

SODIUM

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1. Product Identification

Synonyms: Sodium, metal; Natrium

CAS No.: 7440-23-5

Molecular Weight: 22.99

Chemical Formula: Na

Product Codes: CHEM-053 and others

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Sodium	7440-23-5	90 - 100%	Yes

3. Hazards Identification

Emergency Overview

DANGER! FLAMMABLE SOLID. CORROSIVE. WATER REACTIVE. CATCHES FIRE IF EXPOSED TO AIR. HARMFUL OR FATAL IF SWALLOWED. HARMFUL IF INHALED OR ABSORBED THROUGH SKIN. CONTACT MAY CAUSE BURNS TO ALL BODY TISSUE.

SAF-T-DATA^(tm) Ratings

Health Rating: 3 - Severe (Life)

Flammability Rating: 3 - Severe (Flammable)

Reactivity Rating: 3 - Severe (Water Reactive)

Contact Rating: 4 - Extreme (Corrosive)

Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES;

CLASS D EXTINGUISHER

Storage Color Code: Red Stripe (Store Separately)

Potential Health Effects

Inhalation:

Inhalation produces damaging effects on the mucous membranes and upper respiratory tract. Symptoms may include irritation of the nose and throat, and labored breathing. May cause lung edema, a medical emergency.

Ingestion:

Extremely dangerous, corrosive material. Will react immediately with saliva to cause serious burns and possible local combustion and even explosion of hydrogen in the mouth or esophagus. The metal's low melting point can cause further complications.

Skin Contact:

Corrosive, can cause serious burns due to almost immediate reaction with water, especially on moist skin. If metal ignites, very deep burns and tissue destruction can occur.

Eye Contact:

Corrosive. May cause redness, pain, blurred vision, and damage from severe alkali burns.

Chronic Exposure:

Continued or repeated skin contact may cause dermatitis, mucous membrane irritation, and lung damage..

Aggravation of Pre-existing Conditions:

No information found.

4. First Aid Measures

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Keep patient quiet in half upright position. Get medical attention immediately.

Ingestion:

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact:

Wipe off excess material from skin then immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. Fire Fighting Measures

Fire:

Autoignition temperature: > 115C (> 239F)

Flammable solid, water reactive. Can react vigorously with water, steam, acids to release flammable/explosive hydrogen. Dangerous in presence of oxidants. May ignite spontaneously in moist air or oxygen. May re-ignite after fire is extinguished. (Autoignition temperature given in dry air.)

Explosion:

Reactions with water forms sodium hydroxide and hydrogen gas which may explode. Burns violently accompanied by explosions which cause spattering of the molten material.

Fire Extinguishing Media:

Use dry soda ash, dry salt, sand, graphite powder or metal-fire-extinguishing dry powder such as Met-L-X®. Do not use water, foam, carbon dioxide, dry chemical, or chlorinated fire extinguishers.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Collect spilled material quickly and transfer to a container of kerosene, light oil or similar hydrocarbon fluid for recovery. Minimize exposure to air. Do not use water on metal. If the spilled sodium has come into contact with water, proceed cautiously. The reaction can rapidly proceed to self-ignition of hydrogen and spattering of molten sodium. Evacuate the area, put on protective equipment and proceed as with a metal fire. Waste sodium should be packaged under a hydrocarbon fluid and sent to an approved disposal facility. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Keep away from water or locations where water may be needed for fire. Avoid high temperatures. Store under nitrogen or kerosene. Never store under halogenated hydrocarbons. A detached fire-resistive building is recommended for quantity storage. Isolate from air, acids, and oxidizing materials. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

None established.

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

For conditions of use where exposure to the dust or mist is apparent, a full-face dust/mist respirator should be worn. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection:

Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance:

Light, silvery-white metal.

Odor:

Odorless.

Solubility:

Decomposes violently in water.

Density:

0.968 @ 20°C / 4°C.

pH:

Water solution alkaline (pH > 7).

% Volatiles by volume @ 21°C (70°F):

0

Boiling Point:

881.4°C (1618°F)

Melting Point:

97.8°C (208°F)

Vapor Density (Air=1):

0.003 @ 900C.

Vapor Pressure (mm Hg):

1.2 @ 400°C (752°F)

Evaporation Rate (BuAc=1):

No information found.

10. Stability and Reactivity

Stability:

Unstable. Reacts violently with water.

Hazardous Decomposition Products:

Does not decompose but can form flammable hydrogen in contact with air.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Water, oxygen, carbon dioxide, carbon tetrachloride, halogens, acetylene, metal halides, ammonium salts, oxides, oxidizing agents, acids, alcohols, chlorinated organic compounds, many other substances.

Conditions to Avoid:

Air, heat, flames, ignition sources and incompatibles.

11. Toxicological Information

For Anhydrous form: Oral rat LD50: 5g/kg. Investigated as a mutagen, reproductive effector.

Ingredient	\ Cancer Lists \		IARC Category
	Known	Anticipated	
Sodium (7440-23-5)	No	No	None

12. Ecological Information

Environmental Fate:

No information found.

Environmental Toxicity:

No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Domestic (Land, D.O.T.)

Proper Shipping Name: SODIUM

Hazard Class: 4.3

UN/NA: UN1428

Packing Group: I

Information reported for product/size: 1LB

International (Water, I.M.O.)

Proper Shipping Name: SODIUM

Hazard Class: 4.3

UN/NA: UN1428

Packing Group: I

Information reported for product/size: 1LB

15. Regulatory Information

----- \ Chemical Inventory Status - Part 1 \ -----

Ingredient	TSCA	EC	Japan	Australia
Sodium (7440-23-5)	Yes	Yes	No	Yes

----- \ Chemical Inventory Status - Part 2 \ -----

-----Canada-----

Ingredient	Korea	DSL	NDSL	Phil.
Sodium (7440-23-5)	Yes	Yes	No	Yes

----- \ Federal, State & International Regulations - Part 1 \ -----

-----SARA 302-----SARA 313-----

Ingredient	RQ	TPQ	List	Chemical Catg.
Sodium (7440-23-5)	No	No	No	No

----- \ Federal, State & International Regulations - Part 2 \ -----

Ingredient	CERCLA	-RCRA-	-TSCA
Sodium (7440-23-5)	10	261.33	8(d)
		No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
SARA 311/312: Acute: Yes Chronic: Yes Fire: Yes Pressure: No
Reactivity: Yes (Pure / Solid)

Australian Hazchem Code: 4W
Poison Schedule: None allocated.
WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

NFPA Ratings: Health: 3 Flammability: 3 Reactivity: 2 Other: **Water reactive**

Label Hazard Warning:

DANGER! FLAMMABLE SOLID. CORROSIVE. WATER REACTIVE. CATCHES FIRE IF EXPOSED TO AIR. HARMFUL OR FATAL IF SWALLOWED. HARMFUL IF INHALED OR ABSORBED THROUGH SKIN. CONTACT MAY CAUSE BURNS TO ALL BODY TISSUE.

Label Precautions:

- Do not get in eyes, on skin, or on clothing.
- Do not breathe vapor.
- Use only with adequate ventilation.
- Store in a tightly closed container.
- Do not get wet.
- Keep away from heat, sparks and flame.
- Wash thoroughly after handling.
- Remove and wash contaminated clothing promptly.

Label First Aid:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. In case of contact, wipe off excess material from skin then immediately flush eyes or skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. In all cases get medical attention immediately.

Product Use:

Laboratory Reagent and Consumer Hobby

Revision Information:

No Changes.

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