

## SECTION 1: IDENTIFICATION

### Product Identifier

Product form: Liquid Substance  
 Product Name: **PCM-OM18P**  
 CAS No: Not available

### 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

REGULATION (EC) No 1272/2008

Classification: Not classified

### Labeling

Hazard Pictograms (GHS): No hazard pictogram GHS required  
 Signal Word: N/A  
 Hazard Statement: N/A  
 Precautionary Statements: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.  
 No Smoking  
 P220 - Keep away from clothing and other combustible materials  
 P402+ P404 - Store in a dry place. Store in a closed container  
 P312 - Call a POISON CENTER/doctor if you feel unwell  
 P501 - Dispose of contents/ container in accordance with local/regional/national and international regulations.  
 Supplemental Hazard Statements: N/A

## SECTION 3: COMPOSITION/ INFORMATION ON INGREDIENTS

### Substance

Name	Product Identifier	%	Classification (GHS)
savENRG® PCM-OM18P	Not available	100	N/A

### Mixture

N/A

## SECTION 4: FIRST AID MEASURES

### Description of First Aid Measures

General information:	Never give anything by mouth to the unconscious person. If you feel unwell, seek medical advice (show the label where possible). Do not rub the affected area.
Following Inhalation:	Expose to fresh air if affects occur. Seek medical attention immediately.
Following Skin Contact:	Wash off in flowing water or shower. Remove contaminated cloth immediately. Seek medical attention.
Following Eye Contact:	Irrigate with flowing water immediately and continuously for 15 minutes. Seek medical attention.
Following 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

Treatment:	If you feel unwell, seek medical advice (show the label where possible).
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## SECTION 5: FIRE-FIGHTING MEASURES

### Extinguishing Media

Suitable Extinguishing Media:	Use extinguishing media appropriate for surrounding fire. Use Dry powder, Foam, Carbon dioxide (CO <sub>2</sub> ). Summon fire department immediately.
Unsuitable Extinguishing Media:	Avoid inert adsorbents.

### Special Hazards Arising from the Substance or Mixture

Fire Hazard:	When heated to decomposition may produce irritant fumes. Remove from vicinity containers NOT involved in fire.
Explosion Hazard:	Under explosion, the material will be flammable.
Reactivity:	Avoid contact with oxidizing materials.

### 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 7, 8, and 13.

## SECTION 7: HANDLING AND STORAGE

### Precautions for Safe Handling

Additional Hazards When Processed: Risk of explosion if heated under confinement.  
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.  
Fire and protection regulations: Risk of explosion if heated under confinement. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Use only non-sparking tools.

### 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

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ECHA (European union OEL), ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL). Please follow national occupational exposure limits.

### Exposure controls

General measures: Handle in accordance with good industrial hygiene and safety procedures  
Appropriate engineering controls: Use explosion proof equipment. Proper grounding procedures to avoid static electricity should be followed. Gas detectors should be used when flammable gases/vapors may be released. 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

Eye/face protection:	Safety eyewear/face shields complying with an approved standard (European Standard EN 166) should be used if the product is sprayed or when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. E.g. chemical goggles or safety glasses.
Hand protection:	chemical-resistant, impervious gloves complying with an approved standard (European standard EN374) should be worn at all times when handling chemical products if the risk assessment indicates this is necessary.
Other body protection:	wear suitable protective clothing. Wear fire/flamm resistant/retardant clothing. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection:	Use an approved (European standard EN143) air purifying respirator in case of high workplace concentrations. In case of emergency or unknown concentrations: wear self-breathing apparatus.
Thermal hazards:	If material is cold, wear thermally resistant protective gloves.

## Environmental exposure controls

No information available

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid; 25 °C
Appearance:	Clear liquid at room temperature
Color:	Clear
Odor:	Waxy
Odor Threshold:	No data available
pH:	No data available
Relative evaporation rate:	No data available
Melting point:	19°C
Freezing point:	17°C
Initial boiling point and boiling range:	252 - 254 °C
Flash point:	113 °C; 1.009,8 hPa
Decomposition Temperature:	No data available
Auto-ignition Temperature:	not auto-flammable
Flammability (solid,liquid, gas):	not classified
Relative vapor pressure:	ca. 1,9 hPa; 20 °C; NF T 20-048, ca. 16,4 hPa; 50 °C; NF T 20-048
Relative Vapor Density at 20°C:	No data available
Relative Density:	No data available
Liquid Density:	763 kg/m <sup>3</sup>
Solid Density:	820 kg/m <sup>3</sup>
Specific Gravity:	No data available
Solubility:	Insoluble in water, Soluble in organic solvents
Partition Coefficient:	log Pow: 7; Calculated according to EPA
Viscosity, kinematic:	2,1 mm <sup>2</sup> /s; 40 °C
Lower/Higher Flammable Limit:	No data available
Latent heat:	215 kJ/kg

## SECTION 10: STABILITY AND REACTIVITY

Reactivity:	Stable under recommended storage conditions.
Chemical Stability:	Stable under recommended handling and storage conditions.

Hazardous reactions:	May explode if heated. Hazardous polymerization will not occur.
Conditions to avoid:	Incompatible materials, sparks, heat, open flame, and other sources of ignition
Materials to avoid:	Strong oxidizers
Hazardous Decomposition Products:	Carbon oxides (CO, CO <sub>2</sub> )

## SECTION 11: TOXICOLOGICAL INFORMATION

### Information on Toxicological Effects

Acute Toxicity:	LD50 Rat: > 5000 mg/kg; OECD Test Guideline 401 (literature value); Category approach; Based on available data, the classification criteria are not met.
Skin Corrosion/Irritation:	Rabbit: not irritating; OECD Test Guideline 404 (literature value); Category approach; Based on available data, the classification criteria are not met.
Serious Eye Damage/Irritation:	Rabbit: not irritating; OECD Test Guideline 405 (literature value); Category approach; Based on available data, the classification criteria are not met.
Respiratory or Skin Sensitization:	Maximisation Test Guinea pig: not sensitizing; OECD Test Guideline 406 (literature value); Category approach Patch-Test Human: not sensitizing (literature value); Category approach; Based on available data, the classification criteria are not met.
Germ Cell Mutagenicity:	Genotoxicity in vitro: In vitro tests did not show mutagenic effects; Category approach Genotoxicity in vivo: In vivo tests did not show mutagenic effects; Category approach; Based on available data, the classification criteria are not met.
Carcinogenicity:	Rat; Inhalation; OECD Test Guideline 453 (literature value); Animal testing did not show any carcinogenic effects; Category approach; Based on available data, the classification criteria are not met.
Reproductive toxicity:	Rat; Oral; OECD Test Guideline 422; Fertility and developmental toxicity tests did not reveal any effect on reproduction. The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Two-generation reproductive toxicity; OECD Test Guideline 416 Testing proposal; Based on available data, the classification criteria are not met.
Teratogenicity:	Rat; Inhalation; OECD Test Guideline 414 (literature value); Fertility and developmental toxicity tests did not reveal any effect on reproduction. Category approach; Based on available data, the classification criteria are not met.
Specific Target Organ Toxicity (Single Exposure):	Not classified
Specific Target Organ Toxicity (Repeated Exposure):	Not classified
Aspiration Hazard:	May be fatal if swallowed and enters airways.

### Relevant Toxicological data

Toxicological information:	Toxicokinetics The substance is poorly absorbed via skin. The substance is readily absorbed by ingestion and inhalation. The substance is metabolized and excreted. The substance is rapidly eliminated from the body.
Acute inhalation toxicity:	LC50 Rat: > 5 mg/l; 8 h; OECD Test Guideline 403; Test atmosphere: vapor (literature value); Category approach; Based on available data, the classification criteria are not met.
Acute dermal toxicity:	D50 Rabbit: > 5.000 mg/kg; OECD Test Guideline 402 (literature value); Category approach; Based on available data, the classification criteria are not met.

### Delayed or immediate effects as well as chronic effects from short and long term exposure

Symptoms/Injuries After Inhalation:	May cause irritation to respiratory tract
Symptoms/Injuries After Skin Contact:	Repeated exposure may cause skin dryness or cracking.
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.

## Information on other hazards

Endocrine disrupting properties: Not listed

## SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish: LL50 (96 h) Oncorhynchus mykiss (rainbow trout): > 10 - 100 mg/l ; semi-static test; OECD Test Guideline 203 (literature value); Category approach

Toxicity to fish - Chronic toxicity: NOEL (28 d) Oncorhynchus mykiss (rainbow trout): > 100 mg/l; Growth rate; QSAR

Toxicity to daphnia and other aquatic invertebrates: EL50 (48 h) Daphnia magna (Water flea): > 100 mg/l ; static test; (literature value)  
LL50 (96 h) Chaetogammarus marinus: > 100 mg/l ; semi-static test; (literature value)

Toxicity to daphnia and other aquatic invertebrates - Chronic toxicity: NOEL (21 d) Daphnia magna (Water flea): > 100 mg/l; reproduction rate; QSAR

Toxicity to aquatic plants: EL50 (72 h) Pseudokirchneriella subcapitata (microalgae): > 100 mg/l ; Growth inhibition; OECD Test Guideline 201; (literature value); Category approach  
EL50 (72 h) Skeletonema costatum (marine diatom): > 100 mg/l ; Growth inhibition; (literature value)

Toxicity to bacteria: The study is not necessary. Justification: Readily biodegradable. The substance is not to be considered to be inhibitory to bacteria.

Toxicity to soil dwelling organisms: The study is not necessary. Justification: The substance does not pose a chronic hazard to soil organisms. (calculated)

Toxicity for other terrestrial non-mammalian fauna: The study is not necessary. Justification: Studies on birds do not need to be conducted due to large mammalian dataset. Absence of toxicity in aquatic organisms and mammals

Persistence and Degradability: Readily biodegradable.; > 60 %; 28 d; aerobic; OECD Test Guideline 301F

Bio accumulative Potential: Bioconcentration factor (BCF): 962; calculated (literature value)

Mobility in Soil: Adsorption/desorption (soil); Koc: 758578; log Koc: 5,88; calculated Immobile

Results of PBT and vPvB assessment: This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

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, and international regulations.

Packaging disposal: Handle empty containers with care. Recycle the material as far as possible.

Sewage disposal-relevant information: No information available

## SECTION 14: TRANSPORTATION INFORMATION

UN number: ADR/RID/IMDG/IATA - Not dangerous goods

Proper shipping name: ADR/RID/IMDG/IATA - Not dangerous goods

Transport hazard class: ADR/RID/IMDG/IATA - Not dangerous goods

Packing group: ADR/RID/IMDG/IATA - Not dangerous goods

Environmental hazards: ADR/RID/IMDG/IATA - Not dangerous goods

Special precautions for user: ADR/RID/IMDG/IATA - Not dangerous goods

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Ship type: 3

Pollution category: Y

Remarks: MARPOL NAME: n-Alkanes (C10+)

## SECTION 15: REGULATORY INFORMATION

**EU Regulations:**

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

COMMISSION REGULATION (EU) No 348/2013 of 17 April 2013 amending Annex XIV to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (Text with EEA relevance)

**Chemical safety assessment:**

No information available.

## SECTION 16: OTHER INFORMATION, INCLUDING DATE OF LAST REVISION

Revision Date	09/16/2021 652R1
Other Information	This Safety Data Sheet complies with the requirements of Regulation (EC) No. 1907/2006 The information given here is meant as a guide to determining suitability of our products for the stated applications. It is based on trials carried out by our laboratories and data selected from literature and shall in no event be held to constitute or imply any warranty. The products are intended for use in industrial applications. The users should test the materials before use and satisfy themselves with regard to contents and suitability in the desired application. Our formal specifications define the limits of our commitment. Recommendation herein may not be construed as freedom to infringe/operate under any third party patents. In the event of a proven claim, our liability is limited only to replacement of our material and in no case shall we be liable for special, incidental or consequential damages arising out of usage of our material. This datasheet is subject to change without notice.