

Safety Data Sheet: Caustic Soda Flakes

1. Identification

Product	Caustic Soda Flakes; CAS 1310-73-2; EC 215-185-5
Use	Industrial alkaline processing, pH adjustment, chemical manufacture and professional cleaning formulation.
Company	Hainan Zhongxin Chemical Co., Ltd. (ZXCHEM)
Address	Room 1001, Building A, Caohejing Center, No. 1520 Gumei Road, Xuhui District, Shanghai, China
Telephone / email	+86-21-54265599 / sales@zxchem.com.cn
Emergency contact	ZXCHEM office number above, office hours, China time (UTC+8). For urgent medical assistance contact local emergency services.
Scope	Reference safety information for Caustic Soda Flakes. The reference composition, concentration and supply-grade differences are described in Section 3. This document does not certify the composition or transport status of a specific delivered batch or a different formulation.

2. Hazards Identification

Classification	Skin corrosion Category 1A; serious eye damage Category 1.
Signal word / symbols	Danger; GHS05
Hazard statements	H314: causes severe skin burns and eye damage. H318: causes serious eye damage.
Prevention	Use adequate ventilation; avoid inhaling dust. Prevent skin and eye contact. Wear suitable chemical-resistant gloves and eye protection. Wash after handling; keep food and drink out of the work area.
Response	After exposure, stop work and seek medical advice. For severe exposure obtain urgent medical care. Rinse contaminated skin or eyes with water; move an inhalation casualty to fresh air.
Environment	Prevent uncontrolled release to drains, soil or surface water. Collect spills for appropriate disposal.



3. Composition / Information on Ingredients

Reference ingredient	Reference SDS: sodium hydroxide, CAS 1310-73-2, EC 215-185-5, >95%; disodium carbonate impurity, CAS 497-19-8, EC 207-838-8, <3%. ZXCHEM supply TDS: NaOH ≥99.0%; Na ₂ CO ₃ ≤0.5%, NaCl ≤0.03%, Fe ₂ O ₃ ≤0.005%.
Supply grade	NaOH ≥99.0%
Applicability	The cited concentration or purity describes the reference material. It is not a certificate of analysis for the delivered batch; different solvents or dilutions require the matching supplier safety document.

4. First-Aid Measures

General	Immediate medical attention is required after significant exposure. Show this sheet to the doctor. Protect rescuers from corrosive dust and contaminated clothing.
Inhalation	Move to fresh air and obtain immediate medical advice. If breathing stops, trained personnel should provide assisted ventilation using a suitable barrier or medical device; avoid direct mouth-to-mouth exposure.
Skin	Immediately remove contaminated clothing and shoes while flushing with plenty of water. Call a doctor immediately for chemical burns. Wash clothing before reuse.
Eyes	Immediately flush gently with plenty of water, including under the eyelids, for at least 15 minutes. Remove contact lenses when easy, continue rinsing and obtain urgent medical treatment.
Ingestion	Rinse the mouth. Do not induce vomiting; obtain emergency medical attention. Give nothing by mouth to an unconscious person. Gastrointestinal perforation is a concern; emesis and gastric lavage are contraindicated.
Effects / treatment	Causes chemical burns by all exposure routes. Swallowing can damage or perforate the oesophagus and stomach; urgent medical treatment is required. Treatment is directed by a clinician.

5. Fire-Fighting Measures

Extinguishing media	Use the extinguishing agent suited to the surrounding fire. The selected flake SDS lists carbon dioxide, dry chemical, dry sand and alcohol-resistant foam. Avoid uncontrolled water contact with bulk material because dissolution generates heat.
Hazards	Sodium oxides may form during fire or thermal decomposition. Corrosive dust or aerosols can be released; the material itself is nonflammable.
Protection	Firefighters require suitable protective clothing and self-contained breathing equipment. Prevent contaminated firefighting water entering drains.

6. Accidental Release Measures

Personnel	Isolate the spill and provide ventilation. Use chemical-resistant gloves and eye protection; avoid contact and dust exposure.
Environment	Contain the release and protect drains and waterways. Report significant environmental contamination to the responsible authority.
Cleanup	Collect spilled solid without raising dust into closed labelled containers.

7. Handling and Storage

Handling	Use controlled transfer and effective ventilation. Avoid generating dust and prevent contamination of the work area.
Storage	Store tightly sealed in a cool, dry, well-ventilated corrosives area. Protect from moisture and keep separate from acids and incompatible metals.
Incompatibilities	Acids, water or moist air during uncontrolled exposure, and incompatible metals. Contact with some metals can produce hydrogen; dissolution in water releases heat.
Specific use	Evaluate compatibility and appropriate operating conditions in the complete formulation before industrial use.

8. Exposure Controls / Personal Protection

Exposure limits	Selected flake SDS: UK and Ireland STEL 2 mg/m ³ ; Germany ceiling 2 mg/m ³ . Apply the current limit and sampling basis applicable to the workplace; local requirements vary.
Engineering controls	Use local extraction where dust can be generated. Maintain accessible eyewash and emergency washing facilities.
Personal protection	Wear chemical-resistant gloves selected for the task, suitable protective clothing and splash goggles. Add face protection for splash-prone tasks.
Respiratory protection	Use a properly selected respirator under a respiratory-protection program where engineering controls do not adequately limit airborne exposure.
Hygiene	Wash after handling, remove contaminated clothing promptly and do not eat, drink or smoke in the work area.

9. Physical and Chemical Properties

Appearance	White solid flakes
Formula / molecular weight	NaOH / 40.00 g/mol
Melting point, reference	318°C
Density, reference	2.13 g/cm ³
Water solubility	Soluble; exothermic dissolution
pH, reference	14 at 5% aqueous solution
Flash point	Not applicable to this nonflammable solid
Other properties	Product-specific values for odor threshold, vapor pressure, partition coefficient, autoignition temperature and viscosity are not supplied by the selected reference set. No values are inferred.

10. Stability and Reactivity

Stability	Hygroscopic; protect from moist air and uncontrolled water contact. Dissolution in water is strongly exothermic.
Hazardous reactions	Acids react vigorously with the alkali. Contact with susceptible metals can release flammable hydrogen. Use controlled addition and cooling during solution preparation.
Conditions to avoid	Moist air, uncontrolled water addition, dust formation, excessive heating and incompatible products.
Incompatibilities	Acids, water or moist air during uncontrolled exposure, and incompatible metals. Contact with some metals can produce hydrogen; dissolution in water releases heat.
Decomposition	Sodium oxides may form during fire or thermal decomposition. Corrosive dust or aerosols can be released; the material itself is nonflammable.

11. Toxicological Information

Exposure effects	Causes chemical burns by all exposure routes. Swallowing can damage or perforate the oesophagus and stomach; urgent medical treatment is required.
Reference classification	Skin corrosion Category 1A; serious eye damage Category 1.
Toxicological data	The selected reference lists sodium hydroxide oral rat LD50 325 mg/kg and dermal rabbit LD50 1,350 mg/kg. The principal classified hazards are severe skin corrosion and serious eye damage; gastrointestinal perforation is a concern after ingestion.

12. Ecological Information

Environmental effects	The reference reports fish LC50 45.4 mg/L over 96 h for sodium hydroxide. Large releases alter water pH and can harm aquatic organisms. The substance is water-soluble and mobile; prevent uncontrolled discharge.
Controls	Prevent uncontrolled release, collect spills and dispose of contaminated material through an authorized route.
Assessment	No product-specific PBT/vPvB assessment is claimed. Absence of data does not establish absence of environmental effects.

13. Disposal Considerations

Product	Collect surplus product and contaminated cleanup material for disposal by an authorized chemical-waste contractor in accordance with local requirements.
Packaging	Containers may retain product residues. Do not reuse contaminated packaging without an approved cleaning process; use an authorized disposal route.

14. Transport Information

Classification	Class 8 — Corrosive
UN number	UN 1823
Shipping name	Sodium hydroxide, solid
Class / packing group	ADR / IMDG / IATA: Class 8; packing group II. Environmental transport hazard: not identified in the selected reference.
Transport precautions	Protect packaging and closures from damage, secure loads and prevent releases. This reference is not a shipping declaration for a specific consignment.

15. Regulatory Information

Identity	Caustic Soda Flakes; CAS 1310-73-2; EC 215-185-5
HS reference	281511; reference heading rather than a destination customs ruling.
Compliance	Apply applicable workplace, environmental and transport rules. A raw-material listing does not establish authorization for a finished disinfectant or biocidal product.
Assessment	No ZXCHEM-specific chemical safety assessment or destination registration is asserted.

16. Other Information

Hazard meanings	H314: causes severe skin burns and eye damage. H318: causes serious eye damage.
Limitations	Prepared as reference safety information for the identified material. It is not a batch analytical certificate or safety assessment of a different solvent-containing formulation.
Revision	2026.2; prepared 2026-10-06. Customer-document branding and title corrected; technical safety data retained.
Document scope	Reference safety information for the material and grade described in Sections 1 and 3. Different concentrations, solvents or formulations require the applicable safety information. This is not a batch analytical certificate.

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