

Sodium

SAFETY DATA SHEET

1 PRODUCT AND SUPPLIER IDENTIFICATION

Product Name : Sodium Metal

Formula : Na

Supplier : ESPI Metals

1050 Benson Way

Ashland, OR 97520

Telephone : 800-638-2581

Fax : 541-488-8313

Email : sales@espimetals.com

Emergency : Infotrac 800-535-5053 (US) or 352-323-3500 (24 hour)

Recommended Uses : Scientific Research

2 HAZARDS IDENTIFICATION

GHS Classification (29 CFR 1910.1200) : Substances and mixtures which, in contact with water, emit flammable gases, category 1, Skin corrosion/irritation, category 1B, Eye damage/irritation, category 1.

GHS Label Elements :



Signal Word : Danger

Hazard Statements : H260 In contact with water releases flammable gases which may ignite spontaneously, H314 Causes severe skin burns and eye damage.

Precautionary Statements : P223 Keep away from any possible contact with water, because of violent reaction and possible flash fire, P231+P232 Handle under inert gas. Protect from moisture, P260 Do not breathe dust or fume, P264 Wash skin thoroughly after handling, P280 Wear protective gloves/protective clothing/eye protection/face protection, P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting, P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse SKIN with water/shower, P335+P334 Brush off loose particles from skin and immerse in cool water/wrap in wet bandages, P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing, P305+P351+P338 IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing, P310 Immediately call a POISON CENTER or doctor/physician, P363 Wash contaminated clothing before reuse, P370+P378 In case of fire: Use class D metal extinguishing agent for extinction, do not use water, P402+P404 Store in a dry place. Store in a closed container, P405 Store locked up, P501 Dispose of contents/container in accordance with local, state or federal regulations.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient : Sodium

CAS# : 7440-23-5

% : 100

EC# : 231-132-9

4 FIRST AID MEASURES

General information : It is advisable to have tongs, tweezers, scrapers or some kind of implement on hand to remove bits of metal from skin or clothing in the event of an accident. Large amounts of water should be used to rinse or flood the area of contact as small amounts of water may do more harm than good.

INHALATION : Remove the victim to fresh air. Seek immediate medical attention.

INGESTION : Quickly wipe material from mouth and rinse with water. Do not induce vomiting. Seek medical attention immediately.

SKIN : Remove contaminated clothing if necessary. Brush off any visible solids. Wash the affected area with water for at least 15 minutes. Seek medical attention.

EYES : Immediately flush eyes with copious amounts of water, including under eyelids for at least 10-15 minutes. A victim may need assistance in keeping their eyelids open. A 5% solution of boric acid may be used to neutralize any remaining caustic. Seek immediate medical attention.

Most Important Symptoms/Effects, Acute and Delayed : May cause severe irritation and burns. See section 11 for more information.

Indication of Immediate Medical Attention and Special Treatment : This product is corrosive and reacts violently with water. Treatment should first remove as much of the material as possible as quickly as possible and then flush with very large quantities of water. Ingestion presents a singular problem as emesis may produce esophageal damage and/or aspiration damage; dilution with water or other water-containing materials may produce a reaction that exacerbates the corrosive activity. Consideration may be given to gastric lavage with a large diameter tube for removal of material and then dilution with

large amounts of water. Esophagoscopy may be of assistance in this procedure and to assess extent of damage. Treatment is otherwise symptomatic and supportive.

5 FIREFIGHTING MEASURES

Extinguishing Media : USE CLASS D metal extinguishing agent such as Met-L-X, dry soda ash (anhydrous Na_2CO_3), dry sand or graphite powder. If the chosen extinguishing agent is capable of absorbing moisture, provision must be made to keep it dry.

Unsuitable Extinguishing Media : DO NOT USE water, carbon dioxide or carbon tetrachloride.

Specific Hazards Arising from the Material : Reacts violently with water. Contact with water releases flammable gases. When heated to decomposition sodium may emit toxic fumes of sodium oxide and sodium hydroxide.

Special Protective Equipment and Precautions for Firefighters : Full face, self-contained breathing apparatus and full protective clothing to prevent contact with skin and eyes. Material can reignite after fire is initially extinguished. Never leave extinguished fire unattended. Alkali metal fires may produce large quantities of white, opaque smoke that is caustic and may react with nearby materials. Flames may be practically invisible.

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures : Wear appropriate respiratory and protective equipment specified in section 8. Isolate spill area and provide ventilation. Avoid breathing dust or fume. Avoid contact with skin and eyes. Eliminate all sources of ignition.

Methods and Materials for Containment and Cleaning Up : The material may ignite spontaneously in air. Burning material may release toxic fumes. Leave the area unless fitted with a self-contained breathing apparatus. Use completely dry non-sparking tools only. Do not use water for clean-up. Soda ash (powdered lime) or dry sand should be used to completely smother and cover any small spill that occurs. Sweep or scoop up. Place in a dry metal container equipped with a lid and replace the lid promptly. This can be done even if the metal is burning. With the lid in place oxygen will be excluded and the fire will go out.

Environmental Precautions : Do not allow to enter drains or to be released to the environment.

7 HANDLING AND STORAGE

Precautions for Safe Handling : It is strongly recommended that at least two persons be involved in the handling and use of this material. Sodium should only be handled by trained personnel wearing proper protective clothing and equipment specified in section 8. Handle in an enclosed, controlled process under dry protective gas such as argon. Make certain that all equipment and tools to be used in handling are absolutely dry. Protect from air and moisture. Protect from heat, flame and sources of ignition. It is advisable to keep a container of dry sand or soda ash readily available in the work area. Keep combustible materials out of the work area. Avoid contact with skin and eyes. Avoid creating dust. Avoid breathing dust or fumes. Wash thoroughly before eating or smoking.

Conditions for Safe Storage, Including Any Incompatibilities : Protect from oxygen and water. Protect from moisture/humidity. Store under dry inert gas such as argon. Store in a sealed container. Storage containers should be labeled to indicate their contents. Containers should be inspected periodically to check for container integrity. Storage area should be free of combustibles and ignition sources. Do not store together with acids, oxidizers, halogens, halocarbons or alcohols. See section 10 for more information on incompatible materials.

8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits : Sodium

OSHA/PEL : No exposure limit established

ACGIH/TLV : No exposure limit established

Appropriate Engineering Controls : Handle in an inert gas such as argon. Handle in an enclosed, controlled process. Use local exhaust to maintain exposure at low levels. Whenever possible the use of local exhaust ventilation or other engineering controls is the preferred method of controlling exposure to airborne dust and fume to meet established occupational exposure limits. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air. Prepare for the possibility of a fire. Keep extinguishing agents, tools for handling and protective clothing readily available.

Individual Protection Measures, Such as Personal Protective Equipment :

Respiratory Protection : Wear a NIOSH/MSHA approved respirator when high concentrations are present.

Eye Protection : Always wear approved chemical splash proof goggles.

Skin Protection : Rubber gloves, flame retardant protective work clothing.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance :

Form : Solid

Color : Silver metallic

Odor : Not determined

Odor Threshold : Not determined

pH : N/A

Melting Point : 97.8 °C

Boiling Point : 883 °C

Flash Point : N/A

Evaporation Rate : N/A

Flammability : Flammable solid

Upper Flammable Limit : No data

Lower Flammable Limit : No data

Vapor Pressure : 1 mm at 439 °C

Vapor Density : N/A

Relative Density (Specific Gravity) : 0.97 g/cc

Solubility in H₂O : Decomposes

Partition Coefficient (n-octanol/water) : Not determined

Autoignition Temperature : No data

Decomposition Temperature : No data

Viscosity : N/A

10 STABILITY AND REACTIVITY

Reactivity : No data

Chemical Stability : Stable under recommended storage conditions.

Possibility of Hazardous Reactions : Sodium reacts violently with water releasing flammable hydrogen gas.

Conditions to Avoid : Contact with air or water.

Incompatible Materials : Water, alcohols, oxidizers, oxygen, carbon dioxide, halogens, halocarbons, acids, sulfur, sulfur dioxide, phosphorus, ammonia, chlorinated hydrocarbons, hydrogen peroxide, lead oxide, potassium oxides.

Hazardous Decomposition Products : Sodium oxides, hydrogen gas, sodium hydroxides.

11 TOXICOLOGICAL INFORMATION

Likely Routes of Exposure : Product as shipped does not present an inhalation or contact hazard. However subsequent operations may create dusts or fumes or debris which could be inhaled or come into contact with skin or eyes.

Symptoms of Exposure : Inhalation of dust will severely irritate the nasal cavity and respiratory tract. Ingestion will cause burns and perforations of the gastrointestinal tract. Severe thermal burns, corrosion and ulceration of the skin any eyes may occur on direct contact.

Acute and Chronic Effects : Sodium reacts readily with moisture to form caustic and highly corrosive sodium hydroxide with evolution of heat. Corrosive materials are acutely destructive to the respiratory tract, eyes, skin and digestive tract. Eye contact may result in permanent damage and complete vision loss. Inhalation may result in respiratory effects such as inflammation, edema, and chemical pneumonitis. May cause coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. Ingestion may cause damage to the mouth, throat and esophagus. May cause skin burns or irritation depending on the severity of the exposure.

Acute Toxicity : LD50 intraperitoneal - mouse - 4g/kg

Carcinogenicity: **NTP** : Not identified as carcinogenic **IARC** : Not identified as carcinogenic

To the best of our knowledge the chemical, physical and toxicological characteristics of the substance are not fully known.

12 ECOLOGICAL INFORMATION

Ecotoxicity : No data

Persistence and Degradability : No data

Bioaccumulative Potential : No data

Mobility in Soil : No data

Other Adverse Effects : Do not allow material to be released to the environment. No further relevant information available.

13 DISPOSAL CONSIDERATIONS

Waste Disposal Method :

Product : Dispose of in accordance with Federal, State and Local regulations.

Packaging : Dispose of in accordance with Federal, State and Local regulations.

14 TRANSPORT INFORMATION

UN Number : UN1428

UN Proper Shipping Name : Sodium

Transport Hazard Class : 4.3

Packing Group : I

Marine Pollutant : No

Special Precautions : Warning, substances which, in contact with water, emit flammable gases.

15 REGULATORY INFORMATION

TSCA Listed : All components are listed.

Regulation (EC) No 1272/2008 (CLP) : Substances and mixtures which, in contact with water, emit flammable gases, category 1, Skin corrosion/irritation, category 1B, Eye damage/irritation, category 1.

Canada WHMIS Classification (CPR, SOR/88-66) : Substances and mixtures which, in contact with water, emit flammable gases, Skin corrosion/irritation, Serious eye damage/eye irritation.

HMIS Ratings : Health : 3 Flammability : 3 Physical : 2

NFPA Ratings : Health : 3 Flammability : 3 Instability : 2 Special Hazard : W

Chemical Safety Assessment : A chemical safety assessment has not been carried out.

16 OTHER INFORMATION

The information contained in this document is based on the state of our knowledge at the time of publication and is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. ESPI Metals makes no representation, warranty, or guarantee of any kind with respect to the information contained in this document or any use of the product based on this information. ESPI Metals shall not be held liable for any damages resulting from handling or from contact with the above product. Users should satisfy themselves that they have all current data relevant to their particular use.

Prepared by : ESPI Metals

Revised/Reviewed : July 2015