

SECTION 1: IDENTIFICATION

Product Identifier

Product form: Liquid Substance
Product Name: **PCM-HS22P**
CAS No: 7774-34-7 for CaCl₂·6H₂O
Synonyms: Hydrated inorganic salts, Calcium Chloride Hexahydrate

Intended Use of the Product

Use of substance/mixture: Latent Heat Storage, Thermal reservoirs

Name, Address, and Telephone of the responsible Party

Name: RGEES LLC
Address: 170 Bradley Branch Rd Ste 7
Arden, NC 28704
Phone: +1.828.708.7178
Email: operations@rgees.com

Emergency Telephone Number

+1.828.708.7016 for Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident.

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS): Eye Irritant-2A

Labeling

Hazard Pictograms (GHS):



Signal Word (GHS): Warning
Hazard Statement: H319 - Causes serious eye Irritation
Precautionary Statements (GHS): P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P305 + P351 IF IN EYES - Rinse cautiously with water for several minutes.
P337 + P313 - If eye irritation persists: Get medical advice/attention.
P264 - Wash hands thoroughly after handling.

Other Hazards

Other Hazards: The product could cause minor skin irritation and dry skin.
Unknown Acute Toxicity (GHS-US): No data available

SECTION 3: COMPOSITION/ INFORMATION ON INGREDIENTS

Substance

Name	Product Identifier	%	Classification (GHS)
savENRG® PCM-HS22P	Calcium Chloride	0-100	Eye Irritant-2A

Full text of H-phrases: see section 16

Mixture

Composition			
Chemical Name	Identifiers	%	Classifications According to Regulations/Directives
Mixture of Inorganic Chemicals	CAS: 7774-34-7 EC Number: Not available	0-100	EU DSD/DPD: Not available EU CPL: Eye Irritant-2A OSHA HCS 2012: Eye Irritant

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

First-aid Measures General:	Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible). Do not rub affected area. Get immediate medical attention.
First-aid Measures After Inhalation:	Expose to fresh air if affects occur. Seek medical attention immediately.
First-aid Measures After Skin Contact:	Wash off in flowing water or shower. Remove contaminated cloth immediately. Seek medical attention.
First-aid Measures After Eye Contact:	Irrigate with flowing water immediately and continuously for 15 minutes. Seek medical attention.
First-aid Measures After Ingestion:	Wash the mouth with plenty of water. Call a physician. Never give anything by mouth or attempt to induce vomiting in an unconscious person.

Most important symptoms and effects, both acute and delayed

Symptoms/Injuries after Inhalation:	May cause irritation to respiratory tract.
Symptoms/Injuries after Skin Contact:	May cause irritation. May cause severe irritation, if skin is damp and/or abraded, or the material is confined to skin.
Symptoms/Injuries After Eye Contact:	May cause moderate to severe irritation, including corneal injury.
Symptoms/Injuries After Ingestion:	Ingestion may be harmful and may cause gastrointestinal irritation.
Chronic Symptoms:	None expected under normal conditions of use.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media:	Use extinguishing media appropriate for surrounding fire. Use Foam, dry chemicals, CO2 as extinguishing media. Summon fire department immediately.
Unsuitable Extinguishing Media:	Avoid inert adsorbents.

Special Hazards Arising From the Substance or Mixture

Fire Hazard:	Not applicable
Explosion Hazard:	Not applicable
Reactivity:	Stable and non-reactive under normal conditions of use

Advice for Firefighters

Precautionary Measures Fire:	Exercise caution when fighting any chemical fire.
Firefighting Instructions:	Shut off source of fuel if possible, and allow fire to burn out. Remove containers from fire area if this can be done without risk. Fight fire from safe distance and protected location.
Protection during Firefighting:	Do not enter fire area without proper protective equipment, including respiratory protection. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Use water spray or fog for cooling exposed containers.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures:	Keep away from heat/sparks/open flames/hot surfaces. No smoking. Do not breathe gas. Avoid contact with the skin and the eyes.
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For Non-emergency Personnel

Protective Equipment:	Use appropriate personal protection equipment (PPE).
Emergency Procedures:	Evacuate unnecessary personnel. Keep upwind.

For Emergency Responders

Protective Equipment:	Equip cleanup crew with proper protection.
Emergency Procedures:	Eliminate ignition sources. Ventilate area.

Environmental Precautions

Avoid release to the environment.

Methods and Material for Containment and Cleaning Up

For Containment:	Stop leak if safe to do so.
Methods for Cleaning Up:	Stop the source of the release, if safe to do so. Ventilate and test area before entering. Contact competent authorities after a spill.

Reference to Other Sections

See Section 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Additional Hazards When Processed:	Not applicable
Hygiene Measures:	Handle in accordance with good industrial hygiene and safety procedures. Use only outdoors or in a well-ventilated area. Do not eat, drink or smoke when using this product.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures:	Check material compatibility of the container that will be used for encapsulating the PCM. The container must be closed-sealed system.
Storage Conditions:	Protect container from physical shock. Store in a cool, dry and well-ventilated place. Keep containers tightly closed. Do not store near heat, flame, or other potential ignition sources. Do not store in unlabeled containers. Ground all equipment containing this material. All electrical equipment in areas where this material is stored or handled must meet all applicable requirements of the NFPA's National Electrical Code (NEC). Store and transport in accordance with all applicable laws.
Specific End Use(s):	Latent Heat Storage

SECTION 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION

Control Parameters

USA ACGIH	ACGIH TWA (ppm)	0
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Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed

Personal Protective Equipment: Protective goggles. Gloves. Protective clothing. Self-contained breathing apparatus.



Materials for Protective Clothing: Wear apron.

Hand Protection: Wear surgical gloves.

Eye Protection: Wear goggles/Face shield

Skin and Body Protection: Wear apron.

Respiratory Protection: Not Applicable

Thermal Hazard Protection: If material is cold, wear thermally resistant protective gloves.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Appearance: Brown / Grey colored liquid above 25° C

Odor: No Odor

Odor Threshold: No data available

pH: No data available

Relative Evaporation Rate: No data available

Melting Point: 23°C

Freezing: 22°C

Boiling Point: No data available

Flash Point: Not Applicable

Decomposition Temperature: No data available

Flammability (solid, liquid, gas): No

Vapor Pressure: No data available

Relative Vapor Density at 20°C: No data available

Relative Density: No data available

Liquid Density: 1540 kg/m³

Solid Density: 1651 kg/m³

Specific Gravity: No data available

Solubility: No data available

Partition Coefficient: No data available

Viscosity: No data available

Lower Flammable Limit: Not Applicable

Higher Flammable Limit: Not Applicable

Latent Heat: 168 kJ/kg

SECTION 10: STABILITY AND REACTIVITY

Reactivity:	Stable under normal conditions.
Chemical Stability:	Stable under recommended handling and storage conditions (see section 7).
Possibility of Hazardous Reactions:	Hazardous polymerization will not occur.
Conditions to Avoid:	None
Incompatible Materials:	Strong acids, Strong bases

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity:	Not classified
Skin Corrosion/Irritation:	Refer to section 3.
Serious Eye Damage/Irritation:	Refer to section 3.
Respiratory or Skin Sensitization:	Not classified
Germ Cell Mutagenicity:	Not classified
Carcinogenicity:	Not classified
Reproductive Toxicity:	Not classified
Specific Target Organ Toxicity (Single Exposure):	Not classified
Specific Target Organ Toxicity (Repeated Exposure):	Not classified
Aspiration Hazard:	Not classified
Symptoms/Injuries After Inhalation:	May cause irritation to respiratory tract
Symptoms/Injuries After Skin Contact:	None expected under normal conditions of use.
Symptoms/Injuries After Eye Contact:	None expected under normal conditions of use.
Symptoms/Injuries After Ingestion:	None expected under normal conditions of use.
Chronic Symptoms:	None expected under normal conditions of use.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity:	No additional information available
Persistence and Degradability:	Non-biodegradable
Bio accumulative Potential:	No additional information available
Mobility in Soil:	No additional information available
Other Adverse Effects:	Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations:	Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.
Additional Information:	Handle empty containers with care. Recycle the material as far as possible. For further information, refer to section 16.

SECTION 14: TRANSPORTATION INFORMATION

DOT:	Not Classified as Dangerous Goods
IMDG:	Not Classified as Dangerous Goods
IATA:	Not Classified as Dangerous Goods

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

OSHA Hazards HCS 2012:	Eye Irritant 2-A
SARA Section 311/312 Hazard Class:	Not Applicable
TSCA Inventory Listing:	<u>Components</u> <u>CAS-No.</u>
	Calcium Chloride 7774-34-7

US State Regulations

U.S. – Delaware:	Accidental Release Prevention Regulations - Sufficient Quantities, Pollutant Discharge Requirements - Reportable Quantities, Volatile Organic Compounds Exempt from Requirements
U.S. – Massachusetts:	Right To Know List, Volatile Organic Compounds Exempt From Requirements
U.S. – Minnesota:	Hazardous Substance List
U.S. – New Jersey:	Discharge Prevention - List of Hazardous Substances, Environmental Hazardous Substances List, Excluded Volatile Organic Compounds, Right to Know Hazardous Substance List, Special Health Hazards Substances List, TCPA - Extraordinarily Hazardous Substances (EHS)
U.S. – Ohio:	Accidental Release Prevention - Threshold Quantities
U.S. – Oregon:	Permissible Exposure Limits - TWAs
U.S. – Pennsylvania:	RTK (Right to Know) List
U.S. – Texas:	Effects Screening Levels - Long Term, Effects Screening Levels - Short Term

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF LAST REVISION

Revision Date	05/01/2018 459R8
Other Information	This document has been prepared in accordance with the SDS requirements of the GHS and OSHA Hazard Communication Standard 29 CFR 1910.1200
GHS Full Text Phrases:	
H319	Causes eye irritation