



SAFETY DATA SHEET (SDS / MSDS)

Silica sol (Colloidal silica solution) | CAS No. 7631-86-9 | Revision: 2026-09-22

SECTION 1: Identification

Product identifier: Silica sol (Colloidal silica solution)

Synonyms: Colloidal silica; Silica dispersion; SiO₂ sol **Formula:** colloidal SiO₂ in water

CAS No.: 7631-86-9 **EC No.:** 231-545-4 **Molecular weight:** 60.08 (SiO₂) g/mol

Recommended use: Precision casting, refractory, paper coating, textile binder, polishing, catalyst support.

Supplier: Dongying Yuansheng Chemical Co., Ltd, Dongying, Shandong Province, P.R. China.

Emergency telephone: +86-546-XXXXXXX (business hours); for medical emergency contact local poison control centre.

SECTION 2: Hazard(s) identification

GHS classification: Eye Irrit. 2; Skin Irrit. 2 (alkaline aqueous dispersion).

Signal word: Warning.

Hazard statements: H319 Causes serious eye irritation; H315 Causes skin irritation.

Precautionary statements: P280 Wear eye protection; P305+P351+P338 IF IN EYES rinse with water; P302+P352 IF ON SKIN wash with water; P337+P313 If irritation persists get medical advice.

Additional hazards: Alkaline (pH ~ 9-10) aqueous colloidal dispersion. Not flammable. Keep from freezing (gelation). Contains sodium stabilizer.

SECTION 3: Composition / information on ingredients

Substance. The table below lists the hazardous component. Colloidal silica; Silica dispersion; SiO₂ sol is the product itself.

Component	CAS No.	EC No.	Concentration (w/w)
Silica sol (Colloidal silica solution)	7631-86-9	231-545-4	Industrial grade (alkaline, ~30% SiO ₂)

SECTION 4: First-aid measures

Inhalation: Move victim to fresh air; keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Seek medical attention immediately.

Skin contact: Take off contaminated clothing immediately. Rinse skin with plenty of water for at least 15 minutes. Seek medical attention immediately.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Seek medical attention immediately.

Ingestion: Rinse mouth. Do NOT induce vomiting. Give water/milk if conscious. Never give anything by mouth to an unconscious person. Seek medical attention immediately.

Most important symptoms/effects: Mild eye/skin irritant (alkaline). Not acutely toxic. Dried silica dust may irritate respiratory tract.

SECTION 5: Fire-fighting measures

Suitable extinguishing media: Product is non-flammable. Use water spray, dry chemical, CO₂ or foam for surrounding fires.

Hazardous combustion products: May release hazardous fumes on heating/fire (see Section 10).

Advice for fire-fighters: Wear SCBA and appropriate protective clothing. Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

Personal precautions: Ensure adequate ventilation. Wear suitable PPE (Section 8). Avoid inhalation and contact with skin/eyes. Remove ignition sources if flammable.

Environmental precautions: Do not allow product to enter drains, surface water, groundwater or soil.

Methods for cleaning up: Ventilate the area. Absorb with inert material (sand, earth, vermiculite) or neutralize as appropriate. Collect in labelled, sealed containers for disposal. Wash remainder with water. Prevent entry into waterways.

SECTION 7: Handling and storage

Handling: Use only in well-ventilated areas. Do not breathe vapour/mist/dust. Wear PPE. Avoid contact with skin, eyes and clothing. Keep away from incompatible materials.

Storage: Store in tightly closed containers in a cool, dry, well-ventilated place. Keep away from direct sunlight and heat. Keep separated from oxidizers, acids/bases and incompatible materials.

SECTION 8: Exposure controls / personal protection

Occupational exposure limits: Not applicable to liquid; dust from dried silica - apply general dust controls.

Engineering controls: Use local exhaust ventilation and/or process enclosure. Emergency eye-wash and safety shower must be available close to the work station.

Respiratory protection: Use approved respirator (organic-vapour / ABEK-P3 filter as appropriate; SCBA for high concentrations or enclosed spaces).

Hand protection: Chemical-resistant gloves (neoprene, PVC, nitrile or fluorinated rubber - check permeation data).

Eye protection: Tightly sealed chemical safety goggles; face shield when risk of splashing.

Skin and body protection: Acid/chemical-resistant protective suit, apron and boots.

Hygiene measures: Do not eat, drink or smoke during work. Wash hands before breaks and at end of work. Remove contaminated clothing.

SECTION 9: Physical and chemical properties

Appearance	Milky/translucent liquid	Odour	Odourless
Density (20°C)	~ 1.20 g/cm ³	pH	9.0 - 10.5
Boiling point	~ 100 °C (water)	Flash point	Non-flammable
Solubility in water	Dispersible	Freezing point	0 °C (keep from freezing)
Particle size	10 - 20 nm	SiO₂ content	~ 30%

SECTION 10: Stability and reactivity

Reactivity / chemical stability: Stable under recommended storage and handling conditions.

Incompatible materials: Strong acids, multivalent electrolytes (salt flocculation), alcohols, high concentrations of soluble salts..

Hazardous reactions: Reacts violently or releases dangerous products with the incompatible materials listed above. Do not mix without assessment.

Conditions to avoid: Heat, direct sunlight, moisture and contact with incompatible materials.

Hazardous decomposition products: Thermal decomposition may release toxic/corrosive fumes (e.g. oxides of carbon, nitrogen, sulfur, hydrogen halides).

SECTION 11: Toxicological information

Acute / chronic toxicity: Mild eye/skin irritant (alkaline). Not acutely toxic. Dried silica dust may irritate respiratory tract.

Routes of exposure: Inhalation, skin/eye contact, ingestion.

Other: See Section 2 for classification. Data above is indicative; refer to authoritative databases (e.g. ECHA, OECD SIDS) for exact values.

SECTION 12: Ecological information

Ecotoxicity: Essentially inert; silica is natural. Do not allow large quantities to enter waterways (turbidity).

Persistence / degradability: See product data. Do not allow undiluted product to reach groundwater, watercourses or sewage.

Other adverse effects: Avoid release to the environment. Dispose of in accordance with local/national regulations.

SECTION 13: Disposal considerations

Product: Dispose of as hazardous waste in accordance with local/national regulations. Do not discharge to sewer. Neutralize/treat as appropriate or hand over to a licensed hazardous-waste contractor.

Contaminated packaging: Dispose of as unused product. Empty containers must be properly drained and handed to an approved disposal/recycling contractor. Do not pressurise, cut, weld or braze used containers.

SECTION 14: Transport information

UN number: Not regulated.

Proper shipping name: Not dangerous goods.

Transport hazard class(es): Class -.

Packing group: -.

Packaging / labels: Pack in approved containers for the hazard class; apply required hazard labels.

Environmental hazards: Refer to classification (Sections 2, 12). ADR/RID/IMDG/IATA regulations apply.

Special precautions: Ensure containers are tightly closed and upright. Keep away from foodstuffs and incompatible materials.

SECTION 15: Regulatory information

National inventories: Listed in the China Inventory of Existing Chemical Substances (IECSC); EINECS/ELINCS as applicable.

Classification: Classified and labelled according to the UN GHS (Rev. 9) and PRC GB 30000 series / GB 13690; Work Safety Law of the PRC; Hazardous Chemicals Safety Management Regulations.

Chemical Safety Assessment: A Chemical Safety Assessment has not been performed for this product by the supplier.

SECTION 16: Other information

Revision date: 2026-09-22. **Version:** 1.0.

Abbreviations: CAS, EC, GHS, SDS/MSDS, LD50/LC50, PEL/TLV, SCBA, STOT, UN, IECSC, ADR, IMDG, IATA.

Disclaimer: The information in this SDS is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. It is intended only as a guide for safe handling, use, storage, transport and disposal. Users are responsible for applying this information in accordance with their specific conditions and for compliance with all applicable laws and regulations.