

Hayem's Reagent

Print date: 02.07.2015

Product code: 3E-096

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Hayem's Reagent

1.2. Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/mixture**

Use as laboratory reagent

1.3. Details of the supplier of the safety data sheet

Company name: Waldeck GmbH & Co KG
Division Chroma
Street: Havixbecker Str. 62
Place: D-48161 Münster
Post-office box: 410180
D-48065 Münster
Telephone: +49(0)180/2247662 Telefax: +49(0)180/1247662
Responsible Department: Labor
Mo. – Do.: 08.00 – 17.00 Uhr, Fr.: 08.00 – 15.00 Uhr

1.4. Emergency telephone number:

+49(0)180/2247662

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Directive 67/548/EEC or 1999/45/EC**

Indications of danger: Xn - Harmful

R phrases:

Harmful if swallowed.

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Hazard categories:

Acute toxicity: Acute Tox. 3

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Toxic if swallowed.

Harmful to aquatic life with long lasting effects.

2.2. Label elements**Hazardous components which must be listed on the label**

mercury dichloride; mercuric chloride

Signal word: Danger

Pictograms: GHS06

**Hazard statements**

H301

Toxic if swallowed.

H412

Harmful to aquatic life with long lasting effects.



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Precautionary statements

P273	Avoid release to the environment.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P330	Rinse mouth.
P405	Store locked up.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
REACH No		
231-299-8	mercury dichloride; mercuric chloride	
7487-94-7	Muta. Cat. 3, Repr. Cat. 3, T+ - Very toxic, T - Toxic, C - Corrosive, N - Dangerous for the environment R68-62-28-48/24/25-34-50-53	< 1 %
080-010-00-X	Muta. 2, Repr. 2, Acute Tox. 2, STOT RE 1, Skin Corr. 1B, Aquatic Acute 1 (M-Factor = 1), Aquatic Chronic 1; H341 H361f *** H300 H372 ** H314 H400 H410	

Full text of R, H and EUH phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalation

Provide fresh air. Medical treatment necessary.

After contact with skin

Wash with plenty of water. Immediately remove any contaminated clothing, shoes or stockings. Medical treatment necessary.

After contact with eyes

After eye contact: Rinse immediately carefully and thoroughly with eye-bath or water. Consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water. Induce vomiting when the affected person is not unconscious. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.



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5.2. Special hazards arising from the substance or mixture

Non-flammable.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations.

Advice on storage compatibility

No special measures are necessary.

7.3. Specific end use(s)

Use as laboratory reagent

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
-	Mercury: divalent inorganic mercury compounds including mercuric oxide and mercuric chloride (measured as mercury)	-	0.02		TWA (8 h)	
		-	-		STEL (15 min)	

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8.2. Exposure controls**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Eye/face protection

Wear eye/face protection.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Wear suitable protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	liquid
Colour:	colourless
Odour:	odourless

Test method

pH-Value (at 20 °C):	4,0 - 6,5
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Changes in the physical state

Melting point:	not determined
Initial boiling point and boiling range:	not determined
Flash point:	not determined

Flammability

Solid:	not applicable
Gas:	not applicable
Lower explosion limits:	not determined
Upper explosion limits:	not determined

Auto-ignition temperature

Solid:	not applicable
Gas:	not applicable
Decomposition temperature:	not determined



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Oxidizing properties

Not oxidizing.

Vapour pressure:

not determined

Density (at 20 °C):

1,01 g/cm³Water solubility:
(at 20 °C)

very soluble

Solubility in other solvents

not determined

Partition coefficient:

not determined

Vapour density:

not determined

Evaporation rate:

not determined

9.2. Other information

Solid content:

not determined

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

none

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Toxic if swallowed.

ATEmix calculated

ATE (oral) 166,7 mg/kg

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
7487-94-7	mercury dichloride; mercuric chloride				
	oral	LD50	1 mg/kg	Rat	RTECS

Irritation and corrosivity

Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.



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STOT-single exposure

Based on available data, the classification criteria are not met.

Severe effects after repeated or prolonged exposure

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Additional information on tests

This mixture is classified as hazardous according to regulation (EC) No. 1272/2008 [CLP]. Special hazards arising from the substance or mixture!

SECTION 12: Ecological information

12.1. Toxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

CAS No	Chemical name					
	Aquatic toxicity	Method	Dose	[h] [d]	Species	Source
7487-94-7	mercury dichloride; mercuric chloride					
	Acute fish toxicity	LC50	0,13 mg/l	96 h	Leuciscus idus	

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The product has not been tested.

12.6. Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

Contaminated packaging

This material and its container must be disposed of as hazardous waste. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:	UN 2024
14.2. UN proper shipping name:	mercury dichloride; mercuric chloride
14.3. Transport hazard class(es):	6.1



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14.4. Packing group: II
Classification code: T4
Tunnel restriction code: D/E

Inland waterways transport (ADN)

14.1. UN number: UN 2024
14.2. UN proper shipping name: mercury dichloride; mercuric chloride
14.3. Transport hazard class(es): 6.1
14.4. Packing group: II
Classification code: T4

Marine transport (IMDG)

14.1. UN number: UN 2024
14.2. UN proper shipping name: mercury dichloride; mercuric chloride
14.3. Transport hazard class(es): 6.1
14.4. Packing group: II
EmS: F-A S-A

Air transport (ICAO)

14.1. UN number: UN 2024
14.2. UN proper shipping name: mercury dichloride; mercuric chloride
14.3. Transport hazard class(es): 6.1
14.4. Packing group: II

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

No information available.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulatory information

Additional information

To follow: 850/2004/EC, 79/117/EEC, 689/2008/EC

National regulatory information

Employment restrictions: Observe employment restrictions for young people. Observe employment restrictions for child bearing mothers and nursing.

Water contaminating class (D): 2 - water contaminating

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

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)
 IMDG: International Maritime Code for Dangerous Goods

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IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Relevant R-phrases (Number and full text)

- | | |
|----------|--|
| 28 | Very toxic if swallowed. |
| 34 | Causes burns. |
| 48/24/25 | Toxic: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed. |
| 50 | Very toxic to aquatic organisms. |
| 53 | May cause long-term adverse effects in the aquatic environment. |
| 62 | Possible risk of impaired fertility. |
| 68 | Possible risks of irreversible effects. |

Relevant H- and EUH-phrases (Number and full text)

- | | |
|-------|---|
| H300 | Fatal if swallowed. |
| H301 | Toxic if swallowed. |
| H314 | Causes severe skin burns and eye damage. |
| H341 | Suspected of causing genetic defects. |
| H361f | Suspected of damaging fertility. |
| H372 | Causes damage to organs through prolonged or repeated exposure. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects. |

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)