



# 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: Silica Sol
- Product Number: SS-20260221
- Brand: SIGALD
- CAS-No.: 112926-00-8
- Synonyms: Colloidal silica; Amorphous silica hydrate; Silicic acid sol

#### 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:** Binder for ceramics/foundry, coating additive, catalyst support, metal polishing, water treatment, textile sizing, paper coating.
- **Uses Advised Against:** Inhalation of dried silica dust; contact with strong acids (gelation); not for food/cosmetic use without purification.

### SECTION 2: Hazards Identification

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

- Hazard Pictogram: GHS07 (Exclamation mark)
- Signal Word: Warning
- Hazard Statements: H319 (Causes serious eye irritation), H335 (May cause respiratory irritation – dust only)
- Precautionary Statements: P264, P280, P305+P351+P338, P337+P313

2.3 Physical/Chemical Hazards: Non-flammable; gelation in strong acids (pH <4) or high temperature (>100°C); no explosive risks; dried silica is fine dust (respiratory hazard).

2.4 Health Hazards: Colloidal liquid causes mild eye irritation; dried silica dust causes respiratory tract irritation/cough; no skin irritation/acute toxicity (oral/dermal).

2.5 Environmental Hazards: Negligible aquatic toxicity; amorphous silica is inert; no biodegradation/ bioaccumulation; no environmental harm.

### SECTION 3: Composition

- **Substance/Mixture:** Mixture (Colloidal dispersion)



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- **Main Component:** Amorphous Silica ( $\text{SiO}_2 \cdot n\text{H}_2\text{O}$ , 30.2%, CAS:112926-00-8)
- **Solvent:** Deionized Water (69.65%)
- **Minor Additives:** Sodium hydroxide (stabilizer, 0.15%, CAS:1310-73-2)
- **Hazardous Ingredients:** None (trace NaOH is non-hazardous in dilute form)

## SECTION 4: First Aid Measures

- **Inhaled (Liquid Vapor):** Move to fresh air; no special treatment (no irritation). **Inhaled (Dust):** Move to fresh air, cough up dust; drink water to soothe throat; consult a doctor if irritation persists.
- **Skin Contact:** Rinse with running water for 3–5 mins; no special treatment (no irritation).
- **Eye Contact:** Rinse thoroughly with water for 10–15 mins (hold eyelids open); consult a doctor if irritation/blurriness remains.
- **Swallowed:** Rinse mouth with water; no special treatment (inert silica); seek medical advice only for large ingestions (mild gastrointestinal discomfort).

## SECTION 5: Firefighting Measures

- **Suitable Extinguishing Media:** Water spray, foam,  $\text{CO}_2$ , dry powder (not required – non-flammable).
- **Special Hazards:** Non-combustible; no hazardous combustion products; high temperature causes water evaporation and silica dust formation (respiratory hazard for firefighters).
- **Firefighter Protection:** Wear standard fire gear; N95 dust mask if silica dust is generated (no other respiratory protection needed).

## SECTION 6: Accidental Release Measures

- **Personal Precautions:** Wear safety goggles/nitrile gloves (large spills); N95 dust mask if liquid evaporates to dust.
- **Cleanup Methods:** Absorb spilled liquid with inert absorbent (sand/vermiculite) or wipe with damp cloth; flush small spills to sewer (dilute with water); collect silica gel residue (from acid contact) for disposal as non-hazardous waste.
- **Environmental Precautions:** No special measures; silica sol is inert and non-toxic to aquatic/soil organisms; no runoff restrictions.

## SECTION 7: Handling and Storage

- **Handling:** Operate in well-ventilated area; avoid eye contact; prevent liquid evaporation (dust formation); do not mix with strong acids (gelation); use plastic/glass equipment (no metal corrosion).
- **Storage Conditions:** Cool, well-ventilated warehouse (5–30°C); store in sealed HDPE/glass drums; avoid direct sunlight/high temperature (>40°C); do not freeze (<0°C, causes gelation).
- **Incompatibilities:** Strong acids (pH <4), concentrated salts, high temperature (>100°C), freezing conditions.
- **Shelf Life:** 18 months (unopened, 5–30°C); 6 months after opening (seal tightly after use).

## SECTION 8: Exposure Controls/Personal Protection



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- **Occupational Exposure Limits:** SiO<sub>2</sub> (amorphous) – no established limits (OSHA/ACGIH); respirable dust – TWA 5 mg/m<sup>3</sup> (total dust).
- **Engineering Controls:** Basic ventilation; local exhaust ventilation if liquid is heated/evaporated (dust control).
- **PPE:**
  - Eye/Face: Safety goggles (routine handling); face shield (bulk transfer).
  - Skin: Nitrile gloves (optional, no irritation); lab coat (industrial use).
  - Respiratory: N95 dust mask (only if silica dust is generated); no respirator needed for liquid handling.

### SECTION 9: Physical and Chemical Properties

- Physical State: Transparent colloidal liquid (25°C)
- Color: Colorless to pale blue
- Odor: Odorless
- Solubility: Miscible with water; insoluble in organic solvents; gelation in strong acids
- SiO<sub>2</sub> Content: 30.2% (w/w)
- pH (25°C): 9.2 (mildly alkaline)
- Particle Size (Average): 15 nm
- Density (25°C): 1.19 g/cm<sup>3</sup>
- Viscosity (25°C): 6 mPa·s
- Conductivity (25°C): 1500 μS/cm
- Boiling Point: 100°C (water evaporation; silica gel formation)
- Freezing Point: 0°C (gelation/sedimentation)
- Flammability: Non-combustible
- Stability: No gelation/sedimentation at 5–30°C for 30 days

### SECTION 10: Stability and Reactivity

- **Stability:** Chemically stable at 5–30°C (sealed); mild alkaline pH (8.5–10.5) maintains colloidal stability; no degradation under normal use.
- **Hazardous Reactions:** Gelation in strong acids (pH <4) or freezing (<0°C); no exothermic/violent reactions; no polymerization.
- **Decomposition Products:** Water (evaporation) and amorphous silica dust (no toxic byproducts); silica gel decomposes to SiO<sub>2</sub> at 1050°C (inert).

### SECTION 11: Toxicological Information

- Oral LD<sub>50</sub> (Rat): >10,000 mg/kg (non-toxic, inert)
- Dermal LD<sub>50</sub> (Rabbit): >10,000 mg/kg (non-toxic, no irritation)
- Inhalation (Liquid Vapor) LC<sub>50</sub> (Rat): >20 mg/m<sup>3</sup> (no irritation)
- Skin Irritation: None (Rabbit, 4h exposure)
- Eye Irritation: Category 2A (mild irritation, reversible)



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- Inhalation (Dust): Mild respiratory irritation (no chronic toxicity; amorphous silica is not carcinogenic).

### 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: Amorphous silica is inert; no biodegradation (natural mineral)
- Bioaccumulative Potential: None (silica is a natural component of soil/water)
- Environmental Fate: Dilutes in water; silica particles settle to soil (inert, no harm); no accumulation in aquatic/terrestrial organisms.

### SECTION 13: Disposal Considerations

- **Product Waste:** Dispose via licensed waste facility; or dilute with water and discharge to wastewater system (per local regulations); silica gel residue (from acid contact) is non-hazardous waste.
- **Packaging Waste:** Rinse with water thoroughly; recycle as plastic/glass waste (non-hazardous); no special disposal required.
- **Dust Waste:** Collect with dust collector; dispose as non-hazardous industrial waste.

### SECTION 14: Transport Information

- UN Number: Not dangerous goods
- Transport Hazard Class: N/A
- Packaging Group: N/A
- Marine Pollutant: No
- **Precautions:** Transport at 5–30°C; avoid freezing/collision/high temperature; store in upright sealed drums; no special transport regulations (non-hazardous).

### SECTION 15: Regulatory Information

- Complies with GHS, REACH, TSCA, GB 13690-2009; not classified as hazardous chemical (China).
- EU SVHC: Not listed; amorphous silica (CAS:112926-00-8) complies with REACH.
- Labeling: GHS07 hazard label (eye irritation); no other mandatory labeling.

### SECTION 16: Other Information

- **Revision Date:** 21 FEB 2026
- **Notes:** Colloidal stability is critical – avoid acid/freeze/high temperature; dried silica dust is a minor respiratory hazard (easily controlled with ventilation).