

Material Safety Data Sheet
 May be used to comply with OSHA's
 Hazard Communication Standard,
 29 CFR 1910, 1200, Standard must be
 consulted for specific requirements.

U.S. Department of Labor
 Occupational Safety and Health Administration
 (Non-mandatory Form)
 Form Approved

Instant Hot Packs

Section 1 – Ingredient Information

Ingredient	CAS	%
Sodium Thiosulfate Pentahydrate	10102-17-7	86
Dextrose Monohydrate	50-99-7	5
Water	7732-18-5	9

Section 2 – Hazards Identification

Potential Health Effects	Eye	
		Pellets may cause slight eye irritation. Dusts may cause severe irritation with corneal injury. Effects may be slow intense effects as well as thermal burns.
	Skin Contact	Short single exposure not likely to cause significant skin irritation. Prolonged or repeated exposure may cause skin irritation, even a burn. May cause more severe response if skin is damp or if material is confined to skin. May cause more severe response if skin is abraded (scratched or cut). When dissolving, the heat produced may cause intense effects as well as thermal burns. Not classified as corrosive according to DOT. A single prolonged exposure is not a likely result in the material being absorbed through skin in harmful amounts.
	Ingestion	Single dose oral toxicity is considered to be low. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury. Ingestion may cause irritation of the mouth, throat, and gastrointestinal tract.
	Inhalation	Vapors are unlikely due to physical properties. Dust may cause irritation to upper respiratory tract.

Section 3 – First Aid

Eyes	Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel.
Skin	Wash off in flowing water or shower.
Ingestion	If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.
Inhalation	Remove to fresh air if effects occur. Consult a physician.
NOTE TO PHYSICIAN	If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Supportive care. Treatment based on judgement of the physician in response to reactions of the patients.

Section 4 – Fire Fighting Measures

Flash Point	N/A	LEL	N/A	Hazardous Combustion Products	None
Method Used	N/A	UEL	N/A	Other Flammability Information	None
Fire Fighting Media	Non-combustible				
Fire Fighting Instructions	Keep unnecessary people away; isolate hazard area and deny unnecessary entry.				
Protective Equipment for Fire Fighters	Wear positive-pressure self-contained breathing apparatus and full protective equipment.				

Section 5 – Accidental Release Measures

Protect People	Isolate and confine spill area. Spills may be a slipping hazard. Wear appropriate safety apparel during cleanup.
Protect the Environment	Losses incidental to correct applications of the product in its intended uses are not expected to be harmful to the environment. Avoid entry of large amounts of product into sewers, natural waters, and drinking water sources.
Cleanup	Spills should be collected to prevent contamination of waterways. Dike spill and recover quickly into suitable containers if reusing; or collect using absorbent material or sand. Small quantities may be flushing away with plenty of water. Walking surfaces may remain wet longer due to moisture being held by spilled product – avoid by thoroughly water washing surfaces.

Section 6 – Handling and Storage

Handling	Use cool water (temperature less than 80° F) when dissolving calcium chloride. Heat developing by solutions is very high during mixing. Leather clothing and shoes will be damaged by calcium chloride. Avoid eye and prolonged skin contact.
Storage	When exposed to the atmosphere, calcium chloride will pick up water and form a solution.

Section 7 – Exposure Controls/Personal Protection

Engineering Controls	Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.
Personal Protective Equipment	Use safety glasses. For dusty operations or when handling solutions of the material, wear chemical goggles.
Skin Protection	For brief contact, no precautions other than clean body-covering clothing should be needed. Use protective clothing impervious to this material. Selection of specific items such as faceshield, gloves, boots, apron or full-body suit will depend on operation. If skin comes in contact with contaminated clothing, remove the clothing immediately, wash skin area with soap and water and launder clothing before reuse. If hands are cut or scratched, use gloves impervious to this material even for brief exposure.
Respiratory Protection	Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator. In dusty atmospheres, use an approved dust respirator.

Section 8 – Physical and Chemical Properties

Appearance	White to off white solid pellets	Vapor Press	0.009mmHg, 70° F
Odor	None	Vapor Density	N/A
Boiling Point	388° F	Solubility in Water	Very soluble
Specific Gravity	2.2		

Section 9 – Stability and Reactivity

Chemical Stability	Stable under normal handling and storage conditions.
Conditions to avoid	See incompatibility section below.
Incompatibility with other materials	Calcium chloride will accelerate corrosion of most metals exposed to air; attack aluminum (and most of its alloys) and yellow brass; react with sulfuric acid to form hydrogen chloride which is corrosive, irritating and, reactive; give an exothermic reaction with water- reactive materials such as sodium; result in a runaway polymerization reaction with methyl vinyl ether (Bratherick, 1979); and in solutions form react with zinc (galvanizing) to yield hydrogen gas which is explosive (Ibid). (Bretherick, L., 1979. Handbook of Reactive Chemical Hazards, 2 nd Ed.)
Hazardous Decomposition Products	Not applicable
Hazardous Polymerization	Will not occur