.

SKIN ABSORPTION:

The LD50 for skin absorption in rabbits is 13,300 mg/kg. A single prolonged exposure is not likely to result in the material being absorbed through the skin in harmful amounts. Repeated skin exposures may result in absorption of harmful amounts.

CHRONIC:

SYSTEMIC & OTHER EFFECTS:

Repeated ingestion may cause severe kidney and also liver and gastrointestinal effects. Signs and symptoms of excessive exposure may be central nervous system effects, nausea and/or vomiting, anesthetic or narcotic effects. Reports of kidney failure and death in burn patients suggest that diethylene glycol may have been a factor. The use of topical applications containing diethylene glycol may not be appropriate in severely burned patients or individuals with impaired renal function. Observations in animals include formation of bladder stones after repeated oral doses.

Studies indicate that diethylene is a teratogen and a tumorigen. Testing of oral doses of diethylene glycol on mice and rats indicates that there is an occurrence of birth defects of offspring born to mothers who have ingested diethylene glycol during pregnancy. There is also evidence that diethylene glycol may lead to an increased occurrence of tumors.

SECTION XII -- ECOLOGICAL INFORMATION

AQUATIC TOXICITY RATING: LC50 (96 hour) greater than 1000ppm.
Considered relatively harmless.

SECTION XIII -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose of solids and the contaminated diking material according to local, state and federal regulations.

CONTAINER DISPOSAL: Do not re-use containers.
Do not weld on metal containers.

MIDWEST INDUSTRIAL SUPPLY, INC.
P. O. BOX 8431
CANTON, OHIO 44711 U.S.A.

Emergency Phone Numbers: 330-456-3121

ZERO GRAVITY THIRD RAIL ANTI-ICER/DEICER (DEG/PG)

MATERIAL SAFETY DATA SHEET

SECTION XIV -- TRANSPORTATION INFORMATION

D.O.T. PROPER SHIPPING NAME (49CFR172.101): None
HAZARDOUS SUBSTANCE (40CFR116): N/A
REPORTABLE QUANTITY (RQ): N/A
D.O.T. HAZARD CLASSIFICATION (49CFR172.101): Non-regulated
D.O.T. LABELS REQUIRED: (49CFR172.101): None
D.O.T. PLACARDS REQUIRED: None
POISON CONSTITUENT (49CFR173.343): N/A
BILL OF LADING DESCRIPTION: Liquid Ice Prevention Compound
(diethylene and propylene glycol based)

SECTION XV-- REGULATORY INFORMATION

ZERO GRAVITY THIRD RAIL ANTI-ICER/DEICER is not a restricted article according to the Department of Transportation.

EPA SARA TITLE III hazard class: None
OSHA HCS hazard class: Irritant (29CFR1910.1200)
**EPA SARA TITLE III Section 313 (40CFR372)
Toxic Chemicals present in quantities greater
than the "de minimus" level are:** None
CERCLA Section 102(a) Hazardous Substance: None
RCRA Hazardous Substance: None
WHMIS Classification: D2, Chronic Toxicity Hazard

SECTION XVI -- OTHER INFORMATION

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown below. However, no warranty, express or implied, is given. Regulator requirements are subject to change and may differ from one location to

**MIDWEST INDUSTRIAL SUPPLY, INC.
P. O. BOX 8431
CANTON, OHIO 44711 U.S.A.**

Emergency Phone Numbers: 330-456-3121

**ZERO GRAVITY THIRD RAIL
ANTI-ICER/DEICER (DEG/PG)**

MATERIAL SAFETY DATA SHEET

another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws.

ABBREVIATIONS AND SYMBOLS:

N.D. - Not Determined

N.A. - Not Applicable

N.T. - Not Tested

< - LESS THAN

> - MORE THAN