



RAPID AID INSTANT COLD PACK/COMPRESS

MSDS No.:RAPID-007

MSDS Preparation Date (dd/mm/yyyy): 25/04/2011

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MATERIAL SAFETY DATA SHEET

SECTION 1: IDENTIFICATION

Product identifier : **RAPID AID INSTANT COLD PACK/COMPRESS**

Product Code(s) : None reported.

Product Use : Relief of bruises, swelling, muscle spasm, pain, headache swelling for sprains, sore joints, first aid for sporting injuries.

Chemical Family : Inorganic ammonium salt.

Supplier's name and address:
Rapid Aid Ltd.
4120A Sladeview Crescent, Units 1 - 4
Mississauga, ON, Canada
L5L 5Z3

Manufacturer's name and address:
Refer to Supplier

Information Telephone # : (905) 820-4788

24 Hr. Emergency Tel # : (905) 820-4788

SECTION 2 - HAZARDS IDENTIFICATION

Classification : WHMIS classification: This product is not a WHMIS controlled product in Canada. This product may be considered a 'manufactured article' or 'medical device'. However, if the article is damaged and/or material is released, contents are harmful. For informational purposes, this product would have the following WHMIS classification:
Class C (Oxidizing Material)
Class D2B (Materials Causing Other Toxic Effects, Toxic Material)

OSHA Classification: This material is not classified as hazardous under OSHA regulations (29 CFR Part 1910.1200). This product is considered an 'article' under 29 CFR Part 1910.1200. However, if the article is damaged and/or material is released, contents are harmful. For informational purposes, this product would have the following OSHA classification;
Oxidizer
Acute Health Hazard
Chronic Health Hazard

Emergency Overview : Beige-brown, odorless solid chemical supplied with water bag.

Harmful effects are not expected under normal usage.

Chemical from damaged, un-activated cold pack may have the following hazards:
DANGER! Strong oxidizer which will promote combustion. Contact with combustible material may cause fire. This product reacts with acids evolving considerable heat. May be harmful if inhaled or swallowed. May cause headache, nausea, dizziness and other symptoms of central nervous system depression. Can cause cyanosis. Contains material which may cause adverse blood system effects.

Chemical from damaged, activated cold pack may have the following hazards:
Activation results in chemicals mixing inside the cold pack. The reaction that occurs is endothermic, causing the solution to become cold. Prolonged contact may cause numbness. Causes little or no irritation.

POTENTIAL HEALTH EFFECTS:

Signs and symptoms of short-term (acute) exposure

Inhalation : Harmful effects are not expected under normal usage.

Chemical from damaged, un-activated cold pack may have the following hazards:
Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough. Irritating or noxious gases may be released during thermal decomposition. Inhalation of high concentrations may cause unconsciousness and cyanosis (bluish discoloration of the skin).

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Skin : Harmful effects are not expected under normal usage.

Chemical from damaged, un-activated cold pack may have the following hazards:
May cause mild skin irritation. Skin contact may provoke the following symptoms: Red, puffy, itching skin.

Chemical from damaged, activated cold pack may have the following hazards:
Prolonged contact may cause numbness. Causes little or no irritation.

Eyes : Harmful effects are not expected under normal usage.

Chemical from damaged, un-activated cold pack may have the following hazards: Direct contact causes eye irritation.

Chemical from damaged, activated cold pack may have the following hazards:
Contact with eyes may cause irritation. Symptoms include: Inflammation of eye tissue, characterized by redness, watering, and/or itching.

Ingestion : Harmful effects are not expected under normal usage.

Chemical from damaged cold pack may have the following hazards:
May cause irritation of mouth, throat, and stomach. Symptoms may include nausea, vomiting, dizziness, drowsiness and other symptoms of central nervous system depression. Ingestion of large quantities of nitrates may affect oxygen transport in the blood and blood system, causing methemoglobinemia. Large doses can cause shock, convulsions, coma and eventual death.

Effects of long-term (chronic) exposure

: Harmful effects are not expected under normal usage.

Chemical from damaged cold pack may have the following hazards: Contains material which may cause adverse blood system effects.

Carcinogenic status : See TOXICOLOGICAL INFORMATION, Section 11.

Additional health hazards : See TOXICOLOGICAL INFORMATION, Section 11.

Potential environmental effects : See ECOLOGICAL INFORMATION, Section 12.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS #	Wt.%
Ammonium nitrate	6484-52-2	31.20 - 54.60
Magnesium nitrate	10377-60-3	0.80 - 1.40

Non Hazardous Ingredients:
Dolomite (CAS: 16389-88-1) 8 - 14%

SECTION 4 - FIRST AID MEASURES

Inhalation : Harmful effects are not expected under normal usage.

Recommended first aid for exposure to chemical from damaged cold pack:
Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Get medical attention.

Skin contact : Harmful effects are not expected under normal usage.

Recommended first aid for exposure to chemical from damaged cold pack:
For skin contact, flush with water for at least 15 minutes, while removing contaminated clothing. If irritation or symptoms develop, seek medical attention.

Eye contact : Harmful effects are not expected under normal usage.

Recommended first aid for exposure to chemical from damaged cold pack:
Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

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Ingestion : Harmful effects are not expected under normal usage.

Recommended first aid for exposure to chemical from damaged cold pack:
Do not induce vomiting. Have victim rinse mouth with water, then give one to two glasses of water to drink. Never give anything by mouth to an unconscious person. Seek immediate medical attention/advice.

Notes For Physician : Treat symptomatically.

SECTION 5 - FIRE FIGHTING MEASURES

Fire hazards/conditions of flammability

: Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.

Chemical from damaged, un-activated cold pack may have the following hazards:
Strong oxidizer which will promote combustion. Contact with combustible material may cause fire.

Flammability classification (OSHA 29 CFR 1910.1200)

: Not flammable under normal conditions of handling.

Oxidizing properties : Chemical from damaged, un-activated cold pack may have the following hazards:
Strong oxidizer which will promote combustion. Will accelerate combustion and increase the risk of fire and explosion in combustible or flammable materials.

Explosion data: Sensitivity to mechanical impact / static discharge

: Not expected to be sensitive to mechanical impact or static discharge.

Suitable extinguishing media : Use water spray to fight fires. Use chemical extinguishing agents with caution. Some chemical extinguishing agents may accelerate decomposition.

Special fire-fighting procedures/equipment

: Fight fires from a safe distance. Evacuate personnel to safe areas. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. A full-body chemical resistant suit should be worn. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame.

Hazardous combustion products

: Ammonia, Metal oxides, Carbon dioxide, carbon monoxide, and oxides of nitrogen.

NFPA Rating

0 - Minimal	1 - Slight	2 - Moderate	3 - Serious	4 - Severe
Health: 1		Flammability: 0	Instability: 3	Special Hazards: OX

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions : Individuals involved in the cleanup must wear appropriate personal protective equipment. Refer to Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, for additional information on acceptable personal protective equipment. Keep all other personnel upwind and away from the spill/release.

Environmental precautions : Discharge into the environment must be avoided. Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. For large spills, dike the area to prevent spreading. Uncontrolled discharge into water courses must be alerted to the appropriate regulatory body.

Spill response/cleanup : Pick up loose items, and place in container for disposal.

Recommended clean-up procedure when un-activated cold packs are damaged:
Ventilate area of release. Remove all sources of ignition. Remove combustible materials. Use only non-sparking tools and equipment in the clean-up process. Cover any spilled material with non-combustible absorbent material, such as vermiculite or sand, then place absorbent material into a container for later disposal (see Section 13). Use methods that do not generate dusts. Notify the appropriate authorities as required.

Recommended clean-up procedures when activated cold packs are damaged:
Ventilate area of release. Remove all sources of ignition. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Notify the appropriate authorities as required.



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Prohibited materials : Do not use combustible absorbents, such as sawdust.

Special spill response procedures

: In case of a transportation accident, in the United States contact CHEMTREC at 1-800-424-9300 or International at 1-703-527-3887. If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8002).
US CERCLA Reportable quantity (RQ): None reported.

SECTION 7 - HANDLING AND STORAGE

Safe Handling procedures : Use in a well-ventilated area. Protect from damage. Keep away from heat and flame. Keep away from combustible material.

Recommended handling procedures when un-activated cold pack is damaged: Wear suitable protective equipment. Avoid breathing dust. Avoid and control operations which create high vapor or dust concentrations. Do not ingest. Avoid contact with skin, eyes and clothing. Never return contaminated material to its original container. Label containers appropriately. Wash thoroughly after handling.

Recommended handling procedures when activated cold pack is damaged: Wear suitable protective equipment. Avoid breathing vapour or mist. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling.

Storage requirements : Store in a cool, dry, well-ventilated area. Store away from incompatibles and out of direct sunlight. Inspect periodically for damage or leaks. No smoking in the area. Protect from damage.

Incompatible materials : Acids ; Reducing agents; Combustible materials; Organic materials; Reactive metals; Fuel; Halogenated compounds; Copper.

Special packaging materials : Always keep in containers made of the same materials as the supply container.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits

<u>Ingredients</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Ammonium nitrate	N/Av	N/Av	N/Av	N/Av
Magnesium nitrate	N/Av	N/Av	N/Av	N/Av

Ventilation and engineering measures

: Not a hazard under normal conditions of use.

Recommended protective measures when cold packs are damaged: Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits.

Respiratory protection : Not required under normal conditions of handling.

Recommended protective measures when cold packs are damaged: Respiratory protection is required if the concentrations exceed the TLV. Advice should be sought from respiratory protection specialists.

Skin protection : None required when used as intended.

Recommended protective measures when cold packs are damaged: Gloves impervious to the material are recommended. The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye / face protection : None required when used as intended.

Recommended protective measures when cold packs are damaged: Chemical splash goggles are recommended.

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Other protective equipment : None required under normal conditions.

Recommended protective measures when cold packs are damaged:
An eyewash station and safety shower should be made available in the immediate working area. Other equipment may be required depending on workplace standards.

General hygiene considerations

: Handle in accordance with good industrial hygiene and safety practice.

Recommended protective measures when cold packs are damaged:
Avoid contact with skin, eyes and clothing. Avoid breathing vapors, fumes or dust. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Wear only clean, uncontaminated clothes when leaving place of work.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: Solid	Appearance	: Beige-brown, odorless solid chemical supplied with water bag.
Odour	: odourless	Odour threshold	: N/Av
pH	: N/Av		
Boiling point	: 130°C (266°F) (Decomposition temperature)	Specific gravity	: 1.06
Melting/Freezing point	: 160 - 170°C (320 - 338°F)	Coefficient of water/oil distribution	: N/Av
Vapour pressure (mmHg @ 20° C / 68° F)	: N/Av	Solubility in water	: 1870 g/L @ 20°C (68°F)
Vapour density (Air = 1)	: N/Av	Evaporation rate (n-Butyl acetate = 1)	: N/Av
Volatile organic Compounds (VOC's)	: 0	Volatiles (% by weight)	: N/Av
Flash point	: N/Av		
Flash point Method	: N/Av	Auto-ignition temperature	: N/Av
Lower flammable limit (% by vol.)	: N/Av	Upper flammable limit (% by vol.)	: N/Av
Flame Projection Length	: N/Av	Flashback observed	: N/Av

Section 10: Stability And Reactivity

Stability and reactivity : Stable under the recommended storage and handling conditions prescribed. Unstable with heat or contamination.

Chemical from damaged, un-activated cold pack may have the following hazards:
Strong oxidizer which will promote combustion. Contact with combustible material may cause fire.

Hazardous polymerization : Will not occur.

Conditions to avoid : Avoid heat and open flame. Avoid contact with incompatible materials. Keep out of direct sunlight. Keep away from combustible material.

Materials To Avoid And Incompatibility

: See Section 7 (Handling and Storage) for further details.

Hazardous decomposition products

: None known, refer to hazardous combustion products in Section 5.

SECTION 11 - TOXICOLOGICAL INFORMATION

Target organs : Eyes, skin, digestive system, respiratory system, blood system.

Routes of exposure : *Inhalation:* YES *Skin Absorption:* NO *Skin & Eyes:* YES *Ingestion:* YES

Toxicological data : There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.

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Ingredients	LC ₅₀ (4hr)	LD ₅₀	
	inh. rat	(Oral, rat)	(Rabbit, dermal)
Ammonium nitrate	> 88,800 mg/m ³	2217 mg/kg	N/Av
Magnesium nitrate	N/Av	5440 mg/kg	N/Av

- Carcinogenic status** : No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.
- Reproductive effects** : Not expected to cause reproductive effects.
- Teratogenicity** : Not expected to be a teratogen.
- Mutagenicity** : Not expected to be mutagenic in humans.
- Epidemiology** : No information available.
- Sensitization to material** : Not expected to be a skin or respiratory sensitizer.
- Synergistic materials** : N/Av
- Irritancy** : Mild skin irritant. Moderate to severe eye irritant.
- other important hazards** : Components of the product create formation of methaemoglobin.
- Conditions aggravated by overexposure** : Pre-existing skin, eye and respiratory disorders.

SECTION 12 - ECOLOGICAL INFORMATION

- Ecotoxicity** : The ecological characteristics of this product have not been fully investigated. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters. Chemical from damaged, un-activated cold pack may have the following hazards:
Ammonium nitrate:
LC50/48h/Cyprinus carpio (Freshwater fish) =65 - 85 mg/L
Ingredients mixture:
LC50/96h/Freshwater fish (Species not specified) = >100 mg/L
- Mobility** : No data is available on the product itself.
- Persistence** : No data is available on the product itself.
- Bioaccumulation potential** : No data is available on the product itself.
- Other Adverse Environmental effects** : Released in excess quantities, ingredients of this product can cause eutrophication in water.

SECTION 13 - DISPOSAL CONSIDERATIONS

- Handling for Disposal** : Handle waste according to recommendations in Section 7. Empty containers retain residue (liquid and/or vapour) and can be dangerous.
- Methods of Disposal** : If the material is unsuitable for recycling or reclamation, dispose of in accordance with federal, provincial and local hazardous waste laws. Contact your local, state or federal environmental agency for specific rules.
- RCRA** : If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method.

SECTION 14: TRANSPORT INFORMATION

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
TDG	UN1477	NITRATES, INORGANIC, N.O.S.	5.1	III	
TDG Additional information	Within Canada only, this product may be shipped according to the 500 kg Gross Mass Exemption. Refer to TDG Section 1.16 for detailed information on this exemption.				

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49CFR/DOT	UN1477	NITRATES, INORGANIC, N.O.S.	5.1	III	
49CFR/DOT Additional information	For shipments by ground within the United States, the Limited Quantity exception may apply. Refer to 49 CFR Section 173.152 for additional Limited quantity shipping requirements.				

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

TSCA: All listed ingredients appear on the Toxic Substances Control Act (TSCA) inventory.

OSHA: This material is not classified as hazardous under OSHA regulations (29 CFR Part 1910.1200). This product is considered an 'article' under 29 CFR Part 1910.1200.

CERCLA Reportable Quantity (RQ) (40 CFR 117.302): None reported.

SARA TITLE III: Sec. 302, Extremely Hazardous Substances, 40 CFR 355: No Extremely Hazardous Substances are present in this material.

SARA TITLE III: Sec. 311 and 312, MSDS Requirements, 40 CFR 370 Hazard Classes: None. If outer containers are damaged and leaking: Reactive hazard; Immediate (Acute) health hazard; Chronic Health Hazard.

SARA TITLE III: Sec. 313, Toxic Chemicals Notification, 40 CFR 372: This material is not subject to SARA notification requirements, since it does not contain any Toxic Chemical constituents above de minimus concentrations.

US State Right to Know Laws:

New Jersey Labeling Requirements: This product contains the following substances required to be disclosed on product labeling: Ammonium nitrate (CAS # 6484-52-2); Magnesium nitrate (CAS#10377-60-3)

California Proposition 65: To the best of our knowledge, this product does not contain any chemicals known to the State of California to cause cancer or reproductive harm.

Other U.S. State "Right to Know" Lists: The following chemicals are specifically listed by individual States:

- Ammonium nitrate (MA, PA, RI)
- Magnesium nitrate (MA, PA, RI)

International Information:

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

Canadian Environmental Protection Act (CEPA): All ingredients listed appear on the Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL).

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

SECTION 16 - OTHER INFORMATION

HMIS Rating : * - Chronic hazard 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe
Health: 1 Flammability: 0 Reactivity: 3

Legend : ACGIH: American Conference of Governmental Industrial Hygienists
 CAS: Chemical Abstract Services
 CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
 DOT: Department of Transportation
 EPA: Environmental Protection Agency
 HMIS: Hazardous Materials Identification System
 HSDB: Hazardous Substances Data Bank
 IARC: International Agency for Research on Cancer
 Inh: Inhalation
 LC: Lethal Concentration
 LD: Lethal Dose

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- MA: Massachusetts
- MSHA: Mine Safety and Health Administration
- N/Ap: Not Applicable
- N/Av: Not Available
- NFPA: National Fire Protection Association
- NIOSH: National Institute of Occupational Safety and Health
- NTP: National Toxicology Program
- OSHA: Occupational Safety and Health Administration
- PA: Pennsylvania
- PEL: Permissible exposure limit
- RCRA: Resource Conservation and Recovery Act
- RI: Rhode Island
- RTECS: Registry of Toxic Effects of Chemical Substances
- SARA: Superfund Amendments and Reauthorization Act
- STEL: Short Term Exposure Limit
- TDG: Canadian Transportation of Dangerous Goods Act & Regulations
- TLV: Threshold Limit Values
- TWA: Time Weighted Average
- TSCA: Toxic Substance Control Act
- WHMIS: Workplace Hazardous Materials Identification System

References

- : 1. ACGIH, Threshold Limit Values and Biological Exposure Indices
- 2. International Agency for Research on Cancer Monographs
- 3. Canadian Centre for Occupational Health and Safety, CCIInfoWeb databases (Chempendium, HSDB and RTECs).
- 4. Material Safety Data Sheets from manufacturer.
- 5. US EPA Title III List of Lists
- 6. California Proposition 65 List

<p>Prepared for: Rapid Aid Ltd. 4120A Sladeview Crescent, Units 1 - 4 Mississauga, ON, Canada, L5L 5Z3 Telephone: 905-820-4788 Please direct all enquiries to Rapid Aid.</p>	
<p>Prepared by: ICC The Compliance Center Inc. http://www.thecompliancecenter.com</p>	

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