

# SAFETY DATA SHEET

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## SECTION 1. IDENTIFICATION

**Product Identifier:** (4N) 99.99% Sodium Hydroxide, Anhydrous

**Product Code:** NA-OH-04-P.AHYD

**CAS Number:** 1310-73-2

**Relevant identified uses of the substance:** Scientific research and development

Supplier details:

American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024  
Tel: +1 310-208-0551  
Fax: +1 310-208-0351  
Emergency telephone number:  
+1 800-424-9300

## SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)

GHS05 Corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Hazards not otherwise classified No data available

GHS label elements, including precautionary statements

Hazard pictograms



GHS05

Signal word Danger

Hazard statements

H314 Causes severe skin burns and eye damage.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P405 Store locked up.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.  
WHMIS classification  
D2B - Toxic material causing other toxic effects  
E - Corrosive material  
Classification system  
HMIS ratings (scale 0-4)  
(Hazardous Materials Identification System)  
HEALTH  
FIRE  
REACTIVITY  
3  
0  
2  
Health (acute effects) = 3  
Flammability = 0  
Physical Hazard = 2  
Other hazards  
Results of PBT and vPvB assessment  
PBT: N/A  
vPvB: N/A

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### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substances  
CAS No. / Substance Name:  
1310-73-2 Sodium hydroxide  
Identification number(s):  
EC number: 215-185-5  
Index number: 011-002-00-6

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### **SECTION 4. FIRST AID MEASURES**

Description of first aid measures  
General information Immediately remove any clothing soiled by the product.  
If inhaled:  
Supply patient with fresh air. If not breathing, provide artificial respiration. Keep patient warm.  
Seek immediate medical advice.  
In case of skin contact:  
Immediately wash with soap and water; rinse thoroughly.  
Seek immediate medical advice.  
In case of eye contact:  
Rinse opened eye for several minutes under running water. Consult a physician.  
If swallowed:  
Seek medical treatment.  
Information for doctor  
Most important symptoms and effects, both acute and delayed  
Causes severe skin burns.  
Causes serious eye damage.  
Indication of any immediate medical attention and special treatment needed:

No data available

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## **SECTION 5. FIREFIGHTING MEASURES**

Extinguishing media

Suitable extinguishing agents Product is not flammable. Use fire-fighting measures that suit the surrounding fire.

Special hazards arising from the substance or mixture

If this product is involved in a fire, the following can be released:

Sodium oxide

Advice for firefighters

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Environmental precautions: Do not allow material to be released to the environment without official permits.

Methods and materials for containment and cleanup:

Use neutralizing agent.

Dispose of contaminated material as waste according to section 13.

Ensure adequate ventilation.

Prevention of secondary hazards: No special measures required.

Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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## **SECTION 7. HANDLING AND STORAGE**

Handling

Precautions for safe handling

Handle under dry protective gas.

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Information about protection against explosions and fires: The product is not flammable

Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility:

Store away from air.

Store away from water/moisture.

Do not store together with acids.

Store away from oxidizing agents.

Store away from metals.

Further information about storage conditions:

Store under dry inert gas.  
This product is hygroscopic.  
This product is air sensitive.  
Keep container tightly sealed.  
Store in cool, dry conditions in well-sealed containers.  
Protect from humidity and water.  
Specific end use(s) No data available

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Additional information about design of technical systems:  
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.  
Control parameters  
Components with limit values that require monitoring at the workplace:  
1310-73-2 Sodium hydroxide (100.0%)  
PEL (USA) Long-term value: 2 mg/m<sup>3</sup>  
REL (USA) Ceiling limit value: 2 mg/m<sup>3</sup>  
TLV (USA) Ceiling limit value: 2 mg/m<sup>3</sup>  
EL (Canada) Short-term value: C 2 mg/m<sup>3</sup>  
Additional information: No data  
Exposure controls  
Personal protective equipment  
Follow typical protective and hygienic practices for handling chemicals.  
Keep away from foodstuffs, beverages and feed.  
Remove all soiled and contaminated clothing immediately.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.  
Maintain an ergonomically appropriate working environment.  
Breathing equipment: Use suitable respirator when high concentrations are present.  
Recommended filter device for short term use:  
Use a respirator with type N95 (USA) or PE (EN 143) cartridges as a backup to engineering controls.  
Risk assessment should be performed to determine if airpurifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.  
Protection of hands:  
Impervious gloves  
Inspect gloves prior to use.  
The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.  
Material of gloves Nitrile rubber, NBR  
Penetration time of glove material (in minutes) No data available  
Eye protection:  
Tightly sealed goggles  
Full face protection  
Body protection: Protective work clothing.

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## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Information on basic physical and chemical properties

Appearance:  
Form: Solid in various forms  
Color: White  
Odor: Odorless  
Odor threshold: No data available.  
pH (50 g/l) at 20 °C (68 °F): 14  
Melting point/Melting range: 316 °C (601 °F)  
Boiling point/Boiling range: No data available  
Sublimation temperature / start: No data available  
Flammability (solid, gas) No data available.  
Ignition temperature: No data available  
Decomposition temperature: No data available  
Autoignition: No data available.  
Danger of explosion: No data available.  
Explosion limits:  
Lower: No data available  
Upper: No data available  
Vapor pressure at 800 °C (1472 °F): 3.5 hPa (3 mm Hg)  
Density at 20 °C (68 °F): 2.13 g/cm<sup>3</sup> (17.775 lbs/gal)  
Relative density No data available.  
Vapor density N/A  
Evaporation rate N/A  
Solubility in / Miscibility with  
Water: Soluble  
Partition coefficient (n-octanol/water): No data available.  
Viscosity:  
Dynamic: N/A  
Kinematic: N/A  
Other information No data available

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## SECTION 10. STABILITY AND REACTIVITY

Reactivity No data available  
Chemical stability Stable under recommended storage conditions.  
Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications.  
Possibility of hazardous reactions Reacts with strong oxidizing agents  
Conditions to avoid No data available  
Incompatible materials:  
Acids  
Air  
Water/moisture  
Oxidizing agents  
Metals  
Hazardous decomposition products: Sodium oxide

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## SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects  
Acute toxicity:  
Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation

of esophagus and stomach.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.

LD/LC50 values that are relevant for classification: No data

Skin irritation or corrosion: Causes severe skin burns.

Eye irritation or corrosion: Causes serious eye damage.

Sensitization: No sensitizing effects known.

Germ cell mutagenicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.

Carcinogenicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

Reproductive toxicity: No effects known.

Specific target organ system toxicity - repeated exposure: No effects known.

Specific target organ system toxicity - single exposure: No effects known.

Aspiration hazard: No effects known.

Subacute to chronic toxicity: No effects known.

Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

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## SECTION 12. ECOLOGICAL INFORMATION

Toxicity

Aquatic toxicity: No data available

Persistence and degradability No data available

Bioaccumulative potential No data available

Mobility in soil No data available

Additional ecological information:

Do not allow material to be released to the environment without official permits.

Do not allow undiluted product or large quantities to reach groundwater, water courses, or sewage systems.

Avoid transfer into the environment.

Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pHs. A high pH harms aquatic organisms. In the dilution of the use-level the pH is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

Results of PBT and vPvB assessment

PBT: N/A

vPvB: N/A

Other adverse effects No data available

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## SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Recommendation Consult official regulations to ensure proper disposal.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agent: Water, if necessary with cleansing agents.

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## SECTION 14. TRANSPORT INFORMATION

UN-Number  
DOT, IMDG, IATA UN1823  
UN proper shipping name  
DOT Sodium hydroxide, solid  
IMDG, IATA SODIUM HYDROXIDE, SOLID  
Transport hazard class(es)  
DOT  
Class 8 Corrosive substances.  
Label 8  
Class 8 (C6) Corrosive substances  
Label 8  
IMDG, IATA  
Class 8 Corrosive substances.  
Label 8  
Packing group  
DOT, IMDG, IATA II  
Environmental hazards: N/A  
Special precautions for user Warning: Corrosive substances  
EMS Number: F-A,S-B  
Segregation groups Alkalis  
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code N/A  
Transport/Additional information:  
DOT  
Marine Pollutant (DOT): No  
UN "Model Regulation": UN1823, Sodium hydroxide, solid, 8, II

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## SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture  
GHS label elements, including precautionary statements  
Hazard pictograms  
GHS05  
Signal word Danger  
Hazard statements  
H314 Causes severe skin burns and eye damage.  
Precautionary statements  
P260 Do not breathe dust/fume/gas/mist/vapors/spray.  
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
P405 Store locked up.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.  
National regulations  
All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.  
All components of this product are listed on the Canadian Domestic Substances List (DSL).  
SARA Section 313 (specific toxic chemical listings) Substance is not listed.  
California Proposition 65

Prop 65 - Chemicals known to cause cancer Substance is not listed.  
Prop 65 - Developmental toxicity Substance is not listed.  
Prop 65 - Developmental toxicity, female Substance is not listed.  
Prop 65 - Developmental toxicity, male Substance is not listed.  
Information about limitation of use: For use only by technically qualified individuals.  
Other regulations, limitations and prohibitive regulations  
Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006.  
Substance is not listed.  
The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.  
Substance is not listed.  
Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed.  
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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## 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document 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. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.