

Material SAFETY DATA SHEET

(M.S.D.S)

PAC – LV / HV

Section 1: Product Identification

Product Use: Drilling Mud Additive
Synonyms: PAC; CMC
Product CAS No.: Mixture
Formula: $[C_6H_7O_2(OH)_2COONa]_n$
Main Compositions: Carboxymethyl Cellulose

Synonyms: PAC-LV, PAC-HV

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Section 2: Composition/Information on Ingredients

COMPONENT	CAS NUMBER	AMOUNT	EINECS	SYM	R-PHRASES
Proprietary	Proprietary	100% Weight	EXEMPT	NA	NA

Occupational Exposure Limits:

Component	Limit	TWA	STEL	Ceiling/peak	Notation
Proprietary	CPCHEM	Not Established	NA	NA	NA

Section 3: Hazards Identification

EMERGENCY OVERVIEW

Off-White powder: DUST MAY PRODUCE MECHANICAL IRRITATION TO THE MUCOUS MEMBRANES OF THE EYES, NOSE, AND THROAT AND UPPER RESPIRATORY TRACT

IMMEDIATE HEALTH EFFECTS:

Eye: Not expected to cause prolonged or significant eye irritation. Material is dusty and may scratch the surface of the eye.

Skin: Contact with the skin is not expected to cause prolonged or significant irritation. Not expected to be harmful to internal organs if absorbed through the skin.

Ingestion: Not expected to be harmful if swallowed.

Inhalation: The dust from this material may cause respiratory irritation.

Section 4: First Aid Measures

Eye: Flush eyes with running water immediately while holding the eyelids open. Remove contact lenses, if worn, after initial flushing, and continue flushing for at least 15 minutes. Get medical attention if irritation persists.

Skin: To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse. Get medical attention if any symptoms develop.

Ingestion: If swallowed, do not induce vomiting. Give the person a glass of water or milk to drink and get immediate medical attention. Never give anything by mouth to an unconscious person.

Inhalation: Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue.

Section 5: Fire Fighting Measures

FIRE CLASSIFICATION:

Classification: Not flammable or combustible. This material will burn although it is not easily ignited.

NFPA RATINGS:

Health: 0

Flammability: 0

Reactivity: 0

FLAMMABLE PROPERTIES:

Flashpoint: NDA

Autoignition: 280 °C (536 °F)

Flammability (Explosive) Limits (% by volume in air):

Lower: NDA

Upper: NDA

EXTINGUISHING MEDIA:

Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions:

Material will not burn unless preheated. Clear fire area of all non-emergency personnel. Only enter confined fire space with full gear, including a positive pressure, approved, self-contained breathing apparatus. Cool surrounding equipment, fire-exposed containers and structures with water. Container areas exposed to direct flame contact should be cooled with large quantities of water (500 gallons water per minute flame impingement exposure) to prevent weakening of container structure.

Combustion Products:

Combustion may form: Carbon Oxides

Section 6: Accidental Release Measures

Protective Measures:

Wear appropriate personal protective equipment when cleaning up spills. Refer to Section 8.

Spill Management:

Avoid creating dust clouds. Shovel, sweep up or use industrial vacuum cleaner to pick up. Place in container for proper disposal. Clean up spills immediately, observing precautions in Exposure Controls/Personal Protection section. Reduce airborne dust and prevent scattering by moistening with water.

Reporting:

U.S.A. regulations require reporting spills of this material that could reach any surface waters. Report spills to local authorities and/or the National Response Center at (800) 424-8802 as appropriate or required.

Section 7: Handling and Storage

READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL. REFER TO PRODUCT LABEL OR MANUFACTURERS TECHNICAL BULLETINS FOR THE PROPER USE AND HANDLING OF THIS MATERIAL.

Precautionary Measures:

Use caution to avoid creation of dusts and to prevent inhalation of product dust (fines). Avoid contact with product dust. Airborne dust concentrations above 20 mg/l may create a dust explosion hazard. Avoid breathing vapors or fumes which may be released during thermal processing. Do not breathe dust at levels above the recommended exposure limits. Avoid breathing material. Keep container closed. Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Discard contaminated clothing and shoes or thoroughly clean before reuse. Do not breathe dust.

Static Hazard:

Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations, which have the potential of generating an accumulation of electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids, National Fire Protection Association (NFPA 77), Recommended Practice on Static Electricity' (liquids, powders and dusts), and/or the American

Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents' (liquids).

General Storage Information:

Treat as a solid that can burn. Store away from oxidizing materials, in a cool, dry place with adequate ventilation. Bond and ground transfer equipment. DO NOT USE OR STORE near heat, sparks or open flames. USE AND STORE ONLY IN WELL VENTILATED AREA. Keep container closed when not in use.

Container Warnings:

Containers, even those that have been emptied, can contain residues of dusts or solid particulates which may create both health and fire/explosion hazards.

Section 8: Exposure Controls/ Personal Protection:

GENERAL CONSIDERATIONS:

Consider the potential hazards of this material (see Section 3) applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:

If heated material generates vapor or fumes, use process enclosures, local exhaust ventilation, or other engineering controls to control exposure.

PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face Protection:

Wear eye-protection such as safety glasses, chemical goggles, or face shields if engineering controls or work practices are not adequate to prevent eye contact.

Skin Protection:

Wear impervious protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted. Users

should determine acceptable performance characteristics of protective clothing. Consider physical requirements and other substances present when selecting protective clothing. Suggested materials for protective gloves include: Nitrile Rubber

Respiratory Protection: If user operations generate harmful levels of airborne material that is not adequately controlled by ventilation, wear a NIOSH approved respirator that provides adequate protection. Use the following elements for air-purifying respirators: Air-Purifying Respirator for Dusts and Mists

Section 9: Physical and Chemical Properties:

APPEARANCE AND ODOR:	Off-White/ Light Yellow powder or granules.
pH:	7 - 10
VAPOR PRESSURE:	NA
VAPOR DENSITY (AIR=1):	NA
BOILING POINT:	NA
SOLUBILITY (in water):	Soluble.
DENSITY:	1.5 g/cm ³

Section 10: Stability and Reactivity:

Chemical Stability:

This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Conditions to Avoid: No Data Available

Incompatibility With Other Materials: No data available

Hazardous Decomposition Products: Carbon Oxides.

Hazardous Polymerization: Hazardous polymerization will not occur.

Section 11: Ecological Information:

IMMEDIATE HEALTH EFFECTS:

Acute Oral Toxicity: LD50 / rat / 15000 - 27000 mg/kg

Acute Dermal Toxicity: LD50 / not known

Acute Inhalation Toxicity: LC50 / not known

Eye Irritation: This material is not expected to be irritating to the eyes.

Skin Irritation: This material is not expected to be irritating to the skin.

ADDITIONAL TOXICOLOGY INFORMATION:

The toxicological properties of this product have not been tested or have not been tested completely and its handling or use may be hazardous. EXERCISE DUE CARE.

Long-term exposure to high dust concentrations may cause non-debilitating lung changes.

Section 12: Ecological Considerations:

ECOTOXICITY:

The toxicity of this material to aquatic organisms has not been evaluated. Consequently, this material should be kept out of sewage and drainage systems and all bodies of water.

ENVIRONMENTAL FATE:

The environmental fate of this material is not available.

Section 13: Transport Information:

The description shown may not apply to all shipping situations. Consult appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

Shipping Descriptions per regulatory authority:

US DOT

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION

ICAO / IATA

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION

IMO / IMDG

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION

RID / ADR

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION

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