

# HYDRAZINE HYDRATE FOR SYNTHESIS MSDS

CAS No: 7803-57-8 MSDS



## MATERIAL SAFETY DATA SHEET (MSDS)

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Substance  
:  
CAS No : 7803-57-8  
Product code : B-01370  
Synonyms : Hydrazinium hydroxide

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### 1.2.1. Relevant identified uses

Use of the substance/mixture : Industrial. For professional use only

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

Bio-Chem Chemicals  
5455, Nicholson Road Science Market,  
Ambala Cantt. 133001 Haryana (India)  
+91-82952 41953  
[info@biofinechemical.com](mailto:info@biofinechemical.com) - [www.biofinechemical.com](http://www.biofinechemical.com)

#### 1.4. Emergency telephone number

Emergency number : +91 99921 51495 (10.00am - 06.30pm) (Office Hours)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Flammable liquids, H226  
Category 3  
Acute toxicity (oral), H301  
Category 3  
Acute toxicity (dermal), H311  
Category 3  
Acute toxicity (inhal.), H331  
Category 3  
Skin corrosion/irritation, H314  
Category 1B  
Sensitisation — Skin, H317  
category 1  
Carcinogenicity, Category H350  
1A  
Hazardous to the aquatic H410  
environment — Chronic  
Hazard, Category 1

Full text of classification categories and H statements : see section 16

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### Classification according to Directive 67/548/EEC or 1999/45/EC

Carc.Cat.1; R45

T; R23/24/25

C; R34

R43

N; R50/53

R10

Full text of R-phrases: see section 16

### Adverse physicochemical, human health and environmental effects

No additional information available

## 2.2. Label elements

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

Hazard pictograms (CLP) :



GHS02

GHS05

GHS06

GHS08

GHS09

Signal word (CLP) : Danger

Hazard statements (CLP) :

- H226 - Flammable liquid and vapour
  - H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled
  - H314 - Causes severe skin burns and eye damage
  - H317 - May cause an allergic skin reaction
  - H350 - May cause cancer
  - H410 - Very toxic to aquatic life with long lasting effects
- Precautionary statements (CLP) :
- P201 - Obtain special instructions before use
  - P273 - Avoid release to the environment
  - P280 - Wear protective gloves/protective clothing/eye protection/face protection
  - P301+P310 - IF SWALLOWED: immediately call a POISON CENTER or doctor/physician
  - P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

## 2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Name : HYDRAZINE HYDRATE FOR SYNTHESIS

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Full text of R- and H-phrases: see section 16

### 3.2. Mixture

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
- First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Immediately call a POISON CENTER or doctor/physician. Wash with plenty of soap and water. Wash contaminated clothing before reuse.
- First-aid measures after eye contact : 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.
- First-aid measures after ingestion : Rinse mouth. Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

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

- Symptoms/injuries : Causes severe skin burns and eye damage.
- Symptoms/injuries after inhalation : May cause an allergic skin reaction.
- Symptoms/injuries after skin contact : Toxic in contact with skin.
- Symptoms/injuries after ingestion : Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.
- Chronic symptoms : May cause cancer.

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

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- Suitable extinguishing media : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO<sub>2</sub>).
- Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : Flammable liquid and vapour.
- Explosion hazard : May form flammable/explosive vapour-air mixture.

### 5.3. Advice for firefighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.

#### 6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel. Do not breathe gas.

#### 6.1.2. For emergency responders

- Protective equipment : Use personal protective equipment as required.
- Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Very toxic to aquatic life with long lasting effects.

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### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Collect spillage. On land, sweep or shovel into suitable containers. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.

Precautions for safe handling : No naked lights. No smoking. Avoid contact with skin and eyes.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations.

Storage conditions : Keep container tightly closed. Store in a well-ventilated place. Keep cool.

Incompatible materials : Heat sources.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

Hand protection : protective gloves

Eye protection : Chemical goggles or safety glasses

Skin and body protection : Wear suitable protective clothing

Respiratory protection : Wear respiratory protection

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid

Colour : Clear Colorless.

Odour : ammonia like.

Odour threshold : No data available

pH : No data available

Relative evaporation rate (butylacetate=1) : No data available

Melting point : -57 °C

Freezing point : No data available

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Boiling point	: 117 °C
Flash point	: 96 °C
Auto-ignition temperature	: 310 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Flammable liquid and vapour
Vapour pressure	: No data available
Relative vapour density at 20 °C	: 1.1
Relative density	: No data available
Density	: 1.028 g/cm <sup>3</sup>
Solubility	: Water: Miscible with water
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 0.9 cP
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 3.5 - 99.99 vol %

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Thermal decomposition generates : Corrosive vapours.

### 10.2. Chemical stability

Flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Open flame. Overheating. Direct sunlight. Heat. Sparks.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

May release flammable gases. Thermal decomposition generates : Corrosive vapours.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Oral: Toxic if swallowed. Dermal: Toxic in contact with skin. Inhalation: Toxic if inhaled.

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Skin corrosion/irritation : Causes severe skin burns and eye damage.  
Serious eye damage/irritation : Serious eye damage, category 1, implicit  
Respiratory or skin sensitisation : May cause an allergic skin reaction.  
Germ cell mutagenicity : Not classified  
Carcinogenicity : May cause cancer.

Reproductive toxicity : Not classified  
Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

### HYDRAZINE HYDRATE FOR SYNTHESIS (7803-57-8)

Viscosity, kinematic	0.87548638 mm <sup>2</sup> /s
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Potential adverse human health effects and symptoms : Toxic if swallowed. Toxic in contact with skin.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - water : Very toxic to aquatic life with long lasting effects.

### 12.2. Persistence and degradability

#### HYDRAZINE HYDRATE FOR SYNTHESIS (7803-57-8)

Persistence and degradability	May cause long-term adverse effects in the environment.
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### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

#### HYDRAZINE HYDRATE FOR SYNTHESIS (7803-57-8)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
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This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
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### 12.6. Other adverse effects

No additional information available

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### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

- Product/Packaging disposal recommendations : Dispose of contents/container to ...
- Additional information : Handle empty containers with care because residual vapours are flammable.
- Ecology - waste materials : Hazardous waste due to toxicity.

### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

#### 14.1. UN number

- UN-No. (ADR) : 2030
- UN-No. (IMDG) : 2030
- UN-No.(IATA) : 2030
- UN-No.(ADN) : Not regulated
- UN-No. (RID) : Not regulated

#### 14.2. UN proper shipping name

- Proper Shipping Name (ADR) : HYDRAZINE, AQUEOUS SOLUTION
- Proper Shipping Name (IMDG) : HYDRAZINE, AQUEOUS SOLUTION
- Proper Shipping Name (IATA) : HYDRAZINE, AQUEOUS SOLUTION
- Proper Shipping Name (ADN) : Not regulated
- Proper Shipping Name (RID) : Not regulated
- Transport document description (ADR) : UN 2030 HYDRAZINE, AQUEOUS SOLUTION, 8 (6.1), II, (E), ENVIRONMENTALLY HAZARDOUS
- Transport document description (IMDG) : UN 2030 HYDRAZINE, AQUEOUS SOLUTION, 8 (6.1), II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
- Transport document description (IATA) : UN 2030 HYDRAZINE, AQUEOUS SOLUTION, 8 (6.1), II, ENVIRONMENTALLY HAZARDOUS

#### 14.3. Transport hazard class(es)

##### ADR

- Transport hazard class(es) (ADR) : 8 (6.1)
- Danger labels (ADR) : 8, 6.1



##### IMDG

- Transport hazard class(es) (IMDG) : 8 (6.1)
- Danger labels (IMDG) : 8, 6.1



##### IATA

- Transport hazard class(es) (IATA) : 8 (6.1)
- Hazard labels (IATA) : 8, 6.1

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### ADN

Transport hazard class(es) (ADN) : Not regulated

### RID

Transport hazard class(es) (RID) : Not regulated

### 14.4. Packing group

Packing group (ADR) : II  
Packing group (IMDG) : II  
Packing group (IATA) : II  
Packing group (ADN) : Not regulated  
Packing group (RID) : Not regulated

### 14.5. Environmental hazards

Dangerous for the environment : Yes  
Marine pollutant : Yes  
Other information : No supplementary information available

### 14.6. Special precautions for user

#### - Overland transport

Classification code (ADR) : CT1  
Special provision (ADR) : 530  
Limited quantities (ADR) : 1L  
Excepted quantities (ADR) : E0  
Packing instructions (ADR) : P001, IBC02  
Mixed packing provisions (ADR) : MP15  
Portable tank and bulk container instructions (ADR) : T7  
Portable tank and bulk container special provisions (ADR) : TP2  
Tank code (ADR) : L4BN  
Vehicle for tank carriage : AT  
Transport category (ADR) : 2  
Special provisions for carriage - Loading, unloading and handling (ADR) : CV13, CV28  
Hazard identification number (Kemler No.) : 86  
Orange plates :



Tunnel restriction code (ADR) : E  
EAC code : •2X  
APP code : B

#### - Transport by sea

Limited quantities (IMDG) : 1 L  
Excepted quantities (IMDG) : E0  
Packing instructions (IMDG) : P001  
IBC packing instructions (IMDG) : IBC02



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Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP2, TP13
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-B
Stowage category (IMDG)	: D
Stowage and handling (IMDG)	: SW2
Segregation (IMDG)	: SG35
MFAG-No	: 153

### - Air transport

PCA Excepted quantities (IATA)	: E0
PCA Limited quantities (IATA)	: Forbidden
PCA limited quantity max net quantity (IATA)	: Forbidden
PCA packing instructions (IATA)	: Forbidden
PCA max net quantity (IATA)	: Forbidden
CAO packing instructions (IATA)	: 855
CAO max net quantity (IATA)	: 30L
Special provision (IATA)	: A1, A36
ERG code (IATA)	: 8P

### - Inland waterway transport

Not regulated

### - Rail transport

Not regulated

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Hydrazine is on the REACH Candidate List

HYDRAZINE HYDRATE FOR SYNTHESIS is not on the REACH Annex XIV List

#### 15.1.2. National regulations

##### Germany

AwSV/VwVwS Annex reference : Water hazard class (WGK) 3, strongly hazardous to water (KBwS-Beschluss; WGK No 130)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

##### Denmark

Class for fire hazard : Class III-1

Store unit : 50 liter

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Classification remarks	: Flammable according to the Danish Ministry of Justice; Emergency management guidelines for the storage of flammable liquids must be followed
Recommendations Danish Regulation	: Young people below the age of 18 years are not allowed to use the product Pregnant/breastfeeding women working with the product must not be in direct contact with the product The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

### 15.2. Chemical safety assessment

No additional information available

### SECTION 16: Other information

Full text of R-, H- and EUH-phrases:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Carc. 1A	Carcinogenicity, Category 1A
Flam. Liq. 3	Flammable liquids, Category 3
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Skin Sens. 1	Sensitisation — Skin, category 1
H226	Flammable liquid and vapour
H301	Toxic if swallowed
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H331	Toxic if inhaled
H350	May cause cancer
H410	Very toxic to aquatic life with long lasting effects
R10	Flammable
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed
R34	Causes burns
R43	May cause sensitisation by skin contact
R45	May cause cancer
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
C	Corrosive
N	Dangerous for the environment
T	Toxic

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*