

SODIUM (METAL) IN LIQUID PARAFFIN

Version No:1
Page 1 of 11

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

SODIUM (METAL) IN LIQUID PARAFFIN

OTHER NAMES

Na, "sodium, metallic", natrium, "sodium, lumps, under petroleum", "sodium (metal) in paraffin", "sodium, metal", "sodium metal"

PROPER SHIPPING NAME

SODIUM

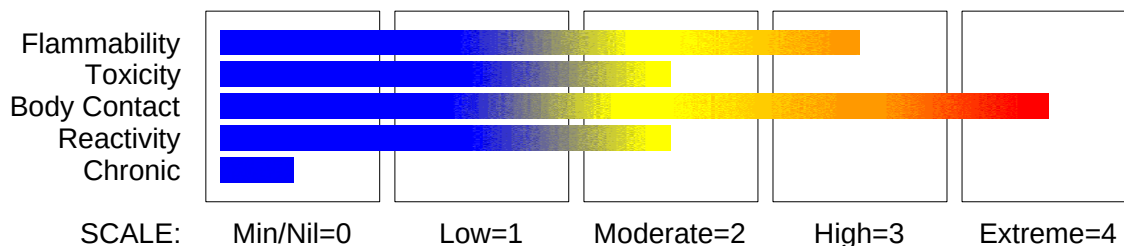
PRODUCT USE

Operators should be trained in procedures for safe use of this material.
 Manufacture of tetraethyl and tetramethyl lead, sodium peroxide and sodium hydride, titanium reduction, polymerisation catalyst for synthetic rubber, laboratory reagent and coolant in nuclear reactors.
 Also used in electric power cables (encased in polyethylene), non-glare lighting for highways, radioactive forms in tracer studies for medicine and as heat transfer agent in solar powered electric generators.

SUPPLIER

Company: S D FINE- CHEM LIMITED
 Address:
 315- 317, T.V. INDUSTRIAL ESTATE,
 248, WORLI,
 MUMBAI- 400030.INDIA.
 technical@sdfine.com
 Telephone: 91- 22- 24959898
 Telephone: 91- 22- 24959899
 Fax: 91- 22- 24937232

HAZARD RATINGS



Section 2 - HAZARDS IDENTIFICATION

GHS Classification

Emit Flammable Gases with Water Category 1

continued...

SODIUM (METAL) IN LIQUID PARAFFIN

Version No:1

Page 2 of 11

Section 2 - HAZARDS IDENTIFICATION

Skin Corrosion/Irritation Category 1C



EMERGENCY OVERVIEW

HAZARD

DANGER

Determined by using GHS criteria:

H260 H314

In contact with water releases flammable gases which may ignite spontaneously

Causes severe skin burns and eye damage

PRECAUTIONARY STATEMENTS

Prevention

Do not breathe dust or mist.

Wash thoroughly after handling.

Wear protective gloves/clothing and eye/face protection.

Handle under inert gas, protect from moisture.

Keep from any possible contact with water, because of violent reaction and possible flash fire.

Response

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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

Wash contaminated clothing before reuse.

If on skin or hair: remove/take off immediately all contaminated clothing. Rinse with water/shower.

Immediately call a POISON CENTER or doctor/physician.

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

Storage

Store in a dry place and/or in a closed container

Store locked up.

Disposal

Dispose of contents and container in accordance with relevant legislation.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
sodium	7440-23-5	100

Section 4 - FIRST AID MEASURES

SWALLOWED

For advice, contact a Poisons Information Centre or a doctor.

continued...

SODIUM (METAL) IN LIQUID PARAFFIN

Version No:1

Page 3 of 11

Section 4 - FIRST AID MEASURES

EYE

If this product comes in contact with the eyes:

- Immediately hold eyelids apart and flush the eye continuously with running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
- Transport to hospital or doctor without delay.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

If skin or hair contact occurs:

- Quickly but gently, wipe material off skin with a dry, clean cloth.
- Immediately remove all contaminated clothing, including footwear.
- Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.
- Transport to hospital, or doctor.

In case of burns:

- Quickly immerse affected area in cold running water for 10 to 15 minutes.
- Bandage lightly with a sterile dressing. Treat for shock if required.
- Lay patient down. Keep warm and rested.
- Transport to hospital, or doctor.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor.

NOTES TO PHYSICIAN

Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- DANGER: Do not attempt to extinguish with conventional media.
- DO NOT use water. Water may spread and scatter fire.

FIRE FIGHTING

Alert Fire Brigade and tell them location and nature of hazard.

- May be violently or explosively reactive.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- Consider evacuation (or protect in place).

DO NOT approach containers suspected to be hot.

If safe to do so, remove containers from path of fire.

FIRE/EXPLOSION HAZARD

DO NOT use water. Water may spread and scatter fire.

Flammable solid. and Spontaneously Combustible.

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SODIUM (METAL) IN LIQUID PARAFFIN

Version No:1

Page 4 of 11

Section 5 - FIRE FIGHTING MEASURES

FIRE INCOMPATIBILITY

Avoid any contamination of this material as it is very reactive and any contamination is potentially hazardous.

Section 6 - ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

MINOR SPILLS

Restrict access to area. Remove all ignition sources. Clean up all spills immediately.

Wear protective clothing, impervious gloves and safety glasses.

Avoid contact with skin and eyes.

DO NOT handle directly. Wear gloves and use scoop / tongs / tools.

- Material from spill may be contaminated with water resulting in generation of highly flammable hydrogen gas with pressurising of closed containers.
- Hold spill material in vented containers only and plan for prompt disposal.

MAJOR SPILLS

Restrict access to area. Remove all ignition sources.

Clean up all spills immediately. Clear area of personnel and move upwind.

Keep dry . DO NOT use water.

Alert Fire Brigade and tell them location and nature of hazard.

- May be violently or explosively reactive.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water and water courses.

Shut off all possible sources of ignition and increase ventilation.

Stop leak if safe to do so.

DO NOT handle directly. Wear gloves and use scoop / tongs / tools.

- Material from spill may be contaminated with water resulting in generation of highly flammable hydrogen gas with pressurising of closed containers.
- Hold spill material in vented containers only and plan for prompt disposal.

After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.

If contamination of drains or waterways occurs, advise emergency services.

EMERGENCY RESPONSE PLANNING GUIDELINES (ERPG)

The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour WITHOUT experiencing or developing

life-threatening health effects is:

sodium 50 mg/m³

irreversible or other serious effects or symptoms which could impair an individual's ability to take protective action is:

sodium 5 mg/m³

other than mild, transient adverse effects without perceiving a clearly defined odour is:

sodium 0.5 mg/m³

The threshold concentration below which most people will experience no appreciable risk of health effects:

sodium 0.5 mg/m³

American Industrial Hygiene Association (AIHA)

Ingredients considered according to the following cutoffs

continued...

SODIUM (METAL) IN LIQUID PARAFFIN

Version No:1

Page 5 of 11

Section 6 - ACCIDENTAL RELEASE MEASURES

Very Toxic (T+)	$\geq 0.1\%$	Toxic (T)	$\geq 3.0\%$
R50	$\geq 0.25\%$	Corrosive (C)	$\geq 5.0\%$
R51	$\geq 2.5\%$		
else	$\geq 10\%$		

where percentage is percentage of ingredient found in the mixture

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

Keep dry. Reacts violently with water. Avoid all personal contact.
Bare unprotected skin should not be exposed to this material.
Wear protective clothing when risk of exposure occurs. Handle and open container with care. Use spark-free tools when handling.
Avoid all ignition sources. Use in a well-ventilated area.
Keep containers securely sealed when not in use.
Avoid sources of heat. Avoid contact with incompatible materials.
Avoid physical damage to containers. When handling, DO NOT eat, drink or smoke.
Wash hands with soap and water after handling.
Work clothes should be laundered separately: NOT at home.
Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.
Use good occupational work practice. Observe manufacturer's storing and handling recommendations.

SUITABLE CONTAINER

DO NOT repack. Use only containers as originally supplied by manufacturer.
· Check that containers are clearly labelled and free from leaks.
For laboratory. Sealed Glass container with sodium under dry kerosene.
Industrial quantities. Supplied as bricks under oil/ kerosene in nitrogen purged sealed metal can inner, which are then packed in a nitrogen purged heavy metal drum outer.
Store in an airtight container under an inert atmosphere such as nitrogen or argon (not carbon dioxide), or in naphtha or another similar liquid hydrocarbon, such as coal oil or kerosene.
Incompatible with halogenated hydrocarbons, as Freon or methylene chloride.

STORAGE INCOMPATIBILITY

Avoid storage with water, compounds of heavy metals such as silver oxide and silver chloride, halogenated hydrocarbon (chlorinated solvents), acids, carbon monoxide, carbon dioxide, volatile hydrocarbons like petroleum ether, halogens and Teflon.
Avoid contact with air.

STORAGE REQUIREMENTS

Do not store where automatic sprinklers are present or where water or steam is used. Do not expose material to air. Keep containers securely sealed.
Do not store with flammables or combustibles or incompatible materials.
Store material in a sealed container under an appropriate inert atmosphere.
Store in a dry, well-ventilated place. Store in a flame-proof area.
Store away from sources of heat or ignition.
Provide warmth in the storage area to keep the material dry when opened.
Protect containers against physical damage.
Check regularly for spills and leaks.
Observe manufacturer's storing and handling recommendations.

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SODIUM (METAL) IN LIQUID PARAFFIN

Version No:1

Page 6 of 11

Section 7 - HANDLING AND STORAGE

SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS



+: *May be stored together*

O: *May be stored together with specific precautions*

X: *Must not be stored together*

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

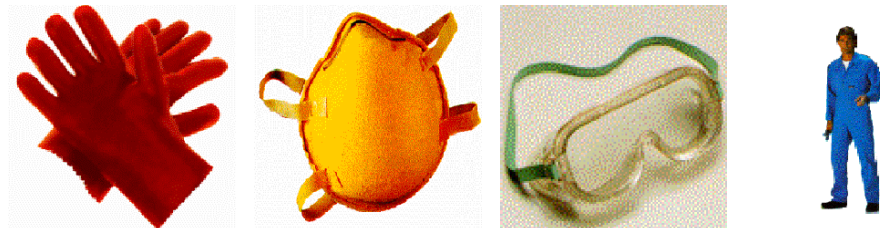
The following materials had no OELs on our records

- sodium: CAS:7440- 23- 5

MATERIAL DATA

No exposure limits set by NOHSC or ACGIH.

PERSONAL PROTECTION



EYE

- Chemical goggles.
- Full face shield may be required for supplementary but never for primary protection of eyes
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

HANDS/FEET

DO NOT handle directly. Wear gloves and use scoop / tongs / tools.

Impervious, gauntlet length gloves.

Layered protective clothing gives added protection from burns, e.g. elbow length mitts (which are oversize for easy removal) over fitting gloves.

Where possible design should minimise manual handling.

Because of fire hazard, do not use rubber or plastic protective clothing which will melt compounding burn injury.

All protective clothing must be kept warm and dry, to prevent condensation

continued...

SODIUM (METAL) IN LIQUID PARAFFIN

Version No:1
Page 7 of 11

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

of atmospheric moisture.

OTHER

Aprons, sleeves, shoulder covers, leggings or spats of pliable flame resistant leather or other suitable materials may also be required in positions where these areas of the body will encounter hot metal.

Cotton washable overalls buttoned to the neck and wrist and washable hat.

Operators should be trained in correct use & maintenance of respirators.

Air supplied breathing apparatus.

Ensure ready access to a burns first aid kit.

Hard hat with brim.

Layered protective clothing gives added protection from burns, consider supply of fire resistant underwear, trousers, heavy duty shoes.

RESPIRATOR

Protection Factor	Half- Face Respirator	Full- Face Respirator	Powered Air Respirator
10 x ES	P1 Air- line*	- -	PAPR- P1 -
50 x ES	Air- line**	P2	PAPR- P2
100 x ES	-	P3	-
		Air- line*	-
100+ x ES	-	Air- line**	PAPR- P3

* - Negative pressure demand ** - Continuous flow.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.

For further information consult your

Occupational Health and Safety Advisor.

ENGINEERING CONTROLS

Use in a well-ventilated area.

If risk of inhalation or overexposure exists, wear SAA approved respirator or work in fume hood.

General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in specific circumstances. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed:
solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25- 0.5 m/s (50- 100 f/min)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5- 1 m/s (100- 200 f/min.)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1- 2.5 m/s (200- 500 f/min.)
grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).	2.5- 10 m/s (500- 2000 f/min.)

Within each range the appropriate value depends on:

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SODIUM (METAL) IN LIQUID PARAFFIN

Version No:1

Page 8 of 11

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Lower end of the range

- 1: Room air currents minimal or favourable to capture
- 2: Contaminants of low toxicity or of nuisance value only.
- 3: Intermittent, low production.
- 4: Large hood or large air mass in motion

Upper end of the range

- 1: Disturbing room air currents
- 2: Contaminants of high toxicity
- 3: High production, heavy use
- 4: Small hood- local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Odourless, soft, silver-white metal oxidising (to grey) rapidly in air. Wax-like at room temperature, brittle at low temperatures. Violently decomposes water on contact with evolution of flammable hydrogen gas to form sodium hydroxide. Insoluble in benzene, kerosene and naphtha. Store in air-tight containers or in naphtha or similar liquid that does not contain water or free oxygen.

PHYSICAL PROPERTIES

Solid.

Molecular Weight: 22.99

Melting Range (°C): 97.6

Solubility in water (g/L): Reacts violently

pH (1% solution): 14

Volatile Component (%vol): Not applicable.

Relative Vapour Density (air=1): Not applicable

Lower Explosive Limit (%): Not applicable

Autoignition Temp (°C): Not available.

State: Divided solid

Boiling Range (°C): 892

Specific Gravity (water=1): 0.97

pH (as supplied): Not applicable

Vapour Pressure (kPa): Not applicable

Evaporation Rate: Not applicable

Flash Point (°C): Not applicable

Upper Explosive Limit (%): Not applicable

Decomposition Temp (°C): Not available

Viscosity: Not available

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

Keep dry. Reacts violently with water.

Presence of air, Presence of water, Presence of extreme humidity.

Presence of heat source and ignition source.

Presence of incompatible materials.

Unstable under normal storage conditions, requires controlled conditions for stability.

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Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion.

Considered an unlikely route of entry in commercial/industrial environments.

EYE

The material can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating.

When applied to the eye(s) of animals, the material produces severe ocular lesions which are present twenty-four hours or more after instillation.

SKIN

The material can produce chemical burns following direct contact with the skin.

Bare unprotected skin should not be exposed to this material.

INHALED

Evidence shows, or practical experience predicts, that the material produces irritation of the respiratory system in a substantial number of individuals following inhalation.

Not normally a hazard due to non-volatile nature of product.

CHRONIC HEALTH EFFECTS

Primary route of exposure is usually by skin contact with the material and inhalation of fumes from the heated material.

As with any chemical product, contact with unprotected bare skin; inhalation of vapour, mist or dust in work place atmosphere; or ingestion in any form, should be avoided by observing good occupational work practice.

TOXICITY AND IRRITATION

unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.
Not available.

Section 12 - ECOLOGICAL INFORMATION

No data for sodium.

Section 13 - DISPOSAL CONSIDERATIONS

Consult State Land Waste Management Authority.

Under an inert atmosphere, cautiously add the material to dry butanol in an appropriate solvent. The chemical reaction may be vigorous and/or exothermic.

Provisions must be made for venting of large volumes of highly flammable hydrogen and/or hydrocarbon gases.

Neutralise the solution with aqueous acid.

Filter off any solid residues for disposal as hazardous waste.

Incinerate the liquid portion in a chemical incinerator equipped with an afterburner and scrubber.

Decontaminate the empty containers or dispose of in an authorised landfill.

(ref. SAFETY)

SODIUM (METAL) IN LIQUID PARAFFIN

Version No:1

Page 10 of 11

Section 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL PROCEDURES

- Collect and package recoverable quantities of sodium in labelled containers for recycling or disposal. For small quantities of sodium wear eye protection, protective clothing and nitrile rubber gloves. Work in a well ventilated area. Place small quantities of solid sodium into a flask. Flush the flask with nitrogen. Dropwise add 95% ethanol at a rate to cause rapid reflux. Stir the contents and heat under reflux until the sodium is dissolved.

SPILLAGE DISPOSAL

- For the disposal of sodium metal clear the area of personnel. Wear a face shield, goggles, protective clothing and nitrile rubber gloves to control personal contact from sodium metal. Cover the sodium with dry sodium carbonate or calcium carbonate and scoop into a dry container. Transfer the contents to a well ventilated area. Work from behind a shield and add a small quantities of dry butanol. Allow to stand for 24 hours and empty the contents into the waste. Dilute with at least 50 times its volume of water.

Section 14 - TRANSPORTATION INFORMATION



Labels Required: DANGEROUS WHEN WET
HAZCHEM: 4WE

UNDG:

Dangerous Goods Class: 4.3
UN Number: 1428
Shipping Name: SODIUM

Subrisk: None
Packing Group: I

Air Transport IATA:

ICAO/IATA Class: 4.3
UN/ID Number: 1428
Special provisions: A1
Cargo Only
Packing Instructions: 412
Passenger and Cargo
Packing Instructions: Forbidden
Passenger and Cargo
Limited Quantity
Packing Instructions: -
Shipping Name: SODIUM

ICAO/IATA Subrisk: None
Packing Group: I

Maximum Qty/Pack: 15 kg
Passenger and Cargo
Maximum Qty/Pack: Forbidden
Passenger and Cargo
Limited Quantity
Maximum Qty/Pack: -

Maritime Transport IMDG:

IMDG Class: 4.3
UN Number: 1428
EMS Number: F- G, S- N
Shipping Name: SODIUM

IMDG Subrisk: None
Packing Group: I
Special provisions: None

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SODIUM (METAL) IN LIQUID PARAFFIN

Version No:1
Page 11 of 11

Section 15 - REGULATORY INFORMATION

REGULATIONS

sodium (CAS: 7440-23-5) is found on the following regulatory lists;
OECD Representative List of High Production Volume (HPV) Chemicals
WHO Guidelines for Drinking-water Quality - Chemicals for which guideline values have not been established

Section 16 - OTHER INFORMATION

The above information is believed to be accurate and represent the best information currently available to us, but does not represent any warranty expressed or implied of the properties of the product. User should make their own investigation to determine the suitability of the information for their particular purpose.

Issue Date: 27-Oct-2017