

## SAFETY DATA SHEET (SDS)

Dyad Medical Sourcing

### SECTION I - PRODUCT IDENTIFICATION

**Product Trade Name:** HCS Instant Cold Packs  
**Manufacturer:** Dyad Medical Sourcing, LLC  
2101 Waukegan Road, Suite 208  
Bannockburn, IL 60015  
**Emergency Phone Number:** 1-855-241-1773

### SECTION II - HAZARD(S) IDENTIFICATION

**Ingestion:** Low to moderate degree of toxicity by ingestion.  
**Inhalation:** Low to moderate degree of toxicity by inhalation.  
**Eye Contact:** Eye irritant. Contact may cause stinging, watering, redness and swelling.  
**Skin Contact:** Contact may cause redness, itching, burning and skin damage. No harmful effects from skin absorption have been reported.  
**Signs & Symptoms:** Effects of overexposure may include irritation of the nose, throat and digestive tract; coughing, nausea, vomiting, diarrhea, abdominal pain, breathing difficulties, and blood disorders (methemoglobinemia). Symptoms of toxicity may include headache, fainting, fatigue, cyanosis, confusion, irregular heartbeats, and possible respiratory paralysis. Pre-existing heart disease may be aggravated by exposure to nitrates.  
**Other Comments:** This material contains nitrate salts. Nitrates may be reduced by intestinal bacteria to nitrate. When absorbed, nitrites may result in effects on the blood (methemoglobinemia) and blood vessels (vasodilating and a fall in blood pressure).

### SECTION III - COMPOSITION / INFORMATION ON INGREDIENTS

<b>Chemical Name &amp; Synonyms:</b>	<u>Ammonium Nitrate</u>	<u>Water</u>
<b>C.A.S. Number:</b>	6484-52-2	7732-18-5
<b>Chemical Formula:</b>	NH <sub>4</sub> NO <sub>3</sub>	N/A
<b>WT%:</b>	≥ 1%	≥ 50%
<b>EC#</b>	229-347-8	231-791-2

### SECTION IV - FIRST AID MEASURES

**Eyes:** Move victim away from exposure and into fresh air. If irritation or redness develops, flush eyes with clean water and seek immediate medical attention. For direct contact, immediately hold eyelids apart and flush the affected eye(s) with clean water for at least 15 minutes. Seek medical attention.

**Skin:** Remove contaminated shoes and clothing, and flush affected area(s) with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. If skin surface is not damaged, cleanse affected area(s) thoroughly by washing with mild soap or water. If irritation or redness develops, seek medical

**SECTION IV - FIRST AID MEASURES** *(continued)*

- Ingestion:** If swallowed, seek emergency medical attention. If victim is drowsy or unconscious and vomiting, place on left side with the head down and do not give anything by mouth. If victim is conscious and alert and ingestion occurred within the last hour, vomiting should be induced for ingestion of large amounts (more than 5 ounces in an adult) under direction from a physician or poison center. If possible, do not leave victim unattended and observe closely for adequacy of breathing.
- Inhalation:** If respiratory symptoms or other symptoms of exposure develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.
- Note to Physician:** Nitrates in large doses may cause significant vasodilation and hypotension. Pre-existing ischemic heart disease may be aggravated by these effects. In large ingestions nitrates may cause methemoglobinemia. Methemoglobinemia should be suspected if cyanosis occurs. Methylene blue (1-2 mg/kg I.V. over several minutes) is an effective antidote for symptomatic methemoglobinemia.

**SECTION V - FIRE FIGHTING MEASURES**

- Extinguishing Media:** Use water only. Do not use dry chemical, carbon dioxide or foam.
- Special Fire Fighting Procedures:** For fires beyond the incipient stage, emergency responders in the immediate hazard area should wear bunker gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a self-contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8). Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Move undamaged containers from immediate hazard area if it can be done with minimal risk. Water spray may be useful in minimizing or dispersing vapors.
- Unusual Fire & Explosion Hazards:** Oxidizer. The dry chemical of this material is an oxidizer and may increase flammability of any combustible substance. It is the nature of oxidizers to provide their own oxygen source; smothering a fire may be ineffective. Nitrate salts support combustion under certain conditions. Ammonium nitrate is capable of detonation if heated under confinement or if subjected to strong shocks. Organic or other easily oxidizable matter can sensitize it to a more readily explodable state. Do not allow product to evaporate to dryness, especially in

**SECTION VI - ACCIDENTAL RELEASE MEASURES**

- Environmental Precautions:** Prevent spilled material from entering sewers, storm drains, other unauthorized treatment drainage systems, and natural waterways.
- In Case of Spill/Release:** The dry chemical of this material is an oxidizer. Keep all sources of ignition and hot metal surfaces away from spill. The use of explosion-proof equipment is recommended. Stay upwind and away from spill. Notify persons downwind of spill/release; isolate immediate hazard area and keep unauthorized personnel out. Stop spill if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8). Dike far ahead of spill for later recovery or disposal. Spilled material may be absorbed into an appropriate absorbent material. Notify appropriate federal, state, and local agencies.

**SECTION VII - HANDLING & STORAGE**

- Handling:** Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Section 2 and 8). Wash thoroughly after handling. Do not wear contaminated clothing or shoes. Use good personal hygiene practice. "Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. Container should be disposed in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to OSHA Regulations, ANSI Z49.1 and other governmental and industrial references pertaining to cleaning, welding, or other contemplated operations.
- Storage:** Use and store this material in room temperature, well-ventilated areas away from heat and all sources of ignition. Post area "No Smoking or Open Flame." Solution is corrosive to copper, copper alloys, lead, and zinc. Store to avoid contact with incompatible materials such as ordinary combustibles, flammable liquids, greases, and those materials, including other oxidizers, that could react with the oxidizer or catalyze its decomposition (see Section 10). Prohibit accumulation of combustible waste in storage areas. Combustible construction materials that may be in contact with oxidizers shall be protected with a compatible coating to prevent impregnation of the combustible materials by the oxidizers. Protect container(s) against physical damage.

**SECTION VIII - EXPOSURE CONTROLS / PERSONAL PROTECTION**

- Engineering Controls:** If current ventilation practices are not adequate to minimize exposure, additional ventilation or exhaust systems may be required.
- Protective Clothing:** The use of gloves impermeable to the specific material handled is advised to prevent skin contact, possible irritation, absorption, and skin damage (see glove manufacturer literature for information on permeability). Depending on conditions of use, apron and/or arm covers
- Eye/Face Protection:** Approved eye protection to safeguard against potential eye contact, irritation, or injury is recommended. Depending on conditions of use, a face shield may be necessary.
- Respiratory Protection:** A NIOSH/MSHA approved air purifying respirator with a N95 filter may be used under conditions where airborne concentrations are expected to exceed exposure limits (see Section 2). Protection provided by air purifying respirators is limited (see manufacturer's respirator selection guide). Use a positive pressure air supplied respirator if there is potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.
- Other Protective Equipment:** A source of clean water should be available in the work area for flushing eyes and skin. Impervious clothing should be worn as needed.

**SECTION IX - PHYSICAL & CHEMICAL PROPERTIES**

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|--------------------------------|-------------------|------------------------------------|--------------------------|
| <b>Boiling Point:</b>          | No data available | <b>Evaporation Rate:</b>           | No data available        |
| <b>Freezing/Melting Point:</b> | No data available | <b>Flammable/Explosive Limits:</b> | No data available        |
| <b>Specific Gravity:</b>       | approx. 1.3       | <b>Appearance:</b>                 | White solid in water bag |

**SECTION IX - PHYSICAL & CHEMICAL PROPERTIES** *(continued)*

<b>Flashpoint:</b>	Not applicable	<b>Odor:</b>	None
<b>pH:</b>	No data available	<b>Physical State:</b>	Solid/Liquid
<b>Solubility in Water:</b>	100%	<b>Chemical Uses:</b>	Physical Cooling
<b>Autoignition Temperature:</b>	No data available		

**Note:** Unless otherwise stated, values are determined at 20°C (68°F) and 760mmHg (1atm).

**SECTION X - STABILITY & REACTIVITY**

<b>Chemical Stability:</b>	Stable under normal conditions of storage and handling. Dry chemical is an oxidizer and may promote combustion in other materials.
<b>Conditions to Avoid:</b>	This material may be an oxidizer. Do not heat above 250°F. Do not let dry chemical or solution dry or crystalize in contact with organic, reactive, or combustible materials (see <b>Incompatibility</b> (Material to Avoid): Avoid contact with reactive, combustible, or organic materials; such as wood, grain, organic chemicals, acids, corrosive liquids, sulfur, flammable liquids, chlorates, permanganates, finely divided materials, charcoal, coke, cork, or sawdust. Avoid contact with other oxidizers. Contact with alkaline materials may liberate ammonia.
<b>Incompatibility</b> (Material to Avoid):	
<b>Hazardous Decomposition Products:</b>	Material will not burn, but if involved in a fire, oxides of nitrogen may be generated. Exposure to heat may liberate ammonia fumes.
<b>Hazardous Polymerization:</b>	Will not occur.
<b>Conditions to Avoid:</b>	Heat and fire. Can react with certain reducing agents under heat conditions.

**SECTION XI - TOXICOLOGICAL INFORMATION**

No definitive information available on carcinogenicity, mutagenicity, target organs or developmental toxicity.

**SECTION XII - ECOLOGICAL INFORMATION**

<b>Ammonium Nitrate:</b>	CAS# 6484-52-2	
	<b>LD50:</b> 4820 mg/kg (RAT)	<b>LC50:</b> no information available

**SECTION XIII - DISPOSAL CONSIDERATIONS**

This material, if discarded as produced, is not an RCRA listed or characteristic hazardous waste. Along with properly characterizing all waste materials, consult state and local regulations regarding the proper disposal of this material.

**SECTION XIV - TRANSPORT INFORMATION**

<b>Hazard Class / Division:</b>	Not classified as hazardous.
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**SECTION XV - REGULATORY INFORMATION**

This material contains the following chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372.

**Component:** CAS# 7446-41-7  
Ammonia (includes anhydrous ammonia and aqueous ammonia from water dissociable ammonium salts and other sources; 10 percent of total aqueous ammonia is reportable under this listing).

**Water dissociable nitrate compounds:** None

**Warning:** This material contains the following chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm, and are subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5).

This material has not been identified as a carcinogen by NTP, IARC, or OSHA.

**SECTION XVI - OTHER INFORMATION**

**Date of Preparation:** May 2015

**Notice to Reader:**

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.