

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 : 10217-54-2
Product code : 4080D
Formula : N2H5OH

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

SPAN LAB
UNIT NO. 14, SKY INDUSTRIAL ESTATE, WALIV, VASAI (E)
401208 Mumbai - INDIA
PH: +91 9820509929
info@spanlab.in www.spanlab.in

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

| | |
|---|------|
| Acute toxicity (oral), Category 3 | H301 |
| Acute toxicity (dermal), Category 3 | H311 |
| Acute toxicity (inhalation:vapour) Category 3 | H331 |
| Skin corrosion/irritation, Category 1 | H314 |
| Sensitisation — Skin, category 1 | H317 |
| Carcinogenicity, Category 1A | H350 |
| Hazardous to the aquatic environment — Chronic Hazard, Category 1 | H410 |

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

Hydrazine hydrate 60%

Safety Data Sheet

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) :



GHS05

GHS06

GHS08

GHS09

Signal word (CLP) : Danger

Hazard statements (CLP) : 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 (if inhaled)
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 eye protection, face protection, protective clothing, protective gloves
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
P261 - Avoid breathing fume, gas, vapours

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Name : Hydrazine hydrate 60%

CAS No : 10217-54-2

| Name | Product identifier | % |
|---|---|---------|
| HYDRAZINE HYDRATE 80% substance listed as REACH Candidate (Hydrazine) | (CAS No) 7803-57-8 | 72 - 74 |
| Water | (CAS No) 7732-18-5 (EC no) 231-791-2 | 28 - 30 |

Full text of H-phrases: see section 16

3.2. Mixture

Not applicable

Hydrazine hydrate 60%

Safety Data Sheet

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Get immediate medical advice/attention.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
- First-aid measures after ingestion : Rinse mouth out with water. Get medical advice/attention if you feel unwell.

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

- Symptoms/injuries after inhalation : Toxic if inhaled.
- Symptoms/injuries after skin contact : Toxic in contact with skin.
- Symptoms/injuries after ingestion : Toxic if swallowed.

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 : Water spray. Foam. Dry powder. Carbon dioxide.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

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

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.

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

- Precautions for safe handling : Do not eat, drink or smoke when using this product. Do not handle until all safety precautions have been read and understood.
- Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Hydrazine hydrate 60%

Safety Data Sheet

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep cool. Protect from sunlight.

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
Appearance : Clear, colorless liquid.
Colour : No data available
Odour : No data available
Odour threshold : No data available
pH : No data available
Relative evaporation rate (butylacetate=1) : No data available
Melting point : No data available
Freezing point : No data available
Boiling point : No data available
Flash point : No data available
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Flammability (solid, gas) : No data available
Vapour pressure : No data available
Vapour pressure at 50 °C : 5 mm Hg at 25°C
Relative vapour density at 20 °C : > 1 vs air
Relative density : No data available
Density : 1.029 g/ml at 25°C

Hydrazine hydrate 60%

Safety Data Sheet

| | |
|----------------------|---------------------|
| Solubility | : No data available |
| Log Pow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : 99.99 vol % |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

No additional information available

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Direct sunlight. Overheating. Extremely high or low temperatures.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

| | |
|--|--|
| Acute toxicity | : Oral: Toxic if swallowed. Dermal: Toxic in contact with skin. Inhalation:vapour: Toxic if inhaled. |
| 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 (if inhaled). |
| Reproductive toxicity | : Not classified |
| Specific target organ toxicity (single exposure) | : Not classified |
| Specific target organ toxicity (repeated exposure) | : Not classified |

Hydrazine hydrate 60%

Safety Data Sheet

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

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

| Component | |
|-----------------------------------|---|
| HYDRAZINE HYDRATE 80% (7803-57-8) | 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 |

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

No additional information available

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

Hydrazine hydrate 60%

Safety Data Sheet

| | |
|---------------------------------------|--|
| 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 |



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 |

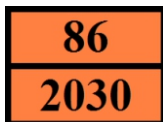
Hydrazine hydrate 60%

Safety Data Sheet

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 |
| 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 |

- 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

Hydrazine hydrate 60%

Safety Data Sheet

- 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 hydrate 60% is not on the REACH Candidate List

Contains substance on the candidate list in concentration $\geq 0.1\%$ or with a lower specific limit: Hydrazine (CAS 7803-57-8)

Hydrazine hydrate 60% is not on the REACH Annex XIV List

15.1.2. National regulations

Germany

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

Denmark

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 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 (Inhalation:vapour) | Acute toxicity (inhalation:vapour) Category 3 |
| Acute Tox. 3 (Oral) | Acute toxicity (oral), Category 3 |
| Aquatic Acute 1 | Hazardous to the aquatic environment — Acute Hazard, Category 1 |
| Aquatic Chronic 1 | Hazardous to the aquatic environment — Chronic Hazard, Category 1 |

Hydrazine hydrate 60%

Safety Data Sheet

| | |
|---------------|--|
| Carc. 1A | Carcinogenicity, Category 1A |
| Flam. Liq. 3 | Flammable liquids, Category 3 |
| Skin Corr. 1 | Skin corrosion/irritation, Category 1 |
| 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 |
| H400 | Very toxic to aquatic life |
| H410 | Very toxic to aquatic life with long lasting effects |

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