

CYCLO[®] INDUSTRIES, LLC

MATERIAL SAFETY DATA SHEET

This MSDS is being provided to your company for the purpose of providing current health and safety information to your management and for your employees who work with this product. Please read the information on these sheets and then provide this information to those people at your company whose responsibility it is to comply with FEDERAL, STATE and COMMUNITY RIGHT TO KNOW regulations. Also, make this information available to any employee who requests it.

If Cyclo Industries, LLC considers the formula of this product to be a trade secret, the exact chemical names of the ingredient(s) and the percentages in which they are combined will not appear in the body of this sheet. The exact composition is available upon request to physicians, industrial hygienists and other health professionals.

SECTION 1 – PRODUCT & COMPANY IDENTIFICATION

Product Name: Cyclo[®] Lock De-Icer, Stock No. C-103

Product Use: Thaws out and prevents freezing of locks.

Manufactured by: Cyclo Industries, LLC
10190 Riverside Drive, Palm Beach Gardens, Florida 33410-4881
Telephone: (561) 775-9600

First Aid Emergency: (800) 752-7869 or (312) 906-6194

Shipping Emergency: (800) 424-9300 or (703) 527-3887 (CHEMTREC)

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

CAS Reg. No.	Material	Percentage	Exposure Limits
124-38-9	Carbon dioxide	1 – 10	5000 ppm – ACGIH TLV 5000 ppm – OSHA PEL
67-63-0	Isopropanol	40 – 50	400 ppm – ACGIH TLV 400 ppm – OSHA PEL 400 ppm – (Canada)

SECTION 3 – HAZARDS IDENTIFICATION

Effects of Overexposure:

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

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.

Skin Contact: May irritate the skin

Eye Contact: Severe eye irritant. May cause corneal burns.

SECTION 3 – HAZARDS IDENTIFICATION

Health Hazards (Chronic): Repeated or prolonged exposure may irritate mucous membranes.

Carcinogenicity: NTP Carcinogen = No; IARC Monographs = No; OSHA Regulated = No

Medical Conditions Generally Aggravated by Exposure: Existing eye, skin and respiratory disorders.

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

SECTION 4 – FIRST AID MEASURES

First Aid Procedures:

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 of vomiting. Get medical attention immediately.

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

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

Eye Contact: Flush eye with clean water for at least 20 minutes while gently holding eyelids open. Get immediate medical attention.

Notes to Physician: Eye: If pain, tears, or redness continue, patient should contact ophthalmologist. Detoxification procedure: Administer and aqueous slurry of activated charcoal followed by a cathartic such as magnesium citrate or sorbitol.

SECTION 5 – FIRE FIGHTING MEASURES

Flash Point: 53°F (12°C)

Method Used: TCC

Explosive Limits in Air (percent):

Lower Explosion Level (LEL) = 2

Upper Explosion Level (UEL) = 12.7

Extinguishing Media: Alcohol foam, CO₂, dry chemical, water

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 NOSH 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.

SECTION 5 – FIRE FIGHTING MEASURES continued

Hazardous Products of Combustion: Carbon monoxide and other unknown organic compounds.

HMIS Code: Health = 2 Flammability = 3 Reactivity = 0

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill Control: 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 large 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 Procedures: 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. Material may attack some forms of plastic, aluminum, rubber and coatings. Do not puncture or incinerate (burn) cans. Do not stick pin, nail or any other sharp object into opening on top of can. See product label for additional information. **KEEP OUT OF THE REACH OF CHILDREN.**

Storage Procedures: Keep in a cool place without direct exposure to sunlight. Keep containers away from heat, sparks, open flames and strong oxidizers. Keep containers tightly closed and otherwise in accordance with NFPA regulations. Maintain air space in storage containers. Do not store above 120°F (49°C).

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

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 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION continued
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Ventilation: Sufficient to prevent inhalation of solvent vapors. General dilution and/or local exhaust ventilation in volume or pattern to keep PEL/TLV of most hazardous ingredient below acceptable limit and LEL below stated limit.

Protective Gloves: Chemical-resistant (neoprene, nitrile) required for prolonged or repeated contact.

Eye Protection: Safety glasses with splash guards or full face shield is recommended. Do not wear contacts.

Other Protective Equipment: Solvent resistant apron or other clothing is recommended.

Work/Hygienic Practices: Eye washes and safety showers in the workplace are recommended.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: 180°F (82°C)

Specific Gravity (H₂O=1): 0.789

Vapor Pressure: 33 mm Hg @ 68°F

Vapor Density (air=1): 2.1

Solubility in Water: Completely

pH: Not determined

Percent Volatile By Volume (%): 100

Melting Point: -127°F (-88°C)

Evaporation Rate (Butyl Acetate = 1): 1.4

Percent Solids by Weight: 0

Appearance and Odor: Clear liquid with solvent odor

Volatile Organic Compound (VOC) (grams/liter): 790

SECTION 10 – STABILITY AND REACTIVITY
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Stability: Stable

Conditions to Avoid: Heat, open flames, temperatures above 120°F (49°C), ignition sources and oxidizing conditions.

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

Hazardous Decomposition or Byproducts: Oxides of carbon and unidentified organic combustion products

Hazardous Polymerization: Will not occur

SECTION 11 – TOXICOLOGICAL INFORMATION

Acute oral effects: No data available

Acute dermal effects: No data available

Acute inhalation effects: No data available

Eye irritation: Severe eye irritant.

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

Carcinogenicity, teratogenicity and mutagenicity: In both mutagenicity studies the mouse micronucleus and CHO assays were negative. Rat and rabbit oral teratogenicity and developmental toxicology there was no evidence that IPA caused teratogenicity in rats or rabbits. 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 480 mg/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 rat inhalation neurotoxicity and oral developmental neurotoxicity studies, there was no evidence that IPA caused neurotoxicity in adults (max dose 5000 ppm) or offspring (max dose 1200 ppm).

Toxicological Information on Hazardous Chemical Constituents of this Product:

Constituent	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 4 hr, (rat)
Carbon Dioxide	Not determined	Not determined	Not determined
Isopropanol	5045 mg/kg	12.8 g/kg	22627 ppm

SECTION 12 – ECOLOGICAL INFORMATION

Aquatic/Terrestrial No data is available at this time.

Toxicity

Environmental Fate

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of in accordance with local, state and federal regulations. Before attempting clean up, refer to other sections of this MSDS for hazard caution information.

SECTION 14 – TRANSPORT INFORMATION

U.S. DOT

Shipping Description:	Aerosols, Consumer Commodity ORM-D
ID Number:	Not applicable
Hazard Class:	Not applicable
Packing Group:	Not applicable
Label:	Not applicable
Placards:	Not applicable

SECTION 14 – TRANSPORT INFORMATION continued

IMDG

Shipping Description:	Aerosols, Limited Quantity
ID Number:	1950
Hazard Class:	2
Packing Group:	Not required
Label:	Not required
Markings:	Not required
Placards:	Not required

SECTION 15 – REGULATORY INFORMATION
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TSCA Inventory: All ingredients of this product are listed on the TSCA inventory.

SARA Extremely Hazardous Substances None

SARA Section 313 This product contains the following toxic chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372 (SARA 313 – Toxic Chemical Release Reporting)

<u>Chemical Name</u>	<u>CAS#</u>	<u>Weight %</u>
Isopropanol	67630	>50

CERCLA/Superfund (RQ): This product is not subject to CERCLA reporting requirements. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

California Proposition 65: This product does not contain chemicals known to the State of California to cause cancer, birth defects and other reproductive harm.

Canadian Regulations: WHMIS Hazard Classes B2; D2B – All components of this product are on the Domestic Substances List

SECTION 16 – OTHER INFORMATION

Document Date: April 4, 2003

Supersedes: 7/2/97

Revisions: All sections – minor updates have been made. Added the following new sections, 11, 12 & 15.

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