

MATERIAL SAFETY DATA SHEET



PRODUCT NAME: BioPCM™ - 49Q
MANUFACTURER: Phase Change Energy Solutions
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Asheboro, NC

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For questions regarding this product, first call [1-800-283-7887](tel:1-800-283-7887)

If it is an emergency and there is no response, please contact the following:

For emergencies in the US and Canada, call CHEMTREC day or night at [800-424-9300](tel:800-424-9300)

For emergencies outside the US and Canada call CHEMTREC day or night at [703-527-3887](tel:703-527-3887)

COMPOSITION/ INFORMATION ON INGREDIENTS

CAS #: Trade Secret

COMPONENT: Proprietary Blend of Emulsifiers, Gelling agents, Fatty Acids, Fatty Alcohols, Fatty Esters, and their derivatives.

HAZARDS IDENTIFICATION

GHS label elements, including precautionary statements

PICTOGRAM:

SIGNAL WORD: Warning

CLASSIFICATION: Classified as non-hazardous to humans and environment

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS):

HEALTH: 0 FLAMMABILITY: 1 REACTIVITY: 0

FIRST AID

SKIN CONTACT: No skin irritation can be expected from short-term contact. Prolonged contact may lead to redness and irritation. Wash skin with soap and water upon contact. If skin irritation occurs, seek medical advice/attention.

EYE CONTACT: Possible Redness; irritation. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do, and continue rinsing. If eye irritation persists, seek medical advice/attention

INHALATION: No irritation can be expected from short and medium term exposure. Remove source of contamination or move victim to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately.

INGESTION: May cause gastrointestinal irritation. Rinse mouth and do NOT induce vomiting. If vomiting occurs, keep head lower than hips to help prevent aspiration.

FIRE FIGHTING

This Product is packaged in different formats to meet the requirements of the ASTM E84 test for the following classes:

1. Plenum: Flame Spread 0-25; smoke-developed 0-50
2. Class A: Flame Spread 0-25; smoke-developed 0-450
3. Class B: Flame Spread 26-75; smoke-developed 0-450
4. Class C: Flame Spread 76-200; smoke-developed 0-450

HAZARDOUS PRODUCTS OF COMBUSTION: Upon decomposition, this product emits carbon dioxide and/or low molecular weight hydrocarbons.

PROPERTIES THAT COULD INCREASE FIRE OR EXPLOSION HAZARD: Combustible when exposed to heat or flame

EXTINGUISHING MEDIA: Water, Foam, dry chemical, or Carbon Dioxide.

FIRE FIGHTING INSTRUCTIONS: Firefighters should wear full protective clothing including self contained breathing apparatus.

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATING:

HEALTH: 0 FLAMMABILITY: 1 REACTIVITY: 0 PERSONAL PROTECTION: D

ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Avoid contact with eyes. If a mist or vapor is generated, an appropriate NIOSH/MSHA approved respirator should be used. .

ENVIRONMENTAL PRECAUTIONS: Minimize contamination of drains, surface, and ground waters.

METHODS FOR CLEANING UP SPILLS: Absorb with inert material, such as sand or dry earth, and put spilled material in appropriate container for disposal.

HANDLING & STORAGE

HANDLING No special personal protection is required under normal handling conditions.

STORAGE: No special storage is required. Keep away from heat, sparks, or open flames.

SAFE STORAGE/TRANSPORT PRESSURE: Ambient

EXPOSURE CONTROLS/ PERSONAL PROTECTION

EXPOSURE LIMITS: No exposure limits have been established for this product.

EXPOSURE GUIDELINES: Wash hands or the exposed area with warm water and soap

VENTILATION: No respiratory protection is required under normal handling conditions

PERSONAL PROTECTIVE EQUIPMENT:

SKIN/BODY PROTECTION: No special personal protection is required under normal handling conditions.

EYE PROTECTION: No eye protection is required under normal handling conditions.

ENGINEERING MEASURES: No special engineering measures are needed.

PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE: Colorless liquid (above melting point)

ODOR: Mild Odor

pH: Not applicable

MELTING POINT: 49°C (120.2°F)

BOILING POINT: >190°C (374°F)

FLASH POINT: 170°C (338°F) -Pensky-Marten Closed Cup

EVAPORATION RATE: N/A

VAPOR PRESSURE @ 43°C (68°F): <0.01 mm Hg

VAPOR DENSITY (Air=1): Not available

RELATIVE DENSITY, g/cm³: 0.80- 0.82 @ 60°C (140 °F)

UPPER FLAMMABILITY LIMIT (UFL): N/A

LOWER FLAMMABILITY LIMIT (LFL): N/A

SOLUBILITY IN WATER: insoluble

AUTO-IGNITION TEMPERATURE: does not ignite

VISCOSITY: Viscous, thick gel

EXPLOSION LIMITS: Doesn't contain explosive properties

OXIDATION PROPERTIES: Doesn't contain oxidizing properties

CHEMICAL STABILITY & REACTIVITY INFORMATION

REACTIVITY: Not a self-reactive substance

CHEMICAL STABILITY: Stable under normal temperatures and pressure

CONDITIONS TO AVOID: Heat, flames, sparks and other sources of ignition

MATERIALS TO AVOID: Incompatible materials/oxidizing agents and strong bases

HAZARDOUS REACTIONS: Will not polymerize

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition will evolve carbon dioxide and/or low molecular weight hydrocarbons which may include irritant vapors

THERMAL DECOMPOSITION PRODUCTS: Oxides of carbon and water

TOXOLOGICAL INFORMATION

EYE EFFECTS: No significant eye irritation can be expected from contact with this product.

SKIN EFFECTS: No skin irritation can be expected from single short-term exposure to this product. Prolonged or repeated contact may produce some irritation.

INGESTION: This product may be harmful if it is swallowed.

INHALATION EFFECTS: Dusts of this product may cause irritation of the nose, throat, and respiratory tract.

SUBCHRONIC EFFECTS: No known effects.

CHRONIC EFFECTS:

MUTAGENICITY: No data available for this product.

TERATOLOGY: No data available for this product.

CARCINOGENICITY: Not listed by: ACGIH, IARC, NTP, DFG or OSHA

CHEMICAL NAME DATA AGENCY: No limits established for this product.

REPRODUCTIVE TOXICITY: Not Listed in U.S. TRI Developmental Toxin and U.S. TRI Developmental Toxin

ECOLOGICAL INFORMATION

AQUATIC TOXICITY: No data available

ECOTOXICOLOGICAL INFORMATION: No data available

BIOLOGICAL OXYGEN DEMAND (BOD5): No data available

CHEMICAL OXYGEN DEMAND (COD): No data available

OTHER ADVERSE EFFECTS: No data available

MOBILITY IN SOIL: Immobile

DISPOSAL CONSIDERATIONS

Disposal method should be in accordance with local, state, national environment laws and regulations.

TRANSPORT INFORMATION

DOT SHIPPING INFORMATION

PROPER SHIPPING NAME: Non-hazardous material

PACKING GROUP: Not applicable

SHIPPING NAME, IF RQ SHIPMENT: Not applicable

EMERGENCY RESPONSE GUIDEBOOK: Not available

LAND TRANSPORT ADR/RID/ADN: Not classified

U.S. DOT INFORMATION: Not classified

UN/NA NUMBER: Not applicable

MARINE POLLUTANT: None

REPORTABLE QUANTITY (RQ lbs):

No reportable quantity for this product

IATA/ICAO: Non-hazardous material

IMO: Non-hazardous material

REGULATORY INFORMATION

GHS CLASSIFICATION: Not classified as hazardous material to human or environment

U.S. FEDERAL REGULATIONS: No product components are listed under: CERCLA (40 CFR 302.4) and SARA Sections: 302 (40 CFR 355), 311/312 (40 CFR 370.21), 313 (40 CFR 372.65)

CHEMICAL INVENTORY LISTING:

Europe (EINECS): Compliant

USA (TSCA): Compliant

Canada (DSL): Compliant

Australia (AICS): Compliant

Japan (ENCS): Compliant

China (IECSC): Compliant

Korea (ECL): Compliant

Philippines (PICCS): Compliant