Safety data sheet

ChemiPURE Sodium Hydroxide, ≥99%

Product name ChemiPURE Sodium Hydroxide, ≥99%	Catalog no. SOH05, SOH10
Synonyms Caustic soda; Sodium hydrate; Lye	SDS revision -
CAS no. 1310-73-2	Format version / date 3 / 25 October 2026

01 PRODUCT AND COMPANY IDENTIFICATION

Product identifier	ChemiPURE Sodium Hydroxide, ≥99%
Product code	SOH05 (500 g); SOH10 (1 kg)
CAS number	1310-73-2
EC number	215-185-5
Recommended use	Laboratory reagent for research, analytical work, buffer preparation, sample processing and pH adjustment. Not for direct consumer use.
Supplier	EcoTech Biotechnology
Website	www.ecotechbiotech.com
Address	Universite Mah. Ipekyolu Cad. Ata Teknokent Sitesi B Blok No: Z10, Yakutiye, Erzurum, Türkiye
Telephone	0090 544 327 34 97
SDS contact	info@ecotechbiotech.com
Emergency telephone	0090 544 327 34 97
Available	Monday-Saturday/08:00-20:00/GMT+3
Languages	Turkish/English
Outside these hours	Contact: info@ecotechbiotech.com

02 HAZARDS IDENTIFICATION

Classification	Met. Corr. 1 (H290); Skin Corr. 1A (H314); Eye Dam. 1 (covered by H314), according to Regulation (EC) No. 1272/2008 (CLP).
Label elements	GHS05 (corrosion); signal word: Danger.
Symbols / pictograms	
Signal word	Danger
Hazard statements	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage.
Precautionary statements - Prevention	P234 Keep only in original packaging. P260 Do not breathe dust. P264 Wash thoroughly after handling. P280 Wear protective gloves, protective clothing and eye/face protection.
Precautionary statements - Response	P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353 IF ON SKIN: Remove contaminated clothing and rinse skin. P305+P351+P338 IF IN EYES: Rinse cautiously with water; remove contact lenses if easy. P310 Immediately call a POISON CENTER/doctor.
Other hazards	Strongly caustic; contact with moisture or dissolution in water releases considerable heat. Reacts with some metals (e.g. aluminium, zinc) to produce flammable hydrogen gas.

Composition & response

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03 COMPOSITION / INFORMATION ON INGREDIENTS

Product name	ChemiPURE Sodium Hydroxide, ≥99%
Synonyms	Sodium hydroxide; caustic soda; lye; sodium hydrate
Concentration	≥99% (purity)
Formula	NaOH
Molecular weight	40.00 g/mol
Substance information	Single-substance product: sodium hydroxide (CAS 1310-73-2; EC 215-185-5), purity ≥99%. Remaining constituents: unspecified trace impurities.

04 FIRST AID MEASURES

4.1 Description of first aid measures

Eye contact	Immediately rinse eyes cautiously with plenty of water for at least 15 minutes, lifting eyelids. Remove contact lenses if easy. Obtain immediate ophthalmologic/medical attention.
Skin contact	Remove contaminated clothing immediately. Rinse skin with running water for at least 15 minutes. Seek urgent medical attention for all suspected chemical burns.
Inhalation	Move to fresh air; keep at rest. Dust or mist can cause serious airway irritation or chemical burns. Get immediate medical advice if symptoms or significant exposure occur.
Ingestion	Rinse mouth. Do NOT induce vomiting and do NOT attempt neutralisation. Never give anything orally to an unconscious person. Obtain immediate emergency medical assistance.
Self-protection of first aider	Avoid contact with product and contaminated clothing. Wear chemical-resistant gloves, splash goggles/face protection and protective clothing.
Most important symptoms / effects	Severe tissue burns to skin, eyes and mucous membranes; possible permanent eye damage; respiratory irritation and potentially serious gastrointestinal injuries.
Notes to physicians	Treat urgently and symptomatically as an alkali burn; consider delayed respiratory and gastrointestinal complications. Do not induce emesis or neutralise in the patient.

05 FIREFIGHTING MEASURES

Suitable extinguishing media	The product is non-combustible. Choose extinguishing media appropriate for the surrounding fire (e.g. dry powder, carbon dioxide or foam).
Unsuitable extinguishing media	Avoid applying a direct water jet to bulk solid product: dissolution generates intense heat and may cause splashing.
Special hazards arising from the substance or mixture	Contact with certain metals may generate flammable hydrogen. Heat and contact with water can create corrosive splashes; thermal decomposition may produce irritating/corrosive fumes.
Explosion data	Not flammable or explosive as supplied. Hydrogen generated on contact with incompatible metals can create an explosion hazard.
Advice for firefighters	Wear self-contained breathing apparatus and chemical-resistant protective equipment. Prevent contamination of waterways with alkaline run-off.

Safe use & protection

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06 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Restrict access. Avoid skin/eye contact and formation or inhalation of dust. Wear chemical-resistant gloves, protective clothing, goggles and face shield where appropriate.
Environmental precautions	Avoid release to drains, soil or water; concentrated alkali may sharply raise environmental pH.
Methods and materials for containment and cleaning up	Collect solid carefully by mechanical means without raising dust. Place in a dry, compatible and closed container. Do not add water directly to bulk spilled solid. Use trained personnel for any neutralisation.
Reference to other sections	See Sections 8 and 13.

07 HANDLING AND STORAGE

Precautions for safe handling	Use local exhaust where dust may form. Avoid contact with skin, eyes and clothing. For solutions, slowly add the solid to water in small portions while stirring and cooling; never pour water onto a bulk quantity of solid.
Conditions for safe storage	Store at 15–25 °C, dry and tightly closed in compatible corrosion-resistant packaging. Protect from moisture and carbon dioxide. Segregate from acids and incompatible metals.
Container labeling	Keep containers tightly closed, correctly labeled and in a corrosion-resistant storage area. Do not use incompatible metal containers.

08 EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Recommended workplace ceiling for sodium hydroxide airborne exposure: 2 mg/m³ (ACGIH / NIOSH; jurisdiction-dependent). Prevent formation and inhalation of airborne alkaline dust or mist.

8.2 Exposure controls

Engineering measures	Provide local extraction for dust-generating operations; ensure ready access to eyewash station and emergency shower.
Hygiene measures	Do not eat, drink or smoke. Wash after handling. Remove contaminated clothing promptly and clean it before reuse.
Eye / face protection	Tight-fitting splash goggles (EN 166); wear face shield where dust or splashes are foreseeable.
Hand protection	Chemical-resistant protective gloves suitable for strong alkalis (EN ISO 374); select by contact time and manufacturer breakthrough data.
Skin and body protection	Chemical-resistant laboratory coat or apron, long trousers and closed protective footwear.
Respiratory protection	When ventilation cannot control dust exposure, use suitable particulate respiratory protection (e.g. EN 143 P2/P3, as risk-assessed).

Material properties

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09 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	White prills / solid
Odor	Odourless
Odor threshold	Not applicable (odourless substance)
pH	Approximately 14 in concentrated aqueous solution (100 g/L, 20 °C)
Melting point / freezing point	Approximately 318–323 °C
Initial boiling point and boiling range	Approximately 1,388 °C
Flash point	Not applicable (non-combustible solid)
Evaporation rate	Not applicable (solid)
Flammability (solid, gas)	Not flammable
Upper / lower flammability or explosive limits	Not applicable
Vapor pressure	Negligible under ambient conditions
Vapor density	Not applicable (solid)
Relative density	Approximately 2.13 g/cm³ at 20 °C
Solubility(ies)	Highly soluble in water (approximately 1,090 g/L at 20 °C); strongly exothermic dissolution
Partition coefficient: n-octanol / water	Not applicable (inorganic ionic substance)
Auto-ignition temperature	Not applicable
Decomposition temperature	No data available
Viscosity	Not applicable (solid)
Explosive properties	Not explosive as supplied
Oxidizing properties	Not classified as oxidizing

10 STABILITY AND REACTIVITY

Reactivity	Highly alkaline; reacts with acids, water (exothermically on dissolution), and certain metals.
Chemical stability	Stable when stored dry and tightly closed under recommended conditions; absorbs moisture and carbon dioxide from air.
Possibility of hazardous reactions	Violent heat release during improper dissolution or contact with acids; hydrogen may evolve on contact with aluminium or zinc.
Conditions to avoid	Moisture, humid air, uncontrolled addition of water, incompatible metals, and contact with acids.
Incompatible materials	Acids, aluminium, zinc, tin, ammonium salts, certain organic halogen compounds and moisture-sensitive materials.
Hazardous decomposition products	None expected under normal use. In fire, potentially corrosive sodium-containing fumes may form.

Health & environment

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11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity	No acute toxicity classification assigned for the solid substance under CLP. Severe local caustic injury is the principal hazard.
Skin corrosion / irritation	Skin Corr. 1A (H314); causes severe skin burns.
Serious eye damage / eye irritation	Causes serious eye damage and possible permanent loss of vision; effects included in H314.
Carcinogenicity	Not classified for carcinogenicity.
Reproductive toxicity	Not classified for reproductive toxicity.
STOT - SE	Not classified; dust/mist can strongly irritate or damage the respiratory tract.
STOT - RE	Not classified on available information.
Aspiration hazard	Not classified; ingestion is corrosive and may damage the mouth, oesophagus and stomach.

11.2 Potential health effects

Ingestion: Causes severe corrosive burns to the mouth and digestive tract.
Inhalation: Dust can damage the nose, throat and airways.
Skin: Causes deep chemical burns.
Eyes: Risk of permanent eye damage or blindness.

11.3 Additional information

Prompt medical evaluation is required following eye, skin, inhalation or ingestion exposures involving this corrosive material.

12 ECOLOGICAL INFORMATION

Ecotoxicity	Large releases can cause severe pH shifts harmful to aquatic organisms; do not discharge concentrated solution to surface water.
Persistence and degradability	Inorganic substance; standard biodegradation criteria are not applicable.
Bioaccumulative potential	Not expected to bioaccumulate.
Mobility in soil	Highly soluble; aqueous ions may migrate in water and soil, with local pH alteration.
Results of PBT and vPvB assessment	PBT/vPvB assessment criteria are not applicable to inorganic substances.

13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product	Dispose of as corrosive laboratory chemical waste through an approved waste contractor in accordance with applicable regulations. Do not release into drains; any neutralisation must be controlled by trained personnel.
Contaminated packaging	Treat containers bearing residual alkali as contaminated corrosive waste; dispose through an approved route. Do not reuse for other chemicals.

Transport & reference

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14 TRANSPORT INFORMATION

Mode	UN no.	UN proper shipping name	Hazard class	Packing group	Environmental hazards
ADR/RID	1823	SODIUM HYDROXIDE, SOLID	8	II	No
IMDG	1823	SODIUM HYDROXIDE, SOLID	8	II	No
IATA	1823	SODIUM HYDROXIDE, SOLID	8	II	No

15 REGULATORY INFORMATION

Safety, health and environmental regulations / legislation	Regulation (EC) No. 1907/2006 (REACH); Regulation (EC) No. 1272/2008 (CLP). Sodium hydroxide: CAS 1310-73-2; EC 215-185-5; Index 011-002-00-6. Classification: Met. Corr. 1, Skin Corr. 1A, Eye Dam. 1.
Environmental hazards	Not classified as a marine pollutant for transport. Prevent release of concentrated alkali to the environment.
Chemical safety assessment	No product-specific chemical safety assessment available.

16 OTHER INFORMATION

Key to abbreviations and acronyms

STOT-SE	Specific Target Organ Toxicity - Single Exposure
STOT-RE	Specific Target Organ Toxicity - Repeated Exposure
PBT	Persistent Bioaccumulative and Toxic
vPvB	very Persistent very Bioaccumulative and toxic
ADR	European Agreement concerning the international carriage of Dangerous goods by Road
CAS	Chemical Abstracts Service
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime code for Dangerous Goods
REACH	Registration, Evaluation, Authorization and restriction of Chemicals
RID	Regulations concerning the International transport of Dangerous goods by rail