



MATERIAL SAFETY DATA SHEET
Sodium hydroxide, solid, pellets

Section 1 - Chemical Product and Company Identification

MSDS Name: Sodium hydroxide, solid, pellets
Catalog Numbers: S/4920/53, S/4920/60, S/4920/63, S/4920/65, S/4920/68, S/4920/71, S/4920/PC71
Synonyms: Caustic soda
Company Identification: Fisher Scientific UK
 Bishop Meadow Road, Loughborough
 Leics. LE11 5RG
For information in Europe, call: (01509) 231166
Emergency Number, Europe: 01509 231166

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	%	EINECS#	Hazard Symbols:	Risk Phrases:
497-19-8	Sodium carbonate	<3%	207-838-8		
1310-73-2	Sodium hydroxide	95-100%	215-185-5	C	35

Text for R-phrases: see Section 16

Hazard Symbols: C



Risk Phrases: 35

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Causes severe burns. Hygroscopic (absorbs moisture from the air).

Potential Health Effects

Eye: Causes severe eye burns. Causes redness and pain.
Skin: May be fatal if absorbed through the skin. Causes skin burns. May cause deep, penetrating ulcers of the skin.
Ingestion: Harmful if swallowed. Causes gastrointestinal tract burns. Causes severe pain, nausea, vomiting, diarrhea, and shock. May cause corrosion and permanent tissue destruction of the esophagus and digestive tract.
Inhalation: Irritation may lead to chemical pneumonitis and pulmonary edema. Causes severe irritation of upper respiratory tract with coughing, burns, breathing difficulty, and possible coma.
Chronic: Prolonged or repeated skin contact may cause dermatitis.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15

minutes while removing contaminated clothing and shoes. Discard contaminated clothing in a manner which limits further exposure.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

Section 5 - Fire Fighting Measures

General Information: Wear appropriate protective clothing to prevent contact with skin and eyes. Wear a self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products. Use water with caution and in flooding amounts. Contact with moisture or water may generate sufficient heat to ignite nearby combustible materials.

Extinguishing Media: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use with adequate ventilation. Do not allow water to get into the container because of violent reaction. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Corrosives area.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

CAS# 497-19-8:

Russia: 5 mg/m³ TWA

CAS# 1310-73-2:

United States OSHA: 2 mg/m³ TWA

Belgium - STEL: 2 mg/m³ VLE

France - VME: 2 mg/m³ VME

Germany: 2 mg/m³ TWA (inhalable fraction)

Malaysia: 2 mg/m³ Ceiling

Spain: 2 mg/m³ VLA-EC

Personal Protective Equipment

Eyes: Not available.

Skin: Wear impervious gloves.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A NIOSH/MSHA approved air purifying dust or mist respirator or European Standard EN 149.

Section 9 - Physical and Chemical Properties

Physical State: Pellets
Color: white
Odor: odorless
pH: Not available.
Vapor Pressure: 1 mbar @700 deg C
Viscosity: Not available.
Boiling Point: 1390 deg C @ 760.00mm Hg (2,534.00°F)
Freezing/Melting Point: 318 deg C (604.40°F)
Autoignition Temperature: Not available.
Flash Point: Not available.
Explosion Limits: Lower: Not available.
Explosion Limits: Upper: Not available.
Decomposition Temperature:
Solubility in water: 1 g/0.9 ml water
Specific Gravity/Density: 2.1300g/cm³
Molecular Formula: NaOH
Molecular Weight: 40.00

Section 10 - Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions.
Conditions to Avoid: Incompatible materials, moisture, contact with water, acids.
Incompatibilities with Other Materials: Not available.
Hazardous Decomposition Products: Toxic fumes of sodium oxide, hydrogen gas, sodium peroxide fumes.
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#: CAS# 497-19-8: VZ4050000
CAS# 1310-73-2: WB4900000

LD50/LC50:
CAS# 497-19-8: Draize test, rabbit, eye: 100 mg/24H Moderate;
Draize test, rabbit, eye: 50 mg Severe;
Draize test, rabbit, skin: 500 mg/24H Mild;
Inhalation, mouse: LC50 = 1200 mg/m³/2H;
Inhalation, rat: LC50 = 2300 mg/m³/2H;
Oral, mouse: LD50 = 6600 mg/kg;
Oral, mouse: LD50 = 6600 mg/kg;
Oral, rat: LD50 = 4090 mg/kg;
CAS# 1310-73-2: Draize test, rabbit, eye: 400 ug Mild;
Draize test, rabbit, eye: 1% Severe;
Draize test, rabbit, eye: 50 ug/24H Severe;
Draize test, rabbit, eye: 1 mg/24H Severe;
Draize test, rabbit, skin: 500 mg/24H Severe;

Carcinogenicity: Sodium carbonate - Not listed as a carcinogen by ACGIH, IARC, or NTP.
Sodium hydroxide - Not listed as a carcinogen by ACGIH, IARC, or NTP.

Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Section 13 - Disposal Considerations

Products considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist disposal company or the local authority or advice. Empty containers must be decontaminated before returning for recycling.

Section 14 - Transport Information

	IATA	IMO	RID/ADR
Shipping Name:	SODIUM HYDROXIDE, SOLID	SODIUM HYDROXIDE, SOLID	SODIUM HYDROXIDE, SOLID
Hazard Class:	8	8	8
UN Number:	1823	1823	1823
Packing Group:	II	II	II

USA RQ: CAS# 1310-73-2: 1000 lb final RQ; 454 kg final RQ

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: C

Risk Phrases:

R 35 Causes severe burns.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 37/39 Wear suitable gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 497-19-8: 1

CAS# 1310-73-2: 1

Canada

CAS# 497-19-8 is listed on Canada's DSL List

CAS# 1310-73-2 is listed on Canada's DSL List

US Federal

TSCA

CAS# 497-19-8 is listed on the TSCA Inventory.

CAS# 1310-73-2 is listed on the TSCA Inventory.

Section 16 - Other Information

Text for R-phrases from Section 2

R 35 Causes severe burns.

MSDS Creation Date: 10/08/2004

Revision #0 Date Original.

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