
SAFETY DATA SHEET

1. Identification of the substance or preparation and of the company/undertaking

1.1 Product identifier

- Product Name: Hydrazine

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

- Use of the substance/preparation:
- Boiler water treatment

1.3 Details of the supplier of the safety data sheet

Company:

Unimarine Services Inc.
60 Market Square,
PO Box 364, Belize City

Contact your nearest Unimarine sales office

Email: info@unimarine-services.com

1.4 Emergency Telephone Number

Emergency Telephone: Only to be used in case of incident
Tel: 00357 96484325

2. Hazards identification

2.1 Classification of the substance or mixture

- Council Directive 1999/45/EEC Classification, packing and labelling of dangerous preparations.
 - Refer to current The Dangerous Substances Directive (67/548/EEC)
 - Symbols: T, N
 - Toxic by inhalation, in contact with skin and if swallowed (R23/24/25)
 - Causes burns (R34)
 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment (R50/53)
 - May cause sensitisation by skin contact (R43)
 - May cause cancer (R45)
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2. Hazards identification

- Regulations 1272/2008/EEC. Classification, labeling and packing of dangerous substances and preparations
- Symbols: GHS05, GHS08, GHS09, GHS06
- Signal Word: Danger
- Acute Tox. 3
- Aquatic Chronic 1
- Skin Sens. 1
- Carc. 1B
- Skin Corr. 1B
- Toxic if swallowed (H301).
- Toxic in contact with skin or if inhaled (H311+H331)
- May cause an allergic skin reaction (H317).
- May cause cancer (H350).
- Causes severe skin burns and eye damage (H314).
- Toxic to aquatic life with long lasting effects (H411).

2.2 Label elements



- Signal Word: Danger
- Skin Sens. 1
- Carc. 1B
- Skin Corr. 1B
- Acute Tox. 3
- Aquatic Chronic 1
-
- Contains:
- hydrazine
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- Hazard phrases
 - Toxic if swallowed (H301).
 - Toxic in contact with skin or if inhaled (H311+H331)
 - Very toxic to aquatic life with long lasting effects (H410).
 - May cause an allergic skin reaction (H317).
 - May cause cancer (H350).
 - Causes severe skin burns and eye damage (H314).
- Precautionary Phrases
 - Obtain special instructions before use (P201).
 - Wear protective gloves/protective clothing/eye protection/face protection (P280).
 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing (P305+P351+P338).
 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician (P301+P310).
 - IF exposed: Call a POISON CENTER or doctor/physician (P307+P311).
 - Dispose of contents/container to an authorised waste collection point (P501)

2.3 Other hazards

- Not applicable
- Not a PBT according to REACH Annex XIII
- Odour: Smells of ammonia
- Appearance: Liquid, colourless, soluble in water

3. Composition/information on ingredients

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3.1 Mixtures

- Hydrazine
 - Concentration: 10-30%
 - CAS Number: 302-01-2
 - EC Number: 206-114-9
 - Symbols: T, N, GHS05, GHS09, GHS08, GHS06
 - R/H Phrases: R45, R10, R23/24/25, R34, R43, R50/53 - H301, H311, H331, H314, H317, H350, H400, H410, H226
 - Categories: Acute Tox. 3, Skin Corr. 1B, Skin Sens. 1, Carc. 1B, Aquatic Acute 1, Aquatic Chronic 1, Flam. Liq. 3
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4. First aid measures

4.1 Description of first aid measures

- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower (P303+P361+P353).
- Wash contaminated clothing before reuse (P363).
- When in doubt or symptoms persist, seek medical attention
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- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing (P305+P351+P338).
- Irrigate eyes thoroughly whilst lifting eyelids
- Obtain immediate medical attention
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- IF SWALLOWED: rinse mouth. Do NOT induce vomiting (P301+P330+P331).
- Give plenty of water to drink
- Never make an unconscious person vomit or drink fluids
- Obtain immediate medical attention
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- IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P341).
- Seek medical attention if irritation persists

4.2 Most important symptoms and effects, both acute and delayed

- The ingestion of significant quantities may cause chemical oedema
- Prolonged skin or eye contact may cause chemical burns
- Causes redness and irritation
- Can cause damage to the eyes, skin and mucous membranes

4.3 Indication of any immediate medical attention and special treatment needed

5. Fire-fighting measures

5.1 Extinguishing media

- Not flammable. In case of fire use extinguishing media appropriate to surrounding conditions

5.2 Special hazards arising from the substance or mixture

- Decomposition products may include nitrogen oxides
- Smoke from fires is toxic. Take precautions to protect personnel from exposure

5.3 Advice for firefighters

- Wear chemical protection suit and positive-pressure breathing apparatus
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6. Accidental release measures

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6.1 Personal precautions, protective equipment and emergency procedures

- Wear protective clothing as per section 8

6.2 Environmental Precautions

- Do not allow to enter public sewers and watercourses

6.3 Methods and material for containment and cleaning up

- Absorb spillage in inert material and shovel up
- Ventilate the area and wash spill site after material pick-up is complete
- Neutralise with Sodium hypochlorite

6.4 Reference to other sections

- None
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7. Handling and storage

7.1 Precautions for safe handling

- Wear protective clothing as per section 8
- Eyewash bottles should be available

7.2 Conditions for safe storage, including any incompatibilities

- Store in a well-ventilated place. Keep container tightly closed (P403+P233).

7.3 Specific end use(s)

- Contact supplier for further information
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8. Exposure controls/personal protection

8.1 Control parameters

- WEL (long term) (Sk) 0.03 mg/m³
- WEL (short term) (Sk) 0.13 mg/m³

8.2 Exposure controls

- The undiluted product must not be used in a confined space without good ventilation

8.3 Occupational exposure controls



- Wear suitable protective clothing, including eye/face protection and gloves (plastic or rubber are recommended)
 - Penetration time of glove material:
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
 - Eyewash bottles should be available
 - Wear suitable respiratory protection
 - Wear suitable respiratory protection. Gas cartridge (organic substances).
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9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Odour: Smells of ammonia
 - Appearance: Liquid, colourless, soluble in water
 - pH 12 at 100 % concentration
 - Boiling point 109 °C
 - Non combustible
 - Density: Density 1.0 - 1.01 g/cm³ at 20 deg C
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9. Physical and chemical properties

- Flash point > 100 deg C (CC)
- Melting point/Range: Melting point -14 °C
- Partition Coefficient (n-Octanol/Water): Log Pow -1,37

9.2 Other information

- No information available
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10. Stability and reactivity

10.1 Reactivity

- This article is considered stable under normal conditions

10.2 Possibility of hazardous reactions

- No hazardous reactions known if used for its intended purpose

10.3 Incompatible materials

- Incompatible with acid
- Incompatible with strong oxidizing substances

10.4 Conditions to avoid

- Avoid overheating

10.5 Hazardous Decomposition Products

- Decomposition products may include nitrogen oxides
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11. Toxicological information

11.1 Information on toxicological effects

- LD50 (oral, rat) 173 mg/kg
- LCLo (inhalation) : (rat) (Hydrazine) 759 mg/l/4h

11.2 Contact with eyes

- Prolonged skin or eye contact may cause chemical burns

11.3 Contact with skin

- Prolonged skin or eye contact may cause chemical burns

11.4 Ingestion

- Can cause damage to the digestive system

11.5 Inhalation

- In cases of severe exposure, severe irritation may develop
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12. Ecological information

12.1 Toxicity

- LC50 (fish) (Hydrazine) 0,61 - 5,98 mg/l (96 hr)
- IC50 (algae) (Hydrazine) 0,071 mg/l (96 hr)
- EC50 (daphnia) (Hydrazine) 0,81 mg/l (48 hr)
- This product contains components which are classified in the EU as dangerous for the environment.
- When hydrazine is released to the environment, it will react with oxygen to decompose into water and nitrogen, till this reaction is complete, the product is toxic to aquatic organisms.

12.2 Persistence and degradability

- Degrades rapidly on exposure to air

12.3 Bioaccumulation Potential

- Bioaccumulation of the components in this product is insignificant.
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12. Ecological information

12.4 Mobility in soil

- Completely soluble in water

12.5 Results of PBT and vPvB assessment

- Not a PBT according to REACH Annex XIII

12.6 Other Adverse Effects

- No information available
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13. Disposal considerations

13.1 Waste treatment methods

- Do not discharge into drains or the environment, dispose to an authorised waste collection point
- Disposal should be in accordance with local, state or national legislation

13.2 Classification

- EU Waste class: 06.02.05
 - This material and/or its container must be disposed of as hazardous waste
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14. Transport information



14.1 UN

- UN No.: UN3293
- Proper Shipping Name: Hydrazine, aqueous solution, with not more than 37% hydrazine
- Hazard Class: 6.1
- Packing Group: III

14.2 Environmental hazards

- ENVIRONMENTALLY HAZARDOUS
- Marine pollutant

14.3 Special precautions for user

- No special precautions are required for this product

14.4 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code

- Not applicable

14.5 Road/Rail (ADR/RID)

- ADR UN No.: UN3293
- Proper Shipping Name: Hydrazine, aqueous solution, with not more than 37% hydrazine
- ADR Hazard Class: 6.1
- ADR subrisk: -
- ADR Packing Group: III
- ADR Flashpoint: -

14.6 Sea (IMDG)

- IMDG UN No.: UN3293
 - Proper Shipping Name: Hydrazine, aqueous solution, with not more than 37% hydrazine-
 - IMDG Hazard Class: 6.1
 - IMDG subrisk: -
 - IMDG Pack Group.: III
 - IMDG EmS: F-A, S-A
 - IMDG Flashpoint: -
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14. Transport information

14.7 Air (ICAO/IATA)

- ICAO Un No.: UN3293
- Proper Shipping Name: Hydrazine, aqueous solution, with not more than 37% hydrazine
- ICAO Packing Group: III
- ICAO Hazard Class: 6.1
- ICAO subrisk: -
- ICAO Flashpoint: -

14.8 DOT / CFR (US Department of Transportation)

- Identification Number: III
 - DOT Proper Shipping Name: Hydrazine, aqueous solution, with not more than 37% hydrazine
 - DOT Labels: 6.1+MAR POL.
 - Product RQ (lbs): -
 - Hazardous Material: UN3293
 - Hazard Class: 6.1
 - DOT subrisk: -
 - DOT Flashpoint: -
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15. Regulatory information

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

- This Safety Data Sheet has been prepared in accordance with article 31 and annex II in REACH and Directive 453/2010/EU.
- Council Directive 1999/45/EEC Classification, packing and labelling of dangerous preparations.
- Refer to current The Dangerous Substances Directive (67/548/EEC)
- Regulations 1272/2008/EEC. Classification, labeling and packing of dangerous substances and preparations
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- Norwegian Productregistration no: 15801
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- ***SUBSTANCES OF VERY HIGH CONCERN (SVHC) ACCORDING TO REACH, ARTICLE 57***: CAS: 302-01-2 - Hydrazine

15.2 Chemical Safety Assessment

- None
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16. Other information

The information contained herein relates only to the specific material identified. Unimarine Services Inc. Believes that such information is accurate and reliable as of the date of this material safety data sheet, but no representation, guarantee or warranty, express or implied, is made as to the accuracy, reliability, or completeness of the information. Unimarine Services Inc. urges persons receiving this information to make their own determination as to the information's suitability and completeness for their particular application