

# MATERIAL SAFETY DATA SHEET

## Lock Deicer

Panef Inc.

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Revision Date: 01/01/09

### Section 1: Chemical Product and Company Identification

**Product Name:** Lock Deicer

**Product Number:** Panef LD-1, LD-24, LD-30

**Manufacturer:** Panef Inc.  
5700 West Douglas Avenue  
Milwaukee, WI 53218

**Emergency Telephone:** 800-535-5053

**Total Pages:** 5

**Information Telephone:** 414-464-7200

### Section 2: Composition / Information on Ingredients

<u>COMPONENT</u>	<u>CAS</u>	<u>AMOUNT (%W/W)</u>
Propylene Glycol	57-55-6	95 %
Demineralized Water	7732-18-5	< 5%
Dipotassium Hydrogen Phosphate	7758-11-45	< 5%

### Section 3: Hazards Identification

**Emergency Overview:**

Appearance: Colorless

Physical State: Liquid

Odor: Mild

Hazards of Product: No significant immediate hazards for emergency response are known.

**Potential Health Effects (effects of single acute overexposure)**

**Inhalation:** At room temperature, exposure to vapor is minimal due to low volatility. Mist may cause irritation of upper respiratory tract (nose and throat).

**Eye Contact:** May cause slight temporary eye irritation. Corneal injury is unlikely

**Skin Contact:** prolonged contact is essentially nonirritating to skin. Repeated contact may cause flaking and softening of skin.

**Skin Absorption:** Prolonged skin contact is unlikely to result in absorption of harmful amounts.

**Swallowing:** Very low toxicity if swallowed. Harmful effects not anticipated from small amounts.

**Chronic, Prolonged or Repeated Overexposure**

**Effects of Repeated Overexposure:** In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

**Other Effects of Overexposure:** No information currently available

See Section 11 for toxicological information and additional information about potential health effects.

**Potential Environmental Effects**

See Section 12 for Ecological Information.

### Section 4: First Aid Measures

**Eyes:** Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

**Inhalation:** Remove to fresh air; if effects occur, consult a physician.

**Ingestion:** No emergency care anticipated.

**Skin:** Wash with soap and water.

**Note to Physician:** There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

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### Section 5: Fire Fighting Measures

**Flammable Properties:** Refer to Section 9, Physical and Chemical Properties.

**Extinguishing Media:** Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Do not use direct water stream. May spread fire. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

**Fire Fighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry. Use water to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Move container from fire area if possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize damage.

**Special Protective Equipment for Firefighters:** Wear self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

**Unusual Fire and Explosion Hazards:** Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Liquid mist of this product can burn. Flammable concentrations of vapor can accumulate at temperatures above flash point; see Section 9.

**Hazardous Combustion Products:** During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide

### Section 6: Accidental Release Measures

**Steps to be taken if material is released or spilled:** Small spills: Absorb with materials such as: Cat litter. Sawdust. Vermiculite. Zorb-all®. Collect in suitable and properly labeled containers. Large spills: Dike area to contain spill. Recover spilled material if possible. See Section 13, Disposal Considerations, for additional information.

**Personal Precautions:** Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**Environmental Precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

### Section 7: Handling and Storage

**General Handling:** See Section 8, Exposure controls and Personal Protection.

**Ventilation:** Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

**Other Precautions:** Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion

**Storage:** Store below 121°C (250°F). Do not store in galvanized steel.

### Section 8: Exposure Controls / Personal Protection

Exposure Limits:	Component	Exposure Limits	Skin. Form
	Propylene Glycol	10mg/m3 TWA8 AIHA WEEL	

*In the Exposure Limits Chart above, if there is no specific qualifier (i.e., Aerosol) listed in the Form Column for a particular limit, the listed limit includes all airborne forms of the substances that can be inhaled.*

A "yes" in the Skin Column indicates a potential significant contribution to overall exposure by the cutaneous (skin) route, including mucous membranes and the eyes, either by contact with vapors or by direct skin contact with the substances. A "Blank" in the Skin Column indicated that exposure by the cutaneous (skin) route is not a potential significant contributor to overall exposure.

#### Personal Protection

**Respiratory Protection:** Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air purifying respirator. In dusty or misty atmospheres, use an approved particulate respirator.

**Ventilation:** Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

**Eye Protection:** Use safety glasses.

**Other Protective Equipment:** No precautions other than clean body-covering clothing should be needed. Use gloves chemically resistant to this material.

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### Section 9: Physical / Chemical Characteristics

<b>Physical State:</b>	Liquid	<b>Boiling Point (760 mmHg):</b>	162°C 323°F
<b>Appearance:</b>	Colorless	<b>Freezing Point:</b>	<=-51°C <=-60°F
<b>pH:</b>	9-11 (5% solution in water)	<b>Specific Gravity (H2O=1):</b>	1.05 20°C/20°C
<b>Solubility in Water (by weight):</b>	20°C 100%	<b>Vapor Pressure:</b>	20°C 0.7 mmHg
<b>Odor:</b>	Mild	<b>Vapor Density (air=1):</b>	2.6
<b>Percent Volatiles:</b>	98 Wt%	<b>Evaporation Rate (Butyl Acetate=1)</b>	0.07
<b>Autoignition Temperature:</b>	416°C 780°F	<b>Melting Point:</b>	N/A
<b>Flash Point – Closed Cup:</b>	102°C 216°F Tag Closed Cup ASTM D 56 (Propylene glycol)		
<b>Flammable Limits in Air:</b>	Lower 2.6%(V) 100.°C (Propylene glycol) Upper 12.5%(V) 130°C ( Propylene glycol)		

### Section 10: Stability and Reactivity

**Stability/Instability:** Thermally stable at recommended temperatures and pressures.

**Conditions to Avoid:** Product can oxidize at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems

**Incompatible Materials:** Avoid contact with: Strong acids. Strong bases. Strong oxidizers.

**Thermal Decomposition:** Decomposition products depend upon temperature, air supply and the pressure of other materials.

Decomposition products can include and are not limited to: Aldehydes. Alcohols. Ethers.

**Hazardous Polymerization:** Will not occur.

### Section 11: Toxicology Information

#### Acute Toxicity

**Peroral:** Rat; female: LD50 = 20300 mg/kg

**Percutaneous:** Based on information for a similar material: Rabbit; LD50=> 10000 mg/kg

**Developmental Toxicity:** Contains components(s) which did not cause birth defects or any other fetal effects in lab animals. The components(s) is/are: Propylene glycol.

**Reproductive Toxicity:** Contains components(s) which did not interfere with reproduction in animal studies. Contains components(s) which did not interfere with fertility in animal studies. The components(s) is/are: Propylene glycol.

**Chronic Toxicity and Carcinogenicity:** Similar formulations did not cause cancer in laboratory animals.

#### Genetic Toxicology

**In Vitro:** In vitro genetic toxicity studies were negative.

**In Vivo:** Genetic toxicity studies in animals were negative for components(s) tested.

**Significant Data With Possible Relevance To Humans:** In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

### Section 12: Ecological Information

**Environmental Fate:** Based largely or completely on information for: Propylene glycol. Material is readily biodegradable. Passes OECD tests(s) for ready biodegradability. Degradation is expected in the atmospheric environment within minutes to hours.

**Ecotoxicity:** Based largely or completely on information for: Propylene glycol. Material is practically non-toxic to aquatic organisms or an acute basis (LC50/EC50>100 mg/L in the most sensitive species tested).

**Further Information:** Based largely or completely on information for: Propylene glycol. Bioconcentration potential is low (BCF < 100 or Log Pow < 3). Potential for mobility in soil is very high (KOC between 0 and 50).

### Section 13: Disposal Considerations

**Disposal:** Do not dump into any sewers, on the ground, or into any body of water. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary if different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The Dow Chemical Company has no control over the management practices or manufacturing processes of parties handling or using this material. The information presented here pertains only to the product as shipped in its intended condition as described in MSDS section 2 (Composition/Information on Ingredients). For unused & uncontaminated product, the preferred options include sending to a licensed, permitted, recycler, reclaiming incinerator or other thermal destruction device. As a service to its customers, Dow can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemical or plastics, and that manage used drums. Telephone Dow's Customer Information Center at 800-258-2436 or 989-832-1556(U.S.) or 1-800-331-6451 (Canada) for further details.

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### Section 14: Transportation Information

#### U. S. D.O.T.

**Non-Bulk – Proper Shipping Name:** Not regulated.

**Bulk – Proper Shipping Name:** Not regulated.

*This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.*

### Section 15: Regulatory Information

#### Federal/National

**OSHA Hazard Communication Standard:** This product is a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**Superfund Amendments & Reauthorization Act of 1986 Title III (Emergency Planning and Community Right to Know Act Section 313):** To the best of our knowledge this product does not contain chemicals at levels which require reporting under this statute.

**Superfund Amendments & Reauthorization Act of 1986 Title III (Emergency Planning & Community Right to Know Act) Section 302:** To the best of our knowledge this product does not contain chemicals at levels which require reporting under this statute.

**Superfund Amendments & Reauthorization Act of 1986 Title III (Emergency Planning & Community Right to Know Act) Section 311 & 312:**

**Delayed (Chronic) Health Hazard:** No

**Fire Hazard:** No

**Immediate (Acute) Health Hazard:** No

**Reactive Hazard:** No

**Sudden Release of Pressure Hazard:** No

**Toxic Substances Control Act (TSCA):** All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30.

**CEPA – Domestic Substances List (DSL):** All substances contained in this product are listed on the Canadian Substances List (DSL) or are not required to be listed.

**European Inventory of Existing Commercial Chemical Substances (EINECS):** The components of this product are on the EINECS inventory or are exempt from EINECS inventory requirements.

#### State/Local

**Pennsylvania (Workers & Community Right –to-Know Act): Pennsylvania Hazardous Substances List and /or Pennsylvania Environmental Hazardous Substance List:** The following product components are cited in the Pennsylvania Hazards Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting

Component	CAS#	Amount
Propylene glycol	57-55-6	96.0000 %

**Pennsylvania (Workers & Community Right-to-Know Act): Pennsylvania Special Hazardous Substance List:** To the best of our knowledge this product does not contain chemicals at levels which require reporting under this statute.

**California Proposition 65 (Safe Drinking Water & Toxic Enforcement Act of 1986):** This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

**California SCAQMD Rule443.1 (South Coast Air Quality Management District Rule 443.1, Labeling of Materials Containing Organic Solvents):**

VOC: Vapor pressure 0.66 mmHg @ 20°C

1002 g/l VOC

1030 g/l less water and less exempted solvents

*This section provides selected regulatory information on this product including its components. This is not intended to include all regulations. It is the responsibility of the user to know and comply with all applicable rules, regulations and laws relating to the product being used.*

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### Section 16: Other Information

**Additional Information:** Additional information on this and other Dow products may be obtained by visiting our web page at [www.dow.com](http://www.dow.com). Additional information on this product may be obtained by calling the Dow Customer Center at 1-800-258-2436 (U.S.) or 1-800-331-6451 (Canada).

**Hazard Rating System:** MFPA ratings for this product are: H-0 F-1 R-0

These ratings are part of specific hazard communication program(s) and should be disregarded where individuals are not trained in the use of these hazard rating systems. You should be familiar with the hazard communication applicable to your workplace.

**Recommended Uses & Restrictions:** Intended as a heat transfer fluid for closed loop systems.

Dow recommends that you use this product in a manner consistent with the listed use. If your intended use is not consistent with Dow's stated use, please contact Dow's Customer Information Group at 1-800-258-2436 (U.S.) or 1-800-331-6451 (Canada) for more information.

**Legend:**

Bacterial/NA	Non Acclimated Bacteria
F	Fire
H	Health
IHG	Industrial Hygiene Guidelines
N/A	Not available
NFPA	National Fire Protection Association
O	Oxidizer
R	Reactivity
TS	Trade Secret
VOL/VOL	Volume/Volume
W	Water Reactive
W/W	Weight/Weight

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