SIGMA-ALDRICH

Material Safety Data Sheet

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Section 1 - Product and Company Information

Product Name Sodium hydride, 60% dispersion in mineral oil
Product Number 452912
Brand Aldrich Chemical

Company Sigma-Aldrich
Street Address 3050 Spruce Street
City, State, Zip, Country SAINT LOUIS, MO 63103 US
Technical Phone: 800-325-5832 **Emergency Phone:** 314-776-6555
Fax: 800-325-5052

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313	EC no	Annex I Index Number
SODIUM HYDRIDE, 55 - 65% DISPERSION IN MINERAL OIL	None	No		

Ingredient Name	CAS #	Percent	SARA 313
SODIUM HYDRIDE	7646-69-7	>= 55.000 % <= 65.000 %	
MINERAL OIL	8012-95-1	>= 35.000 % <= 45.000 %	

Formula NaH
Synonyms

Section 3 - Hazards Identification

Emergency Overview
Flammable (USA) Highly Flammable (EU). Corrosive.
Contact with water liberates extremely flammable gases. Causes severe burns.

HMIS Rating
Health: 3 Flammability: 2 Reactivity: 2 Special Hazard(s) : Water reactive

NFPA Rating
Health: 3 Flammability: 2 Reactivity: 2 Special Hazard(s) : Water reactive

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure
If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately. Do not induce vomiting.

Inhalation Exposure
If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Dermal Exposure
In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

Eye Exposure
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

Flammable Hazards: Yes

Explosion Hazards
Vapor may travel considerable distance to source of ignition and flash back.
Container explosion may occur under fire conditions.
Material readily reacts with water generating flammable and/or explosive hydrogen gas

Explosion Data
Dust Potential
This material, like most materials in powder form, is capable of creating a dust explosion.

Conditions of Flammability
Under fire conditions, material may decompose to form flammable and/or explosive mixtures in air.

Autoignition Temp: N/A **Flammability:** Yes

Extinguishing Media
Suitable
Use approved class D extinguishers or smother with dry sand, dry ground limestone, or dry clay.
Unsuitable
Do not use water. Do not use carbon dioxide extinguisher on this material. Do not use halocarbon extinguishers.

Firefighting
Protective Equipment
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s)
Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

Procedure to be Followed in Case of Leak or Spill
Evacuate area. Shut off all sources of ignition. Use nonsparking tools.

Procedure(s) of Personal Precaution(s)
Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

Methods for Cleaning Up
Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling
User Exposure
Do not breathe dust. Do not get in eyes, on skin, on clothing.

Storage
Suitable
Keep tightly closed. Keep away from heat, sparks, and open flame. Handle and store under nitrogen.
Incompatible Materials
Do not allow contact with water.

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Special Requirements
Handle and store under inert gas.

Section 8 - Exposure Controls / PPE

Engineering Controls
Safety shower and eye bath. Use nonsparking tools. Use only in a chemical fume hood.

Personal Protective Equipment
Respiratory
Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.
Hand
Compatible chemical-resistant gloves.
Eye
Chemical safety goggles.
Other
Faceshield (8-inch minimum).

General Hygiene Measures
Wash contaminated clothing before reuse. Discard contaminated shoes. Wash thoroughly after handling.

Exposure Limits

	Source	Type	Value
	ACGIH	TWA	5 mg/m3
Remarks:	TWA-MIST MINERAL OIL		
			5 mg/m3 Z1A, TWA-MIST
Remarks:	MINERAL OIL		
	ACGIH		10 mg/m3
Remarks:	STEL - MIST MINERAL OIL		
		TWA	0.2 mg/m3
Remarks:	inhalable fraction ACGIHLIS_P MINERAL OIL		

Section 9 - Physical/Chemical Properties

Appearance

Physical State	Color	Form
Solid	Slightly grey	Powder

Molecular Weight: 24.00 AMU

pH	N/A	
BP/BP Range	N/A	
MP/MP Range	N/A	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
SG/Density	92 g/cm3	20 °C
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	

Partition Coefficient	N/A
Decomposition Temp.	N/A
Flash Point °F	N/A
Flash Point °C	N/A
Explosion Limits	N/A
Flammability	N/A
Autoignition Temp	N/A
Solubility	N/A

N/A = not available

Section 10 - Stability and Reactivity

Stability
Conditions to Avoid
Do not allow water to enter container because of violent reaction.
Materials to Avoid
Alcohols, Carbon dioxide..

Hazardous Decomposition Products
Hazardous Decomposition Products
Carbon monoxide, Carbon dioxide, Hydrogen gas.
Hazardous Decomposition Products Formed Upon Contact with Water
Hydrogen gas.

Hazardous Polymerization
Hazardous Polymerization
Will not occur.

Section 11 - Toxicological Information

Route of Exposure
Skin Contact
Causes burns.
Skin Absorption
May be harmful if absorbed through the skin.
Eye Contact
Causes severe burns.
Inhalation
May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Ingestion
May be harmful if swallowed.

Signs and Symptoms of Exposure
Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Inhalation may result in spasm, inflammation and edema of the larynxand bronchi, chemical pneumonitis, and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. If swallowed, this material may cause mild to severe burns to the mouth, throat and digestive tract, difficulty in swallowing, nausea and vomiting, followed by diarrhea and respiratory distress.

RTECS Number: N/A

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation
Contact a licensed professional waste disposal service to dispose of this material.
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable.
Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT
Proper Shipping Name: Sodium hydride
UN#: 1427
Class: 4.3
Packing Group: Packing Group I
Hazard Label: Dangerous when wet.
PIH: Not PIH

IATA
Proper Shipping Name: Sodium hydride
IATA UN Number: 1427
Hazard Class: 4.3
Packing Group: I
Not Allowed - Aircraft: Cargo aircraft only. Not permitted on passenger aircraft.

Section 15 - Regulatory Information

EU Additional Classification
Symbol of Danger: F Xi
Indication of Danger
Highly Flammable. Irritant.
Risk Statements **R:** 15 36
Contact with water liberates extremely flammable gases. Irritating to eyes.
Safety Statements **S:** 26 43
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of fire, use dry powder. Never use water.

US Classification and Label Text
Indication of Danger
Flammable (USA) Highly Flammable (EU). Corrosive.
Risk Statements
Contact with water liberates extremely flammable gases. Causes severe burns.
Safety Statements
Keep container tightly closed and dry. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of fire, use dry powder. Never use water. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

United States Regulatory Information
SARA Listed: No

Canada Regulatory Information
WHMIS Classification
This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: Yes
NDSL: No

Section 16 - Other Information

Disclaimer
For R&D use only. Not for drug, household or other uses.

Warranty
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. Sigma-Aldrich Inc., 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 2006 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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