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ESTD.1976 MULTI CHEM YOUR CHEMICAL PARTNER

SAFETY DATA SHEET

HYDRAZINE HYDRATE 80%

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

1.1 Product identifier:	
CAS Number:	302-01-2
EC number:	206-114-9
1.2 SYNONYMS:	• Hydrazine solution (80%) • Hydrazine monohydrate (80%) • Hydrazine dihydrate (80%) • Hydrazine aqueous solution (80%) • Hydrazine (aqueous, 80%) • Hydrazine, solution • 1,2-Diazane hydrate (80%) • Hydrazinium hydroxide (80%)

SECTION 2: Hazards identification:

2.1 Classification of the substance or mixture:	Classification according to Regulation (EC) No 1272/2008 The substance is classified according to the CLP regulation.
2.2 Label elements:	Labelling according to Regulation (EC) No 1272/2008 Acute toxicity, Oral (Category 3) Acute toxicity, Inhalation (Category 3) Skin corrosion (Category 1B) Carcinogenicity (Category 1B) Skin sensitization (Category 1) Acute aquatic toxicity (Category 1) Acute chronic aquatic toxicity(Category 1)
Hazard Pictograms:	
Signal Word:	Warning

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Hazard statements:	**H330:** Fatal if inhaled. **H301 + H311:** Toxic if swallowed or in contact with skin. **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:	**P210**: Keep away from heat, sparks, open flames, and hot surfaces. — No smoking. **P261**: Avoid breathing dust/fume/gas/mist/vapors/spray. **P264**: Wash hands thoroughly after handling. **P270**: Do not eat, drink, or smoke when using this product. **P271**: Use only outdoors or in a well-ventilated area. **P280**: Wear protective gloves/protective clothing/eye protection/face protection. **P301+P310**: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. **P302+P352**: IF ON SKIN: Wash with plenty of water. **P304+P340**: IF INHALED: Remove person to fresh air and keep comfortable for breathing. **P305+P351+P338**: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. **P405**: Store locked up. **P501:** Dispose of contents/container in accordance with local/regional/national/international regulations

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2.3 Other hazards:	
Inhalation:	may cause severe respiratory irritation, damage to the lungs, and other long-term health effects..
Ingestion:	can cause severe poisoning, leading to nausea, vomiting, abdominal pain, and potentially fatal damage to internal organs.
Skin Contact:	can cause severe irritation, chemical burns, and systemic toxicity upon absorption.
Eye contact:	can cause severe irritation, burns, and permanent eye damage..
Chronic Exposure:	can lead to long-term health effects, including damage to the liver, kidneys, nervous system, and increased risk of cancer.
Aggravation of pre-existing conditions:	may aggravate pre-existing conditions such as respiratory disorders, liver or kidney disease, and neurological conditions, potentially worsening symptoms or causing additional complications.

SECTION 3: Composition/information on ingredients

3.1 Chemical characterisation:	Substances
CAS No:	Description: 302-01-2 HYDRAZINE HYDRATE
Identification number(s):	EC number: 206-114-9

SECTION 4: First aid measures

4.1 Description of first aid measures	
General information:	
After inhalation:	Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.

	Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Do not give mouth respiration.
After skin contact:	Remove contaminated clothes, continue rinsing skin with plenty of water for atleast 10 mins. Consult a physician.
After eye contact:	Immediately flush eyes with plenty of water for at least 15 minutes, Holding eyelids during flushing. consult a physician.
After swallowing:	Rinse mouth with water. Immediately after ingestion. Give lots of water to drink. Never give anything by mouth to an unconscious person. Do not induce vomiting. Consult a physician.
4.2 Most important symptoms and effects, both acute and delayed:	Acute exposure can cause severe respiratory irritation, skin burns, eye damage, nausea, and organ toxicity, while chronic exposure may lead to liver and kidney damage, neurological effects, and an increased risk of cancer.
4.3 Indication of any immediate medical attention and special treatment needed:	Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media:	Carbon dioxide. Water spray. Alcohol-resistant foam. Dry chemical or foam.
5.2 Special hazards arising from the substance or mixture:	Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
5.3 Advice for firefighters:	Wear fully protective suit, safety glasses and respiratory device .

	Cool tanks/drums with water spray/remove them into safety.
5.4 further information:	No data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:	Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Avoid dust accumulation. Seek medical attention.
6.2 Environmental precautions:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided
6.3 Methods and material for containment and cleaning up:	Take up liquid spill into absorbent material, e.g.: sand, earth, vermiculite, powdered limestone. Scoop absorbed substance into closing containers. Spill must not return in its original container. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling

SECTION 7: Handling and storage

7.1 Precautions for safe handling:	Protect from heat and direct sun exposures Make sure that there is no sunlight coming inside the space. Electrostatic discharge protection. Minimize dust generation and accumulation. Avoid ingestion and inhalation. Avoid contact with eyes and skin. Do not Breathe dust.

7.2 Conditions for safe storage, including any incompatibilities:	Store in original containers. Keep containers securely sealed Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks. Store in a dry and dark area. . Provide for a tub to collect spills.
Requirements to be met by storerooms and receptacles:	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
7.3 Specific end uses:	no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters	
Additional information about design of technical facilities:	A system of local and general exhaust is recommended.
8.2 Exposure controls	
Appropriate engineering controls	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Personal protective equipment:	Dust respirator, protective masks, wearing anti chemical gloves, rubber gloves, etc.
General protective and hygienic measures:	Eyes, body and hand protection, maintain indoor air unobstructed. Wear protective equipment.
	Respiratory protection: Required.
Protection of hands:	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product.

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	Dispose of contaminated gloves after use in accordance with applicable laws. Wash and dry hands.
	Eye protection: Required
Protection of Body:	Complete suit protecting against chemicals, Flame retardant antistatic protective clothing.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties General Information	
Appearance: Form:	Liquid,
Colour:	Colourless
Odour:	ammoniacal
pH-value:	12
Melting point/Melting range:	-57°C
Boiling point/Boiling range:	117.2°C
Flammability (solid, gaseous):	No data available
Ignition temperature:	No data available
Decomposition temperature:	No data available
Self-igniting:	No data available
Flash point:	91°C
Danger of explosion:	No data available
Explosion limits: Lower:	4.8%
Explosion limits: Upper:	100%
Vapour pressure:	13 hPa at 20°C
Density at 20 °C:	1.02
Relative density:	1.10
Vapour density:	3.46
Evaporation rate:	No data available
Solubility in / Miscibility with- ·water at 20 °C:	Miscible
Partition coefficient:(n-octanol/water)	No data available
Viscosity:	1.33 mPas

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SECTION 10: Stability and reactivity

10.1 Reactivity	No data available
10.2 Chemical stability	No data available.
10.3 Possibility of hazardous reactions	No data available
10.4 Conditions to avoid	No data available.
10.5 Incompatible materials	Strong acids, Strong bases, Strong oxidizing agents
10.6 Hazardous decomposition products	No data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects	
Acute Toxicity:	**LD50** (Oral, Rat) : 173 mg/kg **LD50** (Dermal, Rabbit) : No data available **LC50** (Inhalation Rat) : 759 mg/m^3
Skin corrosion/Irritation:	May cause allergic skin reaction.
Serious eye damage/irritation:	Corrosive
Respiratory damage/irritation:	May cause allergic respiratory reaction.
Ingestion:	Corrosive
Germ cell mutagenicity:	Test positive under in vitro.
Carcinogenicity:	May cause cancer
Reproductive toxicity:	No data available
Specific target organ toxicity - single exposure:	No data available
Specific target organ toxicity - repeated exposure:	No data available
Aspiration hazard:	No data available
Signs and Symptoms of Exposure:	Refer section 2.3
11.2 Additional toxicological information	
Biodegradability:	Not readily biodegradable

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SECTION 12: Ecological information

12.1 Toxicity Aquatic toxicity:	No data available.
12.2 Persistence and degradability:	Not readily biodegradable
12.3 Bioaccumulative potential:	Low bioaccumulation.
12.4 Mobility in soil:	No data available
12.5 Other adverse effects:	Very toxic to aquatic life.

SECTION 12: Ecological information

12.1 Toxicity Aquatic toxicity:	No data available.
12.2 Persistence and degradability:	No data available
12.3 Bioaccumulative potential:	No data available
12.4 Mobility in soil:	No data available
12.5 Other adverse effects:	Very toxic to aquatic life.

SECTION 13: Disposal considerations

13.1 Waste treatment methods	
Uncleaned packaging Recommendation:	The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
Recommended cleansing agents:	Diluted Acids (e.g., Acetic Acid or Citric Acid) Sodium Hypochlorite (Bleach) Solution Sodium Bicarbonate (Baking Soda) Water and Soap Absorbent Materials (e.g., Clay or Sand)

SECTION 14: Transport information

14.1 UN-Number · ADR, ADN, IMDG, IATA:	UN2030
14.2 UN proper shipping name · ADR, ADN, IMDG, IATA:	Hydrazine, aqueous solution

14.3 Transport hazard class(es) · ADR, ADN, IMDG, IATA :	8 (6.1)
14.4 Packing group · ADR, IMDG, IATA:	2
14.5 Environmental hazards:	Yes
14.6 Special precautions for user:	Hazard identification number 86

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Directive 2012/18/EU	Directive 2012/18/EU, under that this substance is classified in listed substance as toxic and flammable
Named dangerous substances:	This substance is listed in the annex 1 to the directive.
15.2 Chemical safety assessment:	Chemical assessment has been carried out under **REACH** regulation.

SECTION 16: Other information

The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.