

Material Safety Data Sheet (MSDS)

Abbreviations used on this MSDS:

ACGIH = American Conference of Governmental Industrial Hygienists, CAN = Canada, CAS = Chemical Abstracts Service Division of the American Chemical Society, CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act (US), DOT = US Department of Transportation, IARC = International Agency for Research on Cancer, ICAO = International Civil Aviation Organization, IMO = International Maritime Organization, LC₅₀ = Lethal concentration by inhalation to cause death in 50% of a test population of animals, LD₅₀ = Lethal dose by oral or dermal contact to cause death in 50% of a test population of animals, mmHG = millimetres of mercury, MSDS = Material Safety Data Sheet, NFPA = National Fire Protection Association (US), °C = temperature in degrees celsius, OSHA = Occupational Safety and Health Administration (US), pH = indicates acidity < 7 or alkalinity > 7, ppm = parts per million, PEL = Permissible Exposure Limit, SARA = Superfund Amendment and Re-authorization Act (US), TDG = Transportation of Dangerous Goods (CAN), TLV = Threshold Limit Value, TSCA = Toxic Substances Control Act (US), UN = United Nations, US = United States, WHMIS = Workplace Hazardous Materials Information System (CAN)



SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier Instant Cold Pack			
Product Use Relieve muscle pain, severe bruises or hematoma, trauma, swelling, and acute tendinitis			
Manufacturer's Name Cryopak Corporation		Supplier's Name	
Street Address 1053 Derwent Way		Street Address	
City Delta	Province BC	City	Province
Postal Code V3M 5R4	Emergency Telephone Number 613.996.6666 (CANUTEC) Use in case of a dangerous goods emergency	Postal Code	Emergency Telephone Number
Date MSDS Prepared July 31, 2006	Supersedes April 4, 2005	MSDS Prepared by V.G.Scott & Associates Consulting	Telephone Number 1.888.405.1188

SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredients (specific)	%	CAS Number	LD₅₀ of Ingredient (specify species and route)	LC₅₀ of Ingredient (specify species)
Ammonium nitrate	40 - 70	6484-52-2	4500 mg/kg (rat, oral)	Not applicable

SECTION 3 - HAZARDS IDENTIFICATION

Routes of Entry				
<input checked="" type="checkbox"/> Skin Contact	<input checked="" type="checkbox"/> Skin absorption	<input checked="" type="checkbox"/> Eye contact	<input type="checkbox"/> Inhalation	<input checked="" type="checkbox"/> Ingestion
Emergency Overview Dangerous if ingested. May interfere with the circulation and oxygen capacity of the blood.				
WHMIS Symbols				
 Class C	 Class D-2			
Potential Health Effects Product may irritate eyes and skin upon contact but is unlikely to injure tissue.				

PRODUCT IDENTIFIER: Instant Cold Pack

SECTION 4 - FIRST AID MEASURES

Skin Contact May cause skin irritation. Wash contaminated skin with soap and water. Cover irritated skin with an emollient. If irritation persists, seek medical attention.
Eye Contact IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. Obtain medical attention if irritation persists.
Inhalation Liquid product is difficult to inhale. If inhaled seek immediate medical attention.
Ingestion If conscious, have the person drink several glasses of water or milk and induce vomiting. Never give anything by mouth to an unconscious person. Lower the head so the vomit will not reenter the mouth and throat. Obtain medical attention.

SECTION 5 - FIREFIGHTING MEASURES

Flammability <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, under which conditions?	
Means of Extinction Contains oxidizing material. Cool containing vessels with water jet to prevent pressure build-up or explosion. Materials will not burn.		
Flash point (°C) and Method Not applicable	Upper Flammability Limit (% by volume) Not applicable	Lower Flammability Limit (% by volume) Not applicable
Autoignition Temperature (°C) Not applicable	Explosion Data – Sensitivity to Impact Not applicable	Explosion Data – Sensitivity to Static Discharge Not applicable
Hazardous Combustion Products Not applicable		
Fire Fighting Instructions Use flooding quantities of water. Fire Fighters should wear positive-pressure self-contained breathing apparatus (SCBA) and full fire protective clothing.		

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Leak and Spill Procedures Small spill: Use appropriate tools or equipment to clean up spilled liquid material. Small quantities can be flushed to sanitary sewer. Large Spill: Prevent additional material from being spilled. Keep from entering sewers, watercourses, wells, etc. Product will promote algae growth and may degrade water quality and taste. Notify downstream water users.

PRODUCT IDENTIFIER: Instant Cold Pack

SECTION 7 - HANDLING AND STORAGE

Handling Procedures and Equipment

Use no sharp tools to handle packages. Do not drop packages. Use care when opening packages to not damage inner containers.

Keep away from heat, combustible materials and reducing agents. Avoid contact with skin and eyes. Do not ingest. Keep away from combustible materials. Keep out of reach of children. Keep away from food, drink and animal feed.

Storage Requirements

Store in a cool, dry, well ventilated area. Keep away from food, drink and animal feed. Keep away from combustible materials. Keep away from incompatible materials.

SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION

Exposure Limits

10 mg/m³ for ammonium nitrate powder ACGIH TLV OSHA PEL Other (Specify)

Specific Engineering Controls (such as ventilation, enclosed process)

Use appropriate personal protective equipment and clothing to avoid skin contact with liquid product. If spilled product dries out avoid inhaling the dust.

Personal Protective Equipment

Gloves Respirator Eye Footwear Clothing Other

If checked, specify type

Use impervious gloves. Wear safety glasses or safety goggles if there is a risk of splash and spillage. Use suitable waterproof footwear.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State <input type="checkbox"/> Solid <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Gas	Odour and Appearance Liquid	Odour Threshold (ppm) Odourless
Specific Gravity Not available	Vapour Density (air = 1) Not available	Vapour Pressure (mmHG) Not available
Evaporation Rate Not available	Boiling Point (°C) Not available	Freezing Point (°C) Not available
pH 6 (10% solution/water)	Coefficient of Water/Oil Distribution Not applicable	Solubility in Water Easily soluble in water.

PRODUCT IDENTIFIER: Instant Cold Pack

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If no, under which conditions?
Incompatibility with Other Substances <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, which ones? Highly reactive with combustible materials. Reactive with reducing agents, organic materials, metals. Slightly reactive with alkalis. Non-reactive with acids.
Reactivity, and Under What Conditions? Very slightly to slightly corrosive to aluminum, zinc and copper. Non-corrosive to steel and stainless steel (304 and 316). Incompatible with magnesium, zinc, sodium, potassium and other finely powdered metals.	
Hazardous Decomposition Products There are no hazardous decomposition products. The product degrades to nitrogen, hydrogen and oxygen.	

SECTION 11 - TOXICOLOGICAL INFORMATION

Effects of Acute Exposure Toxic to livestock, wildlife and domestic animals if directly ingested. The product itself and its products of degradation are not harmful under normal conditions of careful and responsible use.	
Effects of Chronic Exposure Exposure can cause headache, stomach pains, vomiting and diarrhea. Produces methemoglobinemia which reduces oxygen supply to the circulating blood. Although predominately affecting infants, nitrate induced methemoglobinemia has also been documented in adults.	
Irritancy of Product Contact with skin and eyes may be irritating.	
Skin Sensitization Not expected	Respiratory Sensitization Not expected
Carcinogenicity – IARC Does not demonstrate any risk of gastrointestinal cancer.	Carcinogenicity – ACGIH Does not demonstrate any risk of gastrointestinal cancer.
Reproductive Toxicity Not available	Teratogenicity Not expected
Embryotoxicity Not available	Mutagenicity Not expected
Name of Synergistic Products/Effects None known	

PRODUCT IDENTIFIER: Instant Cold Pack

SECTION 12 - ECOLOGICAL INFORMATION

Toxicity

Low toxicity for humans or animals under normal conditions of use. May be harmful to livestock and wildlife if ingested. Clean up spilled material to prevent animal exposure.

Aquatic Marine Toxicity: Will release ammonium ions. Ammonia is a toxic hazard to fish. Avoid spills or releases to watercourses. Will disperse with current. Release to watercourses may cause effects downstream from point of release. This material is not listed as a marine pollutant in the International Maritime Dangerous Goods Code.

Biochemical Oxygen Demand: Not available

Chemical Oxygen Demand: Not available

Toxicity of the Products of Degradation: The product itself and its products of degradation are not harmful under normal conditions of use. Avoid spills or releases to watercourses.

Special Remarks on the Products of Degradation: Product will promote algae growth and may degrade water quality and taste. Notify downstream water users. Nitrite in potable drinking water should be maintained below 10 mg/L. Will disperse in water.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal or Recycling

Recycle to process in manufacturing if possible. Recover and place material in a suitable container for intended use or disposal. Call for assistance on disposal. Ensure disposal is in compliance with federal, provincial and local regulations.

SECTION 14 - TRANSPORT INFORMATION

Special Shipping Information Product may be shipped as a Consumer Commodity or Limited Quantity as appropriate if in suitable packages.		UN Number UN3139
TDG OXIDIZING LIQUID, N.O.S. (Ammonium nitrate) Class 5.1, III	DOT OXIDIZING LIQUID, N.O.S. (Ammonium nitrate) Class 5.1, III	
IMO OXIDIZING LIQUID, N.O.S. (Ammonium nitrate) Class 5.1, III	ICAO OXIDIZING LIQUID, N.O.S. (Ammonium nitrate) Class 5.1, III	

SECTION 15 - REGULATORY INFORMATION

WHMIS Classification Class C, Class D-2B	OSHA Hazardous by definition of Hazard Communication Standard. This product is not considered a priority pollutant as regulated under the Clean Water Act.
SARA This product has been revised according to the EPA "hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following category(ies): Immediate Health, Fire, Reactive The following product is listed in SARA Section 313: Ammonium nitrate, CAS #6484-52-2 (if in solution)	TSCA This product is listed on the TSCA Inventory.

SECTION 16 - OTHER INFORMATION

Canadian Environmental Protection Act (CEPA): This product is on the Domestic Substances List (DSL), and acceptable for use under the provisions of CEPA.

CERCLA/SUPERFUND, 40 CFR 117,302: this product contains no Reportable Quantity (RQ) Substances.