



# 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 and GB/T 17519; Adapts to GHS, IMDG, IATA Standards)

### SECTION 1: Identification

#### 1.1 Product Identifiers

- Product Name: Kaolin
- Product Number: KL-20260222
- Brand: SIGALD
- CAS-No.: 1332-58-7

Synonyms: Kaolin Clay; China Clay; Hydrated Aluminum Silicate

#### 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:** Ceramic raw material, papermaking filler/coating, paint/coating additive, rubber/plastic filler, cosmetic excipient (cosmetic grade)
- **Uses Advised Against:** Inhalation of large amounts of dust; use in high-acid systems without pH adjustment; use as food additive without food-grade certification

### SECTION 2: Hazards Identification

2.1 GHS Classification: Skin irritation (Category 2); Serious eye irritation (Category 2A); Specific target organ toxicity (single exposure) - respiratory tract (Category 3); Specific target organ toxicity (repeated exposure) - respiratory tract (Category 3)

- Hazard Pictogram: GHS07 (Exclamation mark)
- Signal Word: **Warning**
- Hazard Statements: H315 (Causes skin irritation), H319 (Causes serious eye irritation), H335 (May cause respiratory irritation), H373 (May cause damage to respiratory tract through prolonged or repeated exposure)
- Precautionary Statements: P264, P280, P302+P352, P305+P351+P338, P332+P313, P337+P313, P261, P342+P311
- 2.3 Physical/Chemical Hazards: Non-combustible; non-explosive; reacts with concentrated strong acids (HF, hot HCl) to dissolve; high-concentration dust may form explosive mixture with air (ignition source required); no other hazardous physical/chemical properties
- 2.4 Health Hazards: Prolonged skin contact causes mild irritation; eye contact causes serious irritation due to fine powder; inhalation of dust causes respiratory tract irritation (cough, dry throat); prolonged dust inhalation causes chronic respiratory tract damage
- 2.5



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Environmental Hazards: Non-toxic to aquatic/soil organisms; low water solubility; no bioaccumulation potential; no adverse environmental effects

### SECTION 3: Composition/Information on Ingredients

- **Substance/Mixture:** Pure Substance (Natural mineral)
- **Main Component:** Kaolin (99.8%, CAS:1332-58-7) -  $\text{Al}_2\text{O}_3 \cdot 2\text{SiO}_2 \cdot 2\text{H}_2\text{O}$
- **Impurities:** Trace  $\text{Fe}_2\text{O}_3$ ,  $\text{TiO}_2$ , alkaline metals (non-hazardous)
- **Molecular Weight:** 258.16 g/mol
- **Hazardous Ingredients:** None (hazards from physical dust effects only)

### SECTION 4: First Aid Measures

- **Inhaled:** Move to fresh air immediately; keep respiratory tract open. Sit upright and drink warm water to soothe throat; consult a physician if coughing or shortness of breath persists for more than 2 hours.
- **Skin Contact:** Rinse skin with plenty of running water and mild soap for 5 minutes; remove contaminated clothing and wash before reuse. Apply moisturizer if dryness or irritation occurs.
- **Eye Contact:** Hold eyelids open and rinse thoroughly with running water for 15-20 minutes; remove contact lenses if worn. Consult an ophthalmologist **immediately** to remove residual fine powder even if no irritation is felt.
- **Swallowed:** Rinse mouth with water; do not induce vomiting (low toxicity, insoluble). Consult a physician only if gastrointestinal discomfort (abdominal pain, constipation) occurs.

### SECTION 5: Firefighting Measures

- **Suitable Extinguishing Media:** Water spray, foam,  $\text{CO}_2$ , dry powder (for surrounding fire only)
- **Special Hazards:** Non-combustible; no hazardous combustion products; high-concentration dust may form explosive mixture with air if exposed to ignition source; reacts with acid fire extinguishers (HF) to dissolve
- **Firefighter Protection:** Wear standard fire-fighting gear + N95 dust mask; avoid inhalation of dust; cool containers with water spray to prevent dust dispersion

### SECTION 6: Accidental Release Measures

- **Personal Precautions:** Wear chemical splash goggles, nitrile gloves, N95 dust mask and lab coat for all spills; eliminate all ignition sources (for high-concentration dust); ensure good ventilation.
- **Containment & Cleanup:** Sweep up powder with a damp broom (to prevent dust dispersion) and transfer to sealed HDPE containers; use a vacuum cleaner with dust collection system for large spills; wipe residual powder with a damp cloth.
- **Environmental Precautions:** No special environmental precautions; sweep up spilled powder from soil/water for recycling/disposal; no environmental pollution risk.

### SECTION 7: Handling and Storage

- **Handling:** Operate in well-ventilated area with local exhaust ventilation; use dust collection system for bulk processing; adopt wet processing to reduce dust generation; no eating/drinking/smoking in the work area; wash hands thoroughly after handling.
- **Storage Conditions:** Cool, dry, well-ventilated warehouse ( $\leq 30^{\circ}\text{C}$ , humidity  $\leq 75\%$  RH); store in sealed HDPE bags/coated woven bags; avoid direct sunlight and high humidity; keep away from concentrated strong acids and food/medicines (industrial grade); prevent caking.
- **Incompatibilities:** Concentrated hydrofluoric acid, hot concentrated hydrochloric/sulfuric acid, high humidity ( $\geq 85\%$  RH)
- **Shelf Life:** 36 months (unopened, under specified storage conditions); 12 months after opening (seal tightly and keep dry)

## SECTION 8: Exposure Controls/Personal Protection

- **Occupational Exposure Limits:** OSHA TWA (total dust):  $2\text{ mg}/\text{m}^3$ ; ACGIH TWA (respirable dust):  $1\text{ mg}/\text{m}^3$ ; NIOSH REL:  $2\text{ mg}/\text{m}^3$  (8h TWA)
- **Engineering Controls:** Local exhaust ventilation ( $\geq 20$  air changes/hour); dust collection system (efficiency  $\geq 99\%$ ); closed transfer system for bulk powder handling; wet processing to minimize dust.
- **PPE:**
  - Eye/Face: Chemical splash goggles + face shield (mandatory for bulk handling)
  - Skin: Chemical-resistant nitrile gloves + full protective suit + safety shoes
  - Respiratory: N95 dust mask (routine handling); powered air-purifying respirator (PAPR) for bulk processing/spills
  - Other: Dust-proof cap, disposable mask, protective apron
- **Hygiene Measures:** Change contaminated clothing in a dedicated area; wash hands/face before eating/drinking/smoking.

## SECTION 9: Physical and Chemical Properties

- Physical State: White to off-white fine crystalline powder ( $25^{\circ}\text{C}$ )
- Odor: Odorless
- Solubility: Insoluble in water/ethanol/weak acids/bases; soluble in concentrated HF and hot concentrated mineral acids
- pH Value (5% aq. suspension): 6.0-8.0 (neutral)
- Density:  $2.60\text{-}2.65\text{ g}/\text{cm}^3$  ( $25^{\circ}\text{C}$ ); bulk density  $0.7\text{-}1.1\text{ g}/\text{cm}^3$
- Melting Point:  $1780^{\circ}\text{C}$  (decomposes)
- Boiling Point: N/A (decomposition)
- Flash Point: Non-combustible
- Autoignition Temperature: N/A
- Viscosity: N/A (solid powder)
- Particle Size (D50):  $5.2\text{ }\mu\text{m}$  (industrial grade)
- Whiteness (CIE): 88.3%



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- Hygroscopy: Slight (caking in high humidity)
- Flammability: Non-combustible
- Explosive Limits: 12-25 g/m<sup>3</sup> (dust in air, ignition source required)
- Oil Absorption Value: 20-30 g/100g

### SECTION 10: Stability and Reactivity

- **Stability:** Chemically stable under normal storage and use conditions ( $\leq 30^{\circ}\text{C}$ , dry); slight caking in high humidity (no degradation); no polymerization.
- **Hazardous Reactions:** Reacts with concentrated HF/hot concentrated mineral acids to dissolve; no other hazardous reactions under normal use; high-concentration dust forms explosive mixture with air (ignition source required).
- **Decomposition Products:** Aluminum oxide ( $\text{Al}_2\text{O}_3$ ), silicon dioxide ( $\text{SiO}_2$ ) (at  $>1780^{\circ}\text{C}$ ); silicic acid + aluminum salt (with concentrated acids).
- **Conditions to Avoid:** High humidity ( $\geq 85\%$  RH), concentrated strong acids, dust generation (high concentration), open flame (for dust-air mixture).

### SECTION 11: Toxicological Information

- Oral LD<sub>50</sub> (Rat):  $>10000$  mg/kg (very low acute toxicity, insoluble)
- Dermal LD<sub>50</sub> (Rabbit):  $>10000$  mg/kg (mild skin irritation only)
- Inhalation LC<sub>50</sub> (Rat):  $>50$  mg/m<sup>3</sup>/4h (dust, mild respiratory irritation)
- Skin Irritation: Category 2 (mild reversible irritation; Rabbit, 4h exposure)
- Eye Irritation: Category 2A (serious reversible irritation; Rabbit, 24h exposure)
- Respiratory Toxicity: Prolonged inhalation causes chronic respiratory tract damage (Category 3, repeated exposure)
- Carcinogenicity: IARC Group 3 (Unclassifiable); no carcinogenic effect for pure kaolin
- Mutagenic/Reproductive Toxicity: No mutagenic or reproductive toxic effects

### 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: Non-biodegradable (inorganic mineral); low water solubility
- Bioaccumulative Potential: None (log K<sub>oc</sub>: 1.0; no bioaccumulation in food chain)
- Environmental Fate: Insoluble in water; sinks in aquatic environment; binds to soil organic matter; no adverse effects on soil/aquatic organisms
- Other Adverse Effects: No known environmental hazards; can be used as a soil conditioner (neutral pH)

### SECTION 13: Disposal Considerations

- **Product Waste:** Dispose via licensed waste treatment facilities; unspilled product can be recycled for industrial use; contaminated powder can be landfilled (non-toxic) or incinerated (at  $>1000^{\circ}\text{C}$ ).



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- **Packaging Waste:** Rinse thoroughly with water; recycle as non-hazardous plastic/textile waste; no special disposal required.
- **Contaminated Material:** All cleanup materials are non-hazardous; dispose as ordinary industrial waste; no hazardous waste treatment required.

### SECTION 14: Transport Information

- UN Number: Not dangerous goods
- Transport Hazard Class/Packaging Group: N/A
- Marine Pollutant: No
- **Precautions:** Transport by ordinary vehicles; avoid collision, rain and high humidity; store in sealed packaging during transport; prevent dust dispersion; do not transport with concentrated strong acids and food/medicines; comply with IMDG/IATA non-hazardous goods regulations.

### SECTION 15: Regulatory Information

- Complies with GHS, REACH, TSCA, GB 13690-2009 (China); not classified as a hazardous chemical
- EU SVHC: Not listed; meets industrial mineral regulatory standards; cosmetic/food grade available with corresponding certification
- Labeling: Mandatory GHS07 hazard label; additional "Dust hazard - respiratory irritation" label; cosmetic/food grade with product certification labels

### SECTION 16: Other Information

- **Revision Date:** 22 FEB 2026
- **Notes:** Mandatory dust control for all handling operations; use dust collection system and wet processing to reduce dust; regular medical check-up for long-term operators (respiratory function); store in dry environment to prevent caking; cosmetic/food grade must comply with relevant national standards.