



# NEWAY SINOPHC TECH. LIMITED

ADD:RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI) PILOT FREE TRADE ZONE.  
Email:marketing01@newayphc.com; Phone:+86-021-50350029 <https://www.newayphc.com>

## Safety Data Sheet (MSDS)

(According to GB/T 16483, GB/T 17519; Adapts to GHS, IMDG, IATA Standards)

### SECTION 1: Identification

#### 1.1 Product Identifiers

- Product Name: Hydroxypropyl Methyl Cellulose (HPMC)
- Product Number: HPMC-20260226
- Brand: SIGALD
- CAS-No.: 9004-65-3

Synonyms: Hypromellose; HPMC; Methyl hydroxypropyl cellulose

#### 1.2 Details of the supplier of the safety data sheet

- Company : NEWAY SINOPHC TECH. LIMITED
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- Telephone : +86-021-50350029
- Fax : +86-021-50350029

#### 1.3 Emergency telephone

Emergency Phone # : +86-021-50350029  
(CHEMTREC)

#### 1.4 Uses & Restrictions

- **Identified Uses:** Thickener, binder, emulsifier, film-former, water retention agent for construction, pharmaceuticals, cosmetics, food, coatings and adhesives
- **Uses Advised Against:** Inhalation of large amounts of dust; use in high-temperature aqueous systems (>80°C, gelation) without proper formulation

### SECTION 2: Hazards Identification

2.1 GHS Classification: Eye irritation (Category 2A); Specific target organ toxicity (single exposure) - respiratory tract (Category 3, dust only)2.2 GHS Label Elements

- Hazard Pictogram: GHS07 (Exclamation mark)
- Signal Word: Warning
- Hazard Statements: H319 (Causes serious eye irritation), H335 (May cause respiratory irritation)
- Precautionary Statements: P264, P280, P305+P351+P338, P337+P313, P2612.3 Physical/Chemical Hazards: Non-combustible; non-explosive; forms gel in hot water (>80°C); no hazardous reactions under normal use; dust may form explosive mixtures with air in high concentrations2.4 Health Hazards: Mild eye irritation; dust inhalation causes temporary respiratory irritation/cough; no skin irritation, oral or dermal toxicity; no chronic health effects2.5 Environmental Hazards: Negligible aquatic toxicity; fully biodegradable; no bioaccumulation; no environmental harm to soil and water organisms

### SECTION 3: Composition/Information on Ingredients

- **Substance/Mixture:** Pure Substance (modified cellulose)
- **Main Component:** Hydroxypropyl Methyl Cellulose (CAS:9004-65-3)



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- **Formula:**  $(C_6 H_{10} O_5)_n \cdot (C_3 H_7 O)_x \cdot (CH_3 O)_y$

- **Molecular Weight:** 10,000-1,000,000 Da

- **Hazardous Ingredients:** None

## SECTION 4: First Aid Measures

- **Inhaled (Dust):** Move to fresh air; allow victim to rest; drink water to soothe throat; consult a physician if coughing or shortness of breath persists.

- **Skin Contact:** Rinse skin with running water for 3-5 minutes; remove contaminated clothing and wash before reuse. No special treatment required.

- **Eye Contact:** Hold eyelids open and rinse thoroughly with running water for 10-15 minutes; consult an ophthalmologist if irritation, redness or blurriness remains.

- **Swallowed:** Rinse mouth with water; no special treatment required (non-toxic); seek medical advice only for large ingestions with gastrointestinal discomfort (rare).

## SECTION 5: Firefighting Measures

- **Suitable Extinguishing Media:** Water spray, foam, CO<sub>2</sub>, dry powder

- **Special Hazards:** Non-combustible; no hazardous combustion products; carbon monoxide and carbon dioxide may form at extreme high temperatures (>600°C); dust cloud may ignite if exposed to open flame

- **Firefighter Protection:** Wear standard fire-fighting gear; positive pressure SCBA and full chemical suit if dust cloud is present; cool containers with water spray

## SECTION 6: Accidental Release Measures

- **Personal Precautions:** Wear safety goggles, nitrile gloves and N95 dust mask for large spills; eliminate all ignition sources (dust explosion risk); ensure good ventilation.

- **Cleanup Methods:** Sweep up powder with inert material (sand/vermiculite) and transfer to sealed HDPE containers; use wet cleaning methods to prevent dust dispersion; do not blow dust with compressed air.

- **Environmental Precautions:** No special measures; HPMC is biodegradable; small spills can be left to biodegrade in soil; avoid direct discharge to waterways in large amounts.

## SECTION 7: Handling and Storage

- **Handling:** Operate in well-ventilated area; use dust collection system for bulk processing; avoid dust inhalation and eye contact; add powder to cold water for dissolution (not water to powder); wear PPE for bulk handling.

- **Storage Conditions:** Cool, dry, well-ventilated warehouse ( $\leq 30^\circ\text{C}$ ); store in sealed HDPE drums/bags; avoid direct sunlight, high humidity and high temperature; keep away from strong oxidizers and acids.

- **Incompatibilities:** Strong mineral acids, strong oxidizing agents, high temperature (>80°C for aqueous solutions)

- **Shelf Life:** 24 months (unopened, specified conditions); 6 months after opening (seal tightly to prevent moisture absorption)

## SECTION 8: Exposure Controls/Personal Protection

- **Occupational Exposure Limits:** No established limits (OSHA/ACGIH); respirable dust TWA 5 mg/m<sup>3</sup> (total dust)
- **Engineering Controls:** Local exhaust ventilation; dust collection system for bulk processing; basic ventilation for routine handling
- **PPE:**
  - Eye/Face: Safety goggles (routine handling); face shield (bulk transfer)
  - Skin: Nitrile gloves (bulk handling); lab coat/coverall (industrial processing)
  - Respiratory: N95 dust mask (bulk powder operations); powered air-purifying respirator (PAPR) for high-dust environments
  - Other: Anti-static shoes (dust explosion prevention)

## SECTION 9: Physical and Chemical Properties

- Physical State: White free-flowing powder (25°C)
- Odor: Odorless
- Taste: Tasteless (food grade)
- Solubility: Dispersible in cold water (forms clear solution); insoluble in hot water (>80°C, gelation); insoluble in ethanol, ether and non-polar solvents; soluble in some polar organic solvents (ethanol-water mixtures)
- Viscosity (2% aq. solution, 20°C): 20500 mPa·s
- Methoxyl Content: 29.2%
- Hydroxypropoxyl Content: 9.5%
- pH (2% aq. solution, 25°C): 6.8
- Density: 1.30-1.40 g/cm<sup>3</sup> (25°C)
- Bulk Density: 0.4-0.6 g/cm<sup>3</sup>
- Melting Point: Decomposes (>200°C)
- Flammability: Non-combustible
- Hygroscopy: Hygroscopic
- Gelation Temperature: 80-90°C (2% aq. solution)

## SECTION 10: Stability and Reactivity

- **Stability:** Chemically stable under normal storage and use conditions; hygroscopic but no degradation; stable in neutral and mild acidic/alkaline media (pH 5-8)
- **Hazardous Reactions:** No hazardous reactions under normal use; degrades at >200°C to carbon monoxide and carbon dioxide; gelation in hot water (physical change, no chemical reaction)
- **Decomposition Products:** Carbon monoxide, carbon dioxide, water (at >200°C; no toxic byproducts)

## SECTION 11: Toxicological Information

- Oral LD<sub>50</sub> (Rat): >10,000 mg/kg (non-toxic)



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- Dermal LD<sub>50</sub> (Rabbit): >10,000 mg/kg (non-toxic, no skin irritation)
- Inhalation LC<sub>50</sub> (Rat): >5 mg/m<sup>3</sup>/4h (dust, mild respiratory irritation only)
- Skin Irritation: None (Rabbit, 4h exposure)
- Eye Irritation: Category 2A (mild, reversible irritation; Rabbit, 24h exposure)
- Carcinogenicity: IARC Group 3 (Unclassifiable); no mutagenic/reproductive toxic effects; no chronic toxicity

### SECTION 12: Ecological Information

- Aquatic Toxicity (Zebrafish LC<sub>50</sub>): >5000 mg/L/96h (non-toxic)
- Aquatic Toxicity (Daphnia EC<sub>50</sub>): >5000 mg/L/48h (non-toxic)
- Persistence: Fully biodegradable (microbial degradation in soil and water; BOD<sub>5</sub> /COD >0.6)
- Bioaccumulative Potential: None (log K<sub>oc</sub>: 1.2; no biomagnification)
- Environmental Fate: Disperses in water; biodegrades to CO<sub>2</sub> and water; no accumulation in soil or aquatic environments; no harm to plants or soil organisms

### SECTION 13: Disposal Considerations

- **Product Waste:** Dispose via licensed waste treatment facilities; mix with water and discharge to biological wastewater treatment systems (per local regulations); unspoiled product can be recycled for industrial use.
- **Packaging Waste:** Rinse thoroughly with water; recycle as non-hazardous plastic/paper waste; no special disposal required.
- **Contaminated Material:** All cleanup materials are non-hazardous; dispose as ordinary industrial waste; dust can be mixed with water for biodegradation.

### SECTION 14: Transport Information

- UN Number: Not dangerous goods
- Transport Class/Packaging Group: N/A
- Marine Pollutant: No
- **Precautions:** Transport by ordinary vehicles; avoid collision, leakage, direct sunlight and high humidity; keep sealed; use anti-static packaging for bulk powder; avoid transport with strong acids and oxidizers

### SECTION 15: Regulatory Information

- Complies with GHS, REACH, TSCA, FDA (GRAS for food grade), EU Food Additive Regulation (E464)
- Not classified as a hazardous chemical (China GB 13690-2009)
- No EU SVHC listing; food-grade HPMC complies with FSSC 22000 and HACCP; pharmaceutical-grade complies with USP/EP/BP standards

### SECTION 16: Other Information

- **Revision Date:** 26 FEB 2026
- **Notes:** Viscosity grade customizable (5-200,000 mPa·s); food/pharmaceutical/industrial grades available; dissolve by adding powder to cold water with stirring to avoid agglomeration.



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