



HENAN DONGYU CHEMICAL TECHNOLOGY CO., LTD

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SAFETY DATA SHEET (SDS)

Drilling Fluid Encapsulating Polymer – PHPA

SDS No.: DY-PHPA • Version: 1.2 • Revision date: 2025-09-18

Contents

SECTION 1. Identification of the substance and of the company/undertaking

Product identifier	PHPA (Partially Hydrolyzed Polyacrylamide)
Synonyms	Poly(acrylamide-co-sodium acrylate); PHPA powder/emulsion (grade-dependent)
CAS number	9003-05-8 (polyacrylamide polymer)
Recommended use	Encapsulating/shale-stabilizing polymer for water-based drilling fluids (WBM)
Restrictions on use	Not for food, drug or household applications
Supplier	HENAN DONGYU CHEMICAL TECHNOLOGY CO., LTD
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SECTION 2. Hazards identification

- GHS/CLP: Not classified as hazardous.
- Combustible dust: Finely divided polymer may form explosive dust–air mixtures; minimize dust and ignition sources.
- Other hazards: Hygroscopic; slippery when wet.

SECTION 3. Composition / information on ingredients

Component	CAS No.	EC No.	Content	Note
PHPA (polyacrylamide, partially hydrolyzed)	9003-05-8	—	≥ 90–100%	Polymer; not classified
Residual acrylamide (impurity)	79-06-1	201-173-7	ppm-level	Controlled by supplier COA

Note (powder grade): typical moisture ≤7%; recommended shelf life 24 months (cool, dry, sealed).

Alternative supply form (inverse emulsion):

Component	CAS No.	Content	Note
PHPA (active)	9003-05-8	30–60%	Grade-dependent
Water	7732-18-5	Balance	—
Emulsifiers/inert matrix	—	Balance	Non-hazardous components

SECTION 4. First aid measures

- Eyes: Rinse cautiously with water for several minutes; remove contact lenses if present. Seek medical advice if irritation persists.
- Skin: Wash with soap and water; launder contaminated clothing before reuse.
- Inhalation: Move to fresh air; if symptoms occur, get medical attention.
- Ingestion: Rinse mouth. Do NOT induce vomiting.

SECTION 5. Firefighting measures

- Extinguishing media: water spray, foam, dry chemical or CO₂.
- Specific hazards: combustible dust; slippery residues after water application.
- Firefighters: self-contained breathing apparatus.

SECTION 6. Accidental release measures

- Avoid dust; provide ventilation; eliminate ignition sources. Vacuum or carefully sweep; avoid dry sweeping; wet-clean as appropriate; prevent entry to drains.

SECTION 7. Handling and storage

- Minimize dust; ground/bond equipment; store cool, dry, ventilated; protect from moisture; keep away from strong oxidizers.

SECTION 8. Exposure controls / personal protection

- Exposure limits: none specific; guidance — total dust <10 mg/m³; respirable <3 mg/m³. PPE: safety glasses; gloves; N95/FFP2 if dusty.

SECTION 9. Physical and chemical properties

Property	Value
Appearance	White to light- yellow powder or emulsion
Odor	Odorless to slight
pH (1% soln)	7–9
Bulk density (powder)	0.4–0.9 g/cm ³ (typical)
Solubility	Soluble in water; forms viscous solution/gel
Auto- ignition	Not determined

SECTION 10. Stability and reactivity

- Stable under normal conditions. Avoid dust/moisture/heat/ignition sources. Incompatible with strong oxidizers. Decomposition: CO/CO₂; NO_x at high temperature.

SECTION 11. Toxicological information

- Low acute toxicity expected. Dust may cause mechanical irritation of eyes/airways. Residual monomer (acrylamide) controlled at low ppm levels.

SECTION 12. Ecological information

- Not expected to bioaccumulate; inherently biodegradable over time. Avoid uncontrolled releases.

SECTION 13. Disposal considerations

- Dispose according to local regulations. Do not discharge to drains.

SECTION 14. Transport information

- Not regulated as dangerous goods under ADR/IMDG/IATA.

SECTION 15. Regulatory information

- Inventories: TSCA polymer exempt/listed; EU REACH: polymer (no registration); Canada DSL: listed; China IECSC: existing.

SECTION 16. Other information

Issue date: 2025-09-18 • Supersedes: N/A (new formatted release)

Abbreviations: PHPA=Partially Hydrolyzed Polyacrylamide; WBM=Water-Based Mud;
OEL=Occupational Exposure Limit.

Disclaimer: Information believed accurate as of issue date but not exhaustive; users must ensure suitability and compliance.