

MATERIAL SAFETY DATA SHEET

AEROSOL LOCK DE-ICER

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Panef Inc.

Revision Date: 01/01/09

Section 1: Chemical Product and Company Identification

Product Name: Lock De-Icer

Product Number: Panef LDA-2 & LDA-30

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

Emergency Telephone: 800-535-5053

Total Pages: 3

Information Telephone: 414-464-7200

Section 2: Composition / Information on Ingredients

<u>Hazardous Ingredients</u>	<u>CAS</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>Other Limits</u>	<u>%</u>
Carbon Dioxide	124389	5000 ppm	5000 ppm	N.E.	>10
Isopropanol	67630	400 ppm	400 ppm	400 ppm(Canada)	>50

Section 3: Hazards Identification

Route (s) of Entry:	Inhalation	Skin	Ingestion	Eyes
	Yes	Yes	No	Yes

Symptoms of Acute Overexposure:

Skin: May irritate the skin.

Eyes: Severe eye irritant May cause corneal burns.

Inhalation: May cause irritation to the nose, throat and respiratory tract and may result in central nervous system depression (narcotic effect). May cause coughing, shortness of breath, dizziness and intoxication.

Ingestion: Irritating to the gastrointestinal tract, causing abdominal pain and vomiting, sometimes bloody. Ingestion may cause CNS depression, low blood pressure, rapid heartbeat and liver damage.

Effects of Chronic Overexposure: Repeated or prolonged exposure may irritate mucous membranes.

Carcinogenicity:	NTP	IARC Monographs	OSHA Regulated
	No	No	No

Medical conditions which may be aggravated by exposure: Existing eye, skin and respiratory disorders.

Other Effects: May effect mucous tissue or mucous membrane dysfunction. See section 11.

NFPA Hazard Rating:	Health	Flammability	Reactivity
	2*	3	0

NFPA Notes:

Section 4: First Aid Measures

Eyes: Flush eye with clean water for at least 20 minutes while gently holding eyelids open. Get immediate medical attention. If Pain, tears, or redness continue, victim should contact an ophthalmologist.

Inhalation: Remove patient to fresh air. Administer oxygen if breathing is difficult. Get immediate medical attention.

Ingestion: Do NOT induce vomiting. Give two glasses of water if patient is NOT unconscious or drowsy. Keep victims head below hips to prevent aspiration if vomiting. Get medical attention immediately.

Skin: Immediately remove contaminated clothing and excess contaminant. Flush skin with water. Wash thoroughly with soap and warm water. Consult a physician if irritation develops.

Note: Detoxification procedure: administer an aqueous slurry of activated charcoal followed by a cathartic such as magnesium citrate or sorbitol.

Section 5: Fire Fighting Measures

Flash Point: 53°F
Method: TCC

Flammable Limits: LEL:
2

UEL:
12.7

Extinguishing Media: Foam, Carbon Dioxide, Dry Chemical

Special Fire Fighting Procedures: Clear area of unprotected personnel. Fight fire from safe distance. Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots) and positive pressure NIOSH approved self-contained breathing apparatus. Cool fire exposed containers with water spray.

Unusual Fire and Explosion Hazards: Heat may build enough pressure to rupture closed containers/spreading fire/increasing risk of burns/injuries. When mixed with air and exposed to ignition source, vapors can burn in open or explode if confined. Vapors are heavier than air, travel along floor to ignition source and flash back. Diluting with water may not suffice to raise flash point above ambient temperatures. Burning liquid may float on water. Avoid frothing/steam explosion.

Hazardous Products Formed by Fire or Thermal Decomposition: Product will burn, but not easily ignited. Smoke, carbon monoxide and/or carbon dioxide.

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Section 6: Accidental Release Measures

Spill / Leak Procedures: Avoid personal contact. Eliminate ignition sources. Ventilate area. Equip responders with proper protection.

Containment: Dike, contain and absorb with clay, sand or other suitable material.

Cleanup: Wear appropriate respirator and protective clothing. For spills, blanket with firefighting foam. Pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand, or other suitable material and dispose of properly. Flush area with water to remove trace residue. Small spills – take up with an absorbent material and place in appropriate containers for disposal.

Special procedures: Contain / collect rapidly to minimize dispersion. Prevent spill from entering drainage/sewer systems, waterways, and surface waters. Use bonding/grounding lines and non-sparking tools. On water, material is soluble and may float or sink. May biodegrade. Report per regulatory requirements.

Section 7: Handling and Storage

Handling precautions: Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after using and particularly before eating, drinking, smoking, applying cosmetics, or using toilet facilities. Launder contaminated clothing and protective gear before reuse. Do not breathe vapor or mist. Ground container when pouring. Use non-sparking tools. Handle empty containers with care, vapor residue may be flammable/explosive. Material may attack some forms of plastic, aluminum, rubber, and coatings.

Storage: Keep in a cool place, without direct exposure to sunlight. Keep containers away from heat, sparks, open flames, and strong oxidizers. Keep container tightly closed and otherwise in accordance with NFPA regulations. Maintain air space in storage containers.

Section 8: Exposure Controls / Personal Protection

Respiratory Protection (specify type): Use ventilation that is adequate to keep employee exposure concentrations below exposure limits.

Local Exhaust
Required

Mechanical (general)
Required

Special
None

Other
None

Eye / Face Protection: Wear safety glasses. Wear coverall chemical splash goggles and face shield when eye and face contact is possible. Do not wear contacts.

Skin Protection: Chemical-resistant gloves (Neoprene, nitrile) and other gear as required to prevent skin contact.

Respiratory Protection: A NIOSH/MSHA air purifying respirator with an organic vapor cartridge may be permissible as exposure levels dictate. However use a positive pressure air supplied respirator if there is any potential for uncontrolled release, or unknown exposure levels.

Section 9: Physical / Chemical Characteristics

Boiling Point (760mm/Hg): 180

Vapor Density (Air=1): 2.1

Acetate=1):1.4

Solubility in Water: Completely

pH (5% solution or slurry in water): completely

VOC (grams/liter): 790

Specific Gravity (Water=1): 0.789

Vapor Pressure (mm Hg): 33mmHG at 68°F Evaporation Rate (Butyl

% Volatile (Vol%): 100

Wt/Gal (lbs): N/A

Melting Point: -127

Percent solids by weight: 0

Section 10: Stability and Reactivity

Stability: Material is chemically stable.

Conditions to Avoid: Avoid heat, open flames, temperatures above 120 degrees F and ignition sources, and oxidizing conditions.

Incompatibility (materials to avoid): Strong oxidizing agents. Aluminum metals, NITROFORM, sulfuric acid.

Hazardous Polymerization: Will not occur.

Hazardous products of decomposition: Oxides of carbon and unidentified organic combustion products.

Section 11: Toxicology Information

Acute oral effects: No data available.

Acute dermal effects: No data available.

Acute inhalation effects: No data available.

Eye Irritant: Severe eye irritant.

Sub chronic effects: Rat and mouse inhalation toxicity: the sub chronic NOAEL was 500 ppm based on clinical signs of CNS depression (both species) and increased body weight and blood effects (rat only) seen at 1500ppm.

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Section 11: Toxicology Information

Carcinogenicity, teratogenicity, and mutagenicity: In response to a TSCA test rule, several studies of IPA have now been completed. The studies and their results are as follows: 1) Both mutagenicity studies, the mouse micronucleus and CHO assays, were negative. 2) Rat and rabbit oral teratogenicity and developmental toxicology: a) there was no evidence that IPA caused teratogenicity in rats or rabbits; b) Developmental toxicity was seen in rats at 1200 mg/kg (evidenced by body weight) while no developmental toxicity was seen in the rabbit study. For rats, the NOAEL was 400 mg/kg; for rabbits 480mg/kg. This work also identified pregnant rabbits to be approximately eight times more sensitive to IPA's lethal effects than non-pregnant rabbits.

Other Chronic Effects: In rate inhalation neurotoxicity and oral development neurotoxicity studies, there was no evidence that IPA caused neurotoxicity in adults (max dose 5000ppm) or offspring (max dose 1200ppm).

Toxicological information on hazardous chemical constituents of the Product:

Constituent	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 4hr, (rat)
Carbon dioxide	n/d	n/d	n/d
Isopropanol	5045 mg/kg	12.8 g/kg	22627 ppm

(n/d = not determined)

Section 12: Ecological Information

None Available

Section 13: Disposal Considerations

Waste Management Recommendation: If this product becomes a waste product, it would be hazardous waste by RCRA criteria (40CFR261). Dispose of according to applicable federal, state and local regulations.

Section 14: Transportation Information

Proper Shipping Name: Aerosols*
Hazard Class: 2.1
UN Number: 1950
IMDG page number: N/A
Other: Domestic US: Consumer Commodity, ORM-D

*Depending on the size and type of container, this material may be reclassified as "Consumer Commodity, ORM-D" for shipments within the United States, or "Limited Quantity" elsewhere. Refer to the appropriate regulation.

Section 15: Regulatory Information

U.S. Federal Regulations

TSCA

All ingredients of this product are listed, or are exempt from listing, on the TSCA inventory.

The following RCRA code(s) applies to this material if it becomes waste: D001

Regulatory status of hazardous chemical constituents of this product:

Constituent	Extremely Hazardous?	Toxic Chemical?	CERCLA RQ (lbs)	TSCA 12B Export Notification
Carbon dioxide	No	No	0.0	Not Required
Isopropanol	No	Yes	0.0	Required

For purposes of SARA Section 312 hazardous materials inventory reporting, the following hazard classes apply to this

material: Immediate Health Hazard

Delayed Health Hazard

Fire Hazard

Section 16: Other Information

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