

Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 02/11/2010

Reviewed on 02/10/2010

1 Identification of substance:

Product details:

Product name: Methylmercury(II) hydroxide, 1M in H2O

Stock number: 13395

Manufacturer/Supplier:

Alfa Aesar, A Johnson Matthey Company
Johnson Matthey Catalog Company, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Emergency Phone: (978) 521-6300
CHEMTREC: (800) 424-9300
Web Site: www.alfa.com

Information Department: Health, Safety and Environmental Department

Emergency information:

During normal hours the Health, Safety and Environmental Department. After normal hours call Chemtrec at (800) 424-9300.

2 Composition/Data on components:

Chemical characterization:

Description: (CAS#)

Methylmercury(II) hydroxide (CAS# 1184-57-2): 23%

Water (CAS# 7732-18-5): 77%

Identification number(s):

Index number: 080-004-00-7

3 Hazards identification

Hazard description:



T+ Very toxic
N Dangerous for the environment

Information pertaining to particular dangers for man and environment

R 26/27/28 Very toxic by inhalation, in contact with skin and if swallowed.

R 33 Danger of cumulative effects.

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH	4	Health (acute effects) = 4
FIRE	0	Flammability = 0
REACTIVITY	1	Reactivity = 1

GHS label elements



Danger

3.1/2 - Fatal if swallowed.

3.1/1 - Fatal in contact with skin.

3.1/2 - Fatal if inhaled.



Warning

3.9/2 - May cause damage to organs through prolonged or repeated exposure.



Warning

4.1/1 - Very toxic to aquatic life with long lasting effects.

Prevention:

Do not breathe dust/fume/gas/mist/vapours/spray.

Do not get in eyes, on skin, or on clothing.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

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Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.
Wear respiratory protection.

Response:

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
IF ON SKIN: Gently wash with plenty of soap and water.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Immediately call a POISON CENTER or doctor/physician.

Get medical advice/attention if you feel unwell.

Specific treatment is urgent (see on this label).

Specific treatment (see on this label).

Specific measures (see on this label).

Rinse mouth.

Remove/Take off immediately all contaminated clothing.

Wash contaminated clothing before reuse.

Collect spillage.

Storage:

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Disposal:

Dispose of contents/container in accordance with local/regional/national/international regulations.

4 First aid measures

General information

Immediately remove any clothing soiled by the product.

Remove breathing apparatus only after contaminated clothing has been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

After skin contact

Immediately wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

After eye contact

Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing

Do not induce vomiting; immediately call for medical help.

Seek immediate medical advice.

5 Fire fighting measures

Suitable extinguishing agents

Product is not flammable. Use fire fighting measures that suit the surrounding fire.

Special hazards caused by the material, its products of combustion or resulting gases:

In case of fire, the following can be released:

Carbon monoxide and carbon dioxide

Mercury and organic compounds containing mercury

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

6 Accidental release measures

Person-related safety precautions:

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Measures for environmental protection:

Do not allow material to be released to the environment without proper governmental permits.

Measures for cleaning/collecting:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Additional information:

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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7 Handling and storage

Handling

Information for safe handling:

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Open and handle container with care.

Information about protection against explosions and fires: The product is not flammable

Storage

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility:

Aqueous solutions are incompatible with alkali and alkaline earth metals and many reactive organic and inorganic chemicals.

Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

8 Exposure controls and personal protection

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Components with limit values that require monitoring at the workplace:

methyl mercury, as Hg

	mg/m ³
ACGIH TLV	0.01; 0.03-STEL (skin)
Austria MAK	0.05
Belgium TWA	0.01 (skin)
Denmark TWA	0.05 (skin)
Finland TWA	0.05 (skin)
France VME	0.05 (skin)
Germany MAK	0.01
Japan OEL	0.05
Korea TLV	0.01; 0.03-STEL (skin)
Netherlands MAC-TGG	0.05
Norway TWA	0.05
Sweden NGV	0.05 (vapor)
United Kingdom TWA	0.025
USA PEL	0.01 (skin)

Additional information: No data

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

Breathing equipment: Use suitable respirator when high concentrations are present.

Protection of hands:

Impervious gloves

Check protective gloves prior to each use for their proper condition.

Material of gloves

The selection of suitable gloves not only depends on the material, but also on quality.

Quality will vary from manufacturer to manufacturer.

Eye protection: Safety glasses

Body protection: Protective work clothing.

9 Physical and chemical properties:

General Information

Form:	Solution
Color:	Colorless
Odor:	Characteristic

Change in condition

Melting point/Melting range:	Not determined
Boiling point/Boiling range:	Not determined

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Sublimation temperature / start:	Not determined
Flash point:	Not determined
Ignition temperature:	Not determined
Decomposition temperature:	Not determined
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined
Upper:	Not determined
Vapor pressure:	Not determined
Density:	Not determined
Solubility in / Miscibility with Water:	Fully miscible

10 Stability and reactivity

Thermal decomposition / conditions to be avoided:

Decomposition will not occur if used and stored according to specifications.

Materials to be avoided:

Aqueous solutions are incompatible with alkali and alkaline earth metals and many reactive organic and inorganic chemicals.

Dangerous reactions

Reacts with alkali metals.

Reacts with alkaline earth metals.

Dangerous products of decomposition: Carbon monoxide and carbon dioxide

11 Toxicological information

Acute toxicity:

Primary irritant effect:

on the skin: Irritant to skin and mucous membranes.

on the eye: Irritating effect.

Sensitization: No sensitizing effects known.

Subacute to chronic toxicity:

Organic mercury compounds may attack the central nervous system causing permanent damage. Symptoms include loss of sensation in the hands and feet and in the areas around the mouth, diminishment of vision resulting in tunnel vision, ataxia, inflammation of the gums and mouth, memory loss, general fatigue, dysarthria and hearing loss. Severe poisoning produces blindness, coma and death. Severe poisoning in humans may occur even at doses as small as a few milligrams per kilogram of body weight. There may be a period of weeks to months before development of symptoms.

Additional toxicological information:

Danger through skin absorption.

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12 Ecological information:

Ecotoxicological effects:

Remark: Toxic for fish

General notes:

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Do not allow material to be released to the environment without proper governmental permits.

Toxic for aquatic organisms

13 Disposal considerations

Product:

Recommendation Consult state, local or national regulations to ensure proper disposal.

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Uncleaned packagings:**Recommendation:** Disposal must be made according to official regulations.**Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

DOT regulations:

Hazard class: 6.1
Identification number: UN2024
Packing group: II
Proper shipping name (technical name): MERCURY COMPOUND, LIQUID, N.O.S. (methylmercury hydroxide solution)
Label: 6.1

Land transport ADR/RID (cross-border)

ADR/RID class: 6.1 (T4) Toxic substances
Danger code (Kemler): 60
UN-Number: 2024
Packaging group: II
Special marking: Symbol (fish and tree)
Description of goods: 2024 MERCURY COMPOUND, LIQUID, N.O.S. (methylmercury hydroxide solution)

Maritime transport IMDG:

IMDG Class: 6.1
UN Number: 2024
Label: 6.1
Packaging group: II
EMS Number: F-A, S-A
Marine pollutant: No
Proper shipping name: MERCURY COMPOUND, LIQUID, N.O.S. (methylmercury hydroxide solution)

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: 6.1
UN/ID Number: 2024
Label: 6.1
Packaging group: II
Proper shipping name: MERCURY COMPOUND, LIQUID, N.O.S. (methylmercury hydroxide solution)

UN "Model Regulation": UN2024, MERCURY COMPOUND, LIQUID, N.O.S., 6.1, II**Environmental hazards:** Environmentally hazardous substance, liquid; Marine Pollutant

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15 Regulations

Product related hazard informations:

Hazard symbols:

T+ Very toxic
N Dangerous for the environment

Risk phrases:

26/27/28 Very toxic by inhalation, in contact with skin and if swallowed.
33 Danger of cumulative effects.
51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Safety phrases:

13 Keep away from food, drink and animal feedingstuffs.
28 After contact with skin, wash immediately with plenty of soap and water
36 Wear suitable protective clothing.
45 In case of accident or if you feel unwell, seek medical advice immediately.
60 This material and its container must be disposed of as hazardous waste.
61 Avoid release to the environment. Refer to special instructions/Safety data sheets

Special labeling of certain preparations:

This product contains a chemical known to the state of California to cause cancer or reproductive toxicity.

National regulations

This product is not listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted to research and development only.

This product contains a chemical known to the state of California to cause cancer or reproductive toxicity.

Some or all of the components of this product are not listed on the Canadian Domestic Substances List (DSL) or the Canadian Non-Domestic Substances List (NDSL).

Information about limitation of use:

For use only by technically qualified individuals.
This product contains mercury and is subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and 40CFR372.

16 Other information:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing MSDS: Health, Safety and Environmental Department.

Contact: Zachariah Holt

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code For Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
CAS: Chemical Abstracts Service (division of the American Chemical Society)
HMIS: Hazardous Materials Identification System (USA)

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