

World Headquarters
Hach Company
P.O.Box 389
Loveland, CO USA 80539
(970) 669-3050

MSDS No: M00028

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Alkaline Iodide-Azide Reagent Powder Pillows

Catalog Number: 107266

Hach Company
P.O.Box 389
Loveland, CO USA 80539
(970) 669-3050

Emergency Telephone Numbers:
(Medical and Transportation)
(303) 623-5716 24 Hour Service
(515)232-2533 8am - 4pm CST

MSDS Number: M00028

Chemical Name: Not applicable

CAS Number: Not applicable

Additional CAS No. (for hydrated forms): Not applicable

Chemical Formula: Not applicable

Chemical Family: Mixture

Intended Use: Laboratory Reagent Determination of dissolved oxygen

2. HAZARDS IDENTIFICATION

GHS Classification:

Hazard categories: Corrosive to Metals: Met. Corr. 1 Skin Corrosion/Irritation: Skin Corr. 1A Hazardous to the Aquatic Environment: Aquatic Chronic 2 Acute Toxicity: Acute Tox. 3-Orl Acute Toxicity: Acute Tox. 4-Inh Acute Toxicity: Acute Tox. 3-Derm .

GHS Label Elements:

DANGER



Hazard statements: May be corrosive to metals. Toxic if swallowed. Toxic in contact with skin. Harmful if inhaled. Causes severe skin burns and eye damage. May cause damage to liver through prolonged or repeated exposure by inhalation. Harmful to aquatic life with long lasting effects.

Contact with acids liberates very toxic gas.

Precautionary statements: Wear protective gloves / protective clothing / eye protection / face protection. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Handle environmental release according to local, state, federal, provincial requirements. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF INHALED: Remove victim/person to fresh air and keep at rest in a position comfortable for breathing. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

HMIS:

Health: 3

Flammability: 1

Reactivity: 1

Protective Equipment: X - See protective equipment, Section 8.

NFPA:

Health: 3

Flammability: 1

Reactivity: 1

Symbol: Not applicable

WHMIS Hazard Classification: Class E - Corrosive material Class D, Division 1, Subdivision B - Toxic material (immediate effects)

WHMIS Symbols: Acute Poison Corrosive

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Components according to GHS:

Lithium Hydroxide

CAS Number: 1310-65-2

Chemical Formula: LiOH · H₂O

GHS Classification: Met. Corr. 1, H290; Acute Tox. 3 -Orl., H301; Skin Corr. 1A, H314; Acute Tox. 3 - Inh, H331

Percent Range (Trade Secret): 55.0 - 65.0

Percent Range Units: weight / weight

PEL: 15 mg/m³ as inhalable dust; 5 mg/m³ as respirable dust

TLV: 10 mg/m³ as inhalable dust; 3 mg/m³ as respirable dust

WHMIS Symbols: Corrosive Acute Poison

Potassium Iodide

CAS Number: 7681-11-0

Chemical Formula: KI

GHS Classification: Acute Tox 5 -Orl, H303; Skin Irr. 2, H315; Eye Irr. 2A, H319

Percent Range (Trade Secret): 30.0 - 40.0

Percent Range Units: weight / weight

PEL: 15 mg/m³ as total dust; 5 mg/m³ as respirable dust

TLV: 10 mg/m³ as inhalable dust; 3 mg/m³ as respirable dust

WHMIS Symbols: Other Toxic Effects

Sodium Azide

CAS Number: 26628-22-8

Chemical Formula: NaN₃

GHS Classification: Acute Tox. 2-Orl, H300; Aquatic acute 1, H400; Aquatic chronic 1, H410

Percent Range (Trade Secret): 1.0 - 5.0

Percent Range Units: weight / weight

PEL: Not established

TLV: C: 0.29 mg/m³ as Sodium azide; C: 0.11 ppm as Hydrazoic acid vapor

WHMIS Symbols: Acute Poison

4. FIRST AID MEASURES

General Information: In the event of exposure, show this Material Safety Data Sheet and label (where possible) to a doctor.

Advice to doctor: Treat symptomatically.

Eye Contact: Immediately flush eyes with water for 15 minutes. Call physician.

Skin Contact (First Aid): Remove contaminated clothing. Wash skin with plenty of water for 15 minutes. Call physician immediately.

Inhalation: Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Call physician.

Ingestion (First Aid): Do not induce vomiting. Give 1-2 glasses of water. Never give anything by mouth to an unconscious person. Call physician immediately.

5. FIRE FIGHTING MEASURES

Flammable Properties: Does not burn, but may melt in a fire, releasing toxic fumes. During a fire, corrosive and toxic gases may be generated by thermal decomposition.

Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear. Evacuate area and fight fire from a safe distance.

Extinguishing Media: Carbon dioxide Dry chemical. Water.

Extinguishing Media NOT To Be Used: Not applicable

Fire / Explosion Hazards: Contact with metals gives off hydrogen gas which is flammable Closed containers may explode if heated.

Hazardous Combustion Products: None reported

6. ACCIDENTAL RELEASE MEASURES

Spill Response Notice:

Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

Containment Technique: Stop spilled material from being released to the environment. Releases of this material may contaminate the environment.

Clean-up Technique: Avoid contact with spilled material. Sweep up material. Dispose of material in government approved hazardous waste facility. Decontaminate the area of the spill with a weak acid solution.

Evacuation Procedure: Evacuate general area (50 foot radius or as directed by your facility's emergency response plan) when: a pound or more of loose powder is spilled. If conditions warrant, increase the size of the evacuation.

DOT Emergency Response Guide Number: 154

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes skin clothing Do not breathe dust. Wash thoroughly after handling. Use with adequate ventilation. Maintain general industrial hygiene practices when using this product.

Storage: Store in a cool, dry place. Keep away from: metals acids / acid fumes.

Flammability Class: Not applicable

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use a fume hood to avoid exposure to dust, mist or vapor. Maintain general industrial hygiene practices when using this product.

Personal Protective Equipment:

Eye Protection: chemical splash goggles

Skin Protection: nitrile gloves In the EU, the selected gloves must satisfy the specifications of EU Directive 89/686/EEC and standard EN 374 derived from it. lab coat

Inhalation Protection: laboratory fume hood and / or adequate ventilation

Precautionary Measures: Avoid contact with: eyes skin clothing Do not breathe: dust Wash thoroughly after handling. Keep away from: metals acids/acid fumes

TLV: 10 mg/m³ as inhalable dust

PEL: 15 mg/m³ as inhalable dust; 5 mg/m³ as respirable dust

For Occupational Exposure Limits (OEL) for ingredients, see section 3 - Composition/Information on Ingredients.:

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White crystals

Physical State: Solid

Molecular Weight: Not applicable

Odor: Slight

Odor Threshold: Not applicable

pH: 12.6 (5% solution)

Metal Corrosivity:

Corrosivity Classification: Classified as corrosive to metals.

Steel: Not determined

Aluminum: 0.248 in/yr (6.30 mm/yr)

Specific Gravity/ Relative Density (water = 1; air =1): 1.94

Viscosity: Not applicable

Solubility:

Water: Soluble
Acid: Soluble
Other: Not determined
Partition Coefficient (n-octanol / water): Not applicable
Coefficient of Water / Oil: Not applicable
Melting Point: 110 °C (230 °F)
Decomposition Temperature: Not determined
Boiling Point: Not applicable
Vapor Pressure: Not applicable
Vapor Density (air = 1): Not applicable
Evaporation Rate (water = 1): Not applicable
Volatile Organic Compounds Content: Not applicable
Flammable Properties: Does not burn, but may melt in a fire, releasing toxic fumes. During a fire, corrosive and toxic gases may be generated by thermal decomposition.
Flash Point: Not applicable
Method: Not applicable
Flammability Limits:
Lower Explosion Limits: Not applicable
Upper Explosion Limits: Not applicable
Autoignition Temperature: Not applicable
Explosive Properties:
Not classified according to GHS criteria.
Oxidizing Properties:
Not classified according to GHS criteria.
Reactivity Properties:
Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria.
Gas under Pressure:
Not applicable

10. STABILITY AND REACTIVITY

Chemical Stability: Stable when stored under proper conditions.
Mechanical Impact: None reported
Static Discharge: None reported.
Reactivity / Incompatibility: May react violently in contact with: acids oxidizers
Hazardous Decomposition: Heating to decomposition releases toxic and/or corrosive fumes of: Iodine iodine compounds potassium oxide nitrogen oxides sodium oxides Contact with metals may release flammable hydrogen gas.
Conditions to Avoid: Excess moisture Extreme temperatures Contact with acid or acid fumes Contact with oxidizers

11. TOXICOLOGICAL INFORMATION

Toxicokinetics, Metabolism and Distribution: No information available for mixture.
Toxicologically Synergistic Products: None reported
Acute Toxicity: Acute Toxicity Estimate (ATE) - Calculated from Ingredient Toxicity Data Route Data Given Below
Oral Rat LD50 = 256 mg/kg
Dermal Rabbit LD50 = 862 mg/kg
Inhalation (powder/dust) Rat LC50 = 1.5 mg/L
Specific Target Organ Toxicity - Single Exposure (STOT-SE): Based on classification principles, the classification criteria are not met.
Specific Target Organ Toxicity - Repeat Exposure (STOT-RE): Based on classification principles, the classification criteria are not met.
Skin Corrosion/Irritation: Corrosive to skin.
Eye Damage: Corrosive to eyes.
Sensitization: Based on classification principles, the classification criteria are not met.
CMR Effects/Properties (carcinogenic, mutagenic or toxic to reproduction): Based on classification principles, the classification criteria are not met. Data insufficient for classification
Sodium Azide: DNA inhibition in human fibroblasts @ 50 mg/l; other data reported in RTECS.
This product does NOT contain any IARC listed chemicals.
This product does NOT contain any NTP listed chemicals.
This product does NOT contain any OSHA listed carcinogens.

Symptoms/Effects:

Ingestion: Toxic Causes: severe burns hypotension May cause iodism, which symptoms include skin rash, conjunctivitis, runny nose, sneezing, bronchitis, headache, fever and irritation of mucous membranes. May cause: abdominal pain dizziness nausea vomiting respiratory stimulation convulsions followed by respiratory depression central nervous system effects kidney damage liver damage spleen damage lung damage coma death

Inhalation: Causes: severe burns May cause: coughing shortness of breath bronchitis headache dizziness weakness respiratory stimulation convulsions followed by respiratory depression death

Skin Absorption: Toxic Effects similar to those of ingestion

Chronic Effects: Lithium compounds have been implicated in development of aplastic anemia. Signs of lithium poisoning include dehydration, extreme weight loss, fine tremor of hands, nausea, vomiting and diarrhea. Chronic overexposure may cause headache central nervous system effects kidney damage liver damage adverse effects to the blood brain damage coma death Not determined

Medical Conditions Aggravated: Sodium azide produces a larger blood pressure drop in persons with high blood pressure than in persons with normal blood pressure. Pre-existing: Eye conditions Skin conditions Respiratory conditions Kidney conditions Liver conditions

12. ECOLOGICAL INFORMATION

Product Ecological Information: --

No ecological data available for this product. Do not place in landfill. Recycle appropriately. Do not release into the environment. Mobility in soil: Highly mobile

Method Used for Estimation of Aquatic Toxicity of Mixture Summation Method M-factor (Multiplier) for highly toxic ingredients: 1

Ingredient Ecological Information: Sodium azide: 96 hr Oncorhynchus mykiss LC50 = 0.8 mg/L; 96 hr Lepomis macrochirus LC50 = 0.68 mg/L; 48 hr Daphnia pulex EC50 = 4.2 mg/L; 96 hr Selenastrum capricornutum ErC50 = 0.348 mg/L. Potassium iodide: 48 hr Aquatic invertebrates EC50 = 9.8 mg/L

CEPA categorization for each and every ingredient: Persistent and inherently toxic to non-human organisms (PiT)

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: D002

Special Instructions (Disposal): Never put unreacted azides down the drain! Dispose of material in an E.P.A. approved hazardous waste facility.

Empty Containers: Rinse three times with an appropriate solvent. Dispose of empty container as normal trash. In the US, rinsate from empty containers is classified as hazardous waste and should be disposed of at an E.P. A. approved facility. Rinsate from empty containers may contain sufficient product to require disposal as hazardous waste.

NOTICE (Disposal): These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information. In Europe: Chemical and analysis solutions must be disposed of in compliance with the respective national regulations. Product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system.

14. TRANSPORT INFORMATION

D.O.T.:

D.O.T. Proper Shipping Name: Lithium Hydroxide Mixture

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Hazard Class: 8

Subsidiary Risk: NA

ID Number: UN2680

Packing Group: II

T.D.G.:

Proper Shipping Name: Lithium Hydroxide Mixture

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Hazard Class: 8

Subsidiary Risk: NA

UN Number/PIN: 2680

Packing Group: II

I.C.A.O.:

I.C.A.O. Proper Shipping Name: Lithium Hydroxide Mixture

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Hazard Class: 8

Subsidiary Risk: NA

ID Number: UN2680

Packing Group: II

I.M.O.:

Proper Shipping Name: Lithium Hydroxide Mixture

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Hazard Class: 8

Subsidiary Risk: NA

ID Number: UN2680

Packing Group: II

Additional Information: There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is NOT in a set or kit, the classification given above applies. If the item IS part of a set or kit, the classification would change to the following: UN3316 Chemical Kit, Class 9, PG II or III. If the item is not regulated, the Chemical Kit classification does not apply.

15. REGULATORY INFORMATION

U.S. Federal Regulations:

O.S.H.A.: This product meets the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)

E.P.A.:

S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370): Immediate (Acute) Health Hazard Delayed (Chronic) Health Hazard

S.A.R.A. Title III Section 313 (40 CFR 372): This product contains a chemical(s) subject to the reporting requirements of Section 313 of Title III of SARA.

Sodium azide

302 (EHS) TPQ (40 CFR 355): Sodium Azide 500 lbs.

304 CERCLA RQ (40 CFR 302.4): Sodium azide 1000 lbs.

304 EHS RQ (40 CFR 355): Sodium Azide - RQ 1000 lbs.

Clean Water Act (40 CFR 116.4): Not applicable

RCRA: Contains RCRA regulated substances. See Section 13, EPA Waste ID Number.

State Regulations:

California Prop. 65: No Prop. 65 listed chemicals are present in this product.

Identification of Prop. 65 Ingredient(s): None

California Perchlorate Rule CCR Title 22 Chap 33: Not applicable

Trade Secret Registry: Not applicable

National Inventories:

U.S. Inventory Status: All ingredients in this product are listed on the TSCA 8(b) Inventory (40 CFR 710).

CAS Number: Not applicable

Canadian Inventory Status: All ingredients of this product are DSL Listed.

EEC Inventory Status: All ingredients used to make this product are listed on EINECS / ELINCS.

Australian Inventory (AICS) Status: All ingredients are listed.

New Zealand Inventory (NZIoC) Status: All components either listed or exempt.

Korean Inventory (KECI) Status: All components of this product are either listed, listed as the anhydrous compound or exempt.

Japan (ENCS) Inventory Status: All components either listed or exempt.

China (PRC) Inventory (MEP) Status: All components either listed or exempt.

16. OTHER INFORMATION

References: 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor). Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. CCINFO RTECS. Canadian Centre for Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993. Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Association, 1991. List of Dangerous Substances Classified in Annex I of the EEC Directive (67/548) - Classification, Packaging and Labeling of Dangerous Substances, Amended July 1992. Outside Testing. Technical Judgment.

Complete Text of H phrases referred to in Section 3: H290 May be corrosive to metals. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H411 Toxic to aquatic life with long lasting effects.

Revision Summary: . Substantially Revised MSDS Substantial revision to comply with EU Reg 1272/2008, Reg 1907/2006 and UN GHS (ST/SG/AC.10/36/Add.3).

Date of MSDS Preparation:

Day: 16

Month: June

Year: 2014

MSDS Prepared: MSDS prepared by Product Compliance Department extension 3350

CCOHS Evaluation Note: It is offered under exemption from WHMIS labeling as specified in the Controlled Products Regulation (CPR) Section 17. It is offered under the interim policy that was established by Health Canada permitting use of GHS-formatted safety data sheets in Canada prior to revision of CPR to GHS. This product has been classified and labeled in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3). This SDS has been prepared in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3).

Legend:

NA - Not Applicable	w/w - weight/weight
ND - Not Determined	w/v - weight/volume
NV - Not Available	v/v - volume/volume

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

**THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE.
HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA
OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.**

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