Safety Data Sheet

For INDIA, According to GHS (Rev. 8)

HYDRAZINE HYDRATE (80%)

Date of compilation: 27-07-2026 | Revised: 27-07-2026 | Version: 1

SECTION 1: IDENTIFICATION

1.1 GHS Product identifier:

HYDRAZINE HYDRATE (80%)
Hydrazine monohydrate solution; Diamine hydrate (80% $N_2H_4 \cdot H_2O$ basis)

CAS: 7803-57-8

Other means of identification:

Not relevant

1.2 Recommended use of the chemical and restrictions on use:

Relevant uses: Boiler-water oxygen scavenger, chemical intermediate (agrochemicals, pharmaceuticals, blowing agents, rocket-propellant precursor manufacture), reducing agent, polymerisation catalyst component. For industrial user only; strictly controlled handling required.

Uses advised against: All uses not specified in this section or in section 7.3.

1.3 Supplier's details:

SURAJ CHEMICALS
No 92, Govindappa Naicken Street, Shiva Complex, Chennai – 600001, Tamil Nadu, India
Tel: +91 - 7092722822, +91 - 9840284032 / +91 - 44 - 25393652, 42130281
Email: sales@surajchemicals.com | Website: www.surajchemicals.com
GST No: 33ACEPV8190L1ZZ

1.4 Emergency phone number:

Emergency Contact No: +91 - 7092722822, +91 - 9840284032

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

GHS:
Classification of this product has been carried out in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), based on the harmonised classification for hydrazine and its aqueous solutions.

Flam. Liq. 3	Flammable liquid, Category 3, H226
Acute Tox. 3	Acute toxicity (oral), Category 3, H301
Acute Tox. 3	Acute toxicity (dermal), Category 3, H311
Acute Tox. 3	Acute toxicity (inhalation), Category 3, H331
Skin Corr. 1B	Skin corrosion, Category 1B, H314
Skin Sens. 1	Skin sensitisation, Category 1, H317
Carc. 1B	Carcinogenicity, Category 1B, H350
Muta. 2	Germ cell mutagenicity, Category 2, H341
Aquatic Acute 1	Hazardous to the aquatic environment, acute hazard, Category 1, H400
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic hazard, Category 1, H410

Flash point of the 80% aqueous hydrate is typically in the region of 60–73°C (closed cup) depending on exact water content – some suppliers classify this concentration as Flam. Liq. 3 (H226); treat as a combustible/flammable liquid regardless of the exact figure for this batch.

2.2 GHS label elements, including precautionary statements:

GHS: Danger

Hazard statements:

Flam. Liq. 3: H226 – Flammable liquid and vapour.
Acute Tox. 3: H301 – Toxic if swallowed.
Acute Tox. 3: H311 – Toxic in contact with skin.
Acute Tox. 3: H331 – Toxic if inhaled.
Skin Corr. 1B: H314 – Causes severe skin burns and eye damage.
Skin Sens. 1: H317 – May cause an allergic skin reaction.
Carc. 1B: H350 – May cause cancer.
Muta. 2: H341 – Suspected of causing genetic defects.
Aquatic Acute 1: H400 – Very toxic to aquatic life.
Aquatic Chronic 1: H410 – Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260: Do not breathe vapours/mist.
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.
P272: Contaminated work clothing should not be allowed out of the workplace.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
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.
P308+P313: IF exposed or concerned: Get medical advice/attention.
P310: Immediately call a doctor.
P321: Specific treatment (see supplemental first aid instructions).
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
P363: Wash contaminated clothing before reuse.

P370+P378: In case of fire, use dry chemical powder, CO_2 or alcohol-resistant foam.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P405: Store locked up.
P501: Dispose of the contents/containers in accordance with regulations on hazardous waste.

2.3 Other hazards which do not result in classification:

Strong reducing agent; can react vigorously/exothermically, or spontaneously combust, on contact with oxidizing agents and certain catalytic metal surfaces (e.g. finely divided platinum, iron oxide, copper, brass). Vapours may form explosive mixtures with air.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances:

Chemical description: Hydrazine hydrate solution, 80% w/w hydrazine (N_2H_4) basis in water

In accordance with Annex 4.3.3 of the GHS, the product contains:

Identification	Chemical Name / Classification	Concentration
CAS: 7803-57-8	Hydrazine hydrate — Flam. Liq. 3: H226; Acute Tox. 3: H301, H311, H331; Skin Corr. 1B: H314; Skin Sens. 1: H317; Carc. 1B: H350; Muta. 2: H341; Aquatic Acute 1: H400; Aquatic Chronic 1: H410 – Danger	80% w/w (as N_2H_4)
CAS: 7732-18-5	Water – Not classified	Balance (~20%)

To obtain more information on the hazards of the substances, consult sections 11, 12 and 16.

3.2 Mixtures:

This product is an aqueous solution of hydrazine (see 3.1); composition is not further variable as a mixture.

SECTION 4: FIRST AID MEASURES

4.1 Description of necessary first-aid measures:

Request medical assistance immediately, showing the SDS of this product.

By inhalation:

Remove the person affected from the area of exposure immediately, provide fresh air and keep at rest. Vapours are corrosive to the respiratory tract and toxic; in serious cases (respiratory distress, pulmonary oedema) artificial respiration/oxygen and immediate medical assistance are required.

By skin contact:

Remove contaminated clothing and footwear immediately while flushing skin with copious water. Wash/shower with plenty of water for at least 15 minutes. Causes severe skin burns – seek immediate medical attention.

By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 20 minutes, holding eyelids open. Remove contact lenses if present and easy to do. Seek immediate medical/ophthalmological attention – risk of serious eye damage.

By ingestion/aspiration:

Do NOT induce vomiting. Rinse the mouth with water (do not give anything by mouth if the person is unconscious). Seek immediate medical attention, showing this SDS.

4.2 Most important symptoms/effects, acute and delayed:

Acute and delayed effects are indicated in sections 2 and 11.

4.3 Indication of immediate medical attention and special treatment needed, if necessary:

Treat as a corrosive/toxic chemical exposure emergency. Methylene blue and pyridoxine (vitamin B6) have been used in the clinical management of severe hydrazine poisoning under medical supervision – specialist toxicological advice should be obtained.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Suitable extinguishing media:

Suitable: Water spray/fog (large quantities, for dilution and cooling), alcohol-resistant foam, dry chemical powder, carbon dioxide
Unsuitable: Do not use a solid/jet water stream on burning material or containers

5.2 Specific hazards arising from the chemical:

Flammable liquid and vapour; can ignite spontaneously on contact with air in the presence of catalytic surfaces (rust, metal oxides, porous materials). Vapour/air mixtures can be explosive within the flammability range. Strong reducing agent – violent/explosive reaction possible with oxidizers. Combustion produces toxic nitrogen oxides and ammonia.

5.3 Special protective actions for fire-fighters:

Evacuate all non-essential personnel immediately. Intervention only by capable personnel who are trained and aware of the hazards of the product. In all cases wear self-contained breathing apparatus and full chemical-protective (acid/base-resistant) suit – this product is corrosive, toxic and flammable. After intervention, decontaminate thoroughly (shower, careful clothing removal, equipment check).

Additional provisions:

Cool fire-exposed containers with water spray from a safe distance, approaching from upwind. Contain all fire-fighting water/runoff – do not allow to enter drains or watercourses.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

Evacuate the area. Eliminate all ignition sources and remove combustible/catalytic (metal, porous) materials from the vicinity. Do not attempt clean-up without appropriate corrosion-resistant PPE and respiratory protection (see section 8).

For emergency responders:

Wear full chemical-protective clothing and self-contained breathing apparatus. Keep unprotected persons away and upwind. See section 8.

6.2 Environmental precautions:

Very toxic to aquatic life – prevent at all costs any release to drains, watercourses or soil. Contain spillage with inert, non-combustible absorbent (e.g. vermiculite, dry sand; avoid organic/cellulosic absorbents which may react). Notify the relevant authority immediately in case of environmental release.

6.3 Methods and materials for containment and cleaning up:

Dilute small spills with large quantities of water and neutralise/oxidise under controlled conditions per site procedure (e.g. with dilute sodium hypochlorite, under competent supervision, due to reactivity). Absorb with inert non-combustible material and place in a labelled, closed, corrosion-resistant container for disposal. Ventilate the area after clean-up. Wash the contaminated area thoroughly.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A. General precautions for safe use:

Handle only in well-ventilated areas with local exhaust ventilation. Use full corrosion-resistant PPE. Avoid contact with skin, eyes and clothing. Avoid contact with air/oxidizers/catalytic metal surfaces where practical to reduce ignition risk. Ground and bond containers during transfer.

B. Technical recommendations for the prevention of fires and explosions:

Store and handle strictly away from oxidizing agents, catalytic metal oxides/powders (iron rust, copper, platinum-group metals), porous materials and ignition sources. Use only compatible materials of construction (typically stainless steel, glass, PTFE – avoid copper, brass and their alloys). Provide adequate ventilation and bonding/grounding for all transfer operations.

C. Technical recommendations on general occupational hygiene:

Do not eat or drink during the process; wash hands afterwards with suitable cleaning products.

D. Technical recommendations to prevent environmental risks:

Provide tight electrical equipment well protected against corrosion. Avoid atmospheric emissions. Warn people about the dangers of the product. Follow the protective measures given in the exposure controls/personal protection section. In industrial installations, apply the rules for the prevention of major accidents (consult an expert).

7.2 Conditions for safe storage, including any incompatibilities:

A. Specific storage requirements:

Minimum Temp.	5°C (avoid freezing/crystallisation of concentrated solution)
Maximum Temp.	30°C, protected from light and heat sources
Maximum time	12 Months in original sealed, stabilised packaging

B. General conditions for storage:

Store in a cool, dry, well-ventilated, fire-protected area, isolated from oxidizers, combustible materials, catalytic metals and ignition sources, in tightly closed containers of compatible construction (stainless steel/glass/PTFE-lined). Provide secondary containment/bunding. For additional information see subsection 10.5.

7.3 Specific end use(s):

Except for the instructions already specified, it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:

Substances whose occupational exposure limits have to be assessed in the workplace, per the Factories Act, 1948 (Act No. 63 of 1948), as amended by the Factories (Amendment) Act, 1987 (Act 20 of 1987):

Identification	Occupational Exposure Limit Type	Value
Hydrazine CAS: 302-01-2 (as N_2H_4)	ACGIH TLV – TWA (8 hrs)	0.01 ppm (skin/sensitiser notation; treated by ACGIH as Carcinogen Category A3)

8.2 Appropriate engineering controls:

It is recommended to use localized extraction in the work area as a collective protection measure to avoid exceeding occupational exposure limits, in addition to individual protective equipment (PPE) as needed. Consult the manufacturer's information leaflet for storage, use, cleaning and maintenance of PPE.

B. Respiratory protection:

Full-face respirator with combination gas/vapour and particulate cartridge, or self-contained breathing apparatus for high concentrations, spills or confined-space work.

C. Specific protection for the hands:

Chemical-resistant gloves (e.g. butyl rubber, Viton®) – verify breakthrough time with glove manufacturer; avoid natural rubber/leather.

D. Eye and face protection:

Full face shield plus chemical splash goggles.

E. Bodily protection:

Full chemical-resistant (acid/base-resistant) suit, apron and boots; flame-retardant/antistatic outerwear where flammable atmospheres may be present.

F. Additional emergency measures:

Emergency shower (ANSI Z358-1, ISO 3864-1:2011, ISO 3864-4:2011) and eyewash stations (DIN 12 899, ISO 3864-1:2011, ISO 3864-4:2011) should be available.

Environmental exposure controls:

Avoid environmental spillage of both the product and its container. See subsection 7.1.D.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance	
Physical state at 20°C	Liquid
Appearance	Clear, mobile liquid, fumes in air
Color	Colorless to pale yellow
Odor	Ammoniacal, sharp
Odour threshold	~3–4 ppm (approx.)
Volatility	
Boiling point at atmospheric pressure	~119–120°C (80% solution, approx.)
Vapour pressure at 20°C	~1.3 kPa (approx., 80% solution)
Evaporation rate at 20°C	Slow (aqueous solution)
Product Description	
Density / Relative density at 20°C	~1.03 g/cm³
Dynamic / Kinematic viscosity at 20°C	~1.3 mPa·s
Concentration	80% w/w (as N_2H_4)
pH (aqueous solution)	~10.5–12 (strongly alkaline/basic)
Vapour density (air = 1)	~1.1 (approx.)
Partition coefficient n-octanol/water (log Pow)	-1.37 (hydrazine itself)
Solubility in water at 20°C	Miscible in all proportions
Decomposition temperature	Decomposes above ~180°C (may be catalytically accelerated at lower temperature)
Melting point/freezing point	~-40°C (approx., 80% solution)
Flammability	
Flash Point	~60–73°C (closed cup, typical literature range for concentrated hydrazine hydrate)
Flammability (solid, gas)	Non-applicable (liquid); flammable/combustible
Autoignition temperature	~270–300°C (much lower on catalytic/porous surfaces such as rust)
Lower / Upper flammability limit	~4.7% / 100% (vol. in air, approx., for hydrazine vapour)
Particle Characteristics	
Median equivalent diameter	Non-applicable (liquid)

Values are typical literature/reference values for an 80% hydrazine hydrate solution and may vary slightly by batch; exact flash point should be confirmed by batch-specific testing given the sensitivity of this parameter to trace water content.

9.2 Other information:

Explosive properties	Not classified as explosive; vapour/air mixtures are flammable, and the substance is a powerful reducing agent that can react violently with oxidizers
Oxidising properties	Not an oxidizer – strong reducing agent

Corrosive to metals	Corrosive to copper, brass and copper alloys; can attack some plastics/rubbers
Heat of combustion	~19.4 kJ/g (hydrazine, approx.)
Surface tension at 20°C	~66 mN/m (approx., aqueous solution)
Refraction index	~1.42 (approx.)

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

Powerful reducing agent. Reacts violently/exothermically with strong oxidizing agents (e.g. hydrogen peroxide, nitric acid, halogens, metal oxides). Catalytically decomposes (with heat/gas evolution, risk of spontaneous ignition) on contact with finely divided metals and metal oxides (iron rust, copper, brass, platinum-group metals) and porous materials.

10.2 Chemical stability:

Stable under recommended storage conditions in compatible containers (stainless steel, glass, PTFE). Decomposes slowly on prolonged exposure to air, light and heat; decomposition accelerated by contact with catalytic surfaces.

10.3 Possibility of hazardous reactions:

Contact with oxidizers can cause violent/explosive reaction. Catalytic decomposition on metal/metal-oxide surfaces can generate sufficient heat and gas (nitrogen, ammonia, hydrogen) to cause spontaneous ignition or rupture of closed containers.

10.4 Conditions to avoid:

Shock/Friction	Contact with Air	Increase in Temperature	Sunlight	Humidity
Not applicable	Avoid prolonged air exposure (oxidation/decomposition)	Avoid heat sources – risk of catalytic decomposition/ignition	Avoid prolonged direct exposure	Hygroscopic – keep sealed

10.5 Incompatible materials:

Strong Oxidizing Agents	Catalytic Metals/Oxides (Fe, Cu, brass, Pt-group)	Porous/Combustible Materials
Avoid contact – violent/explosive reaction risk	Avoid contact – risk of catalytic decomposition/spontaneous ignition	Avoid contact/absorption – risk of self-heating/ignition

10.6 Hazardous decomposition products:

Nitrogen, ammonia and hydrogen gas on catalytic/thermal decomposition; oxides of nitrogen on combustion.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

In case of exposure that is repetitive, prolonged, or at concentrations higher than the recommended occupational exposure limits, adverse health effects may result depending on the means of exposure:

A. Ingestion (acute effect):

Toxic if swallowed (H301). Causes severe corrosive burns to the mouth, throat and gastrointestinal tract; systemic toxicity includes CNS effects (tremors, convulsions) and haemolysis.

B. Inhalation (acute effect):

Toxic if inhaled (H331). Vapours/mist are corrosive to the respiratory tract, causing coughing, breathlessness and, at high concentration, pulmonary oedema. Systemic absorption can cause CNS effects, haemolytic anaemia and liver/kidney injury.

C. Contact with skin and eyes (acute effect):

Causes severe skin burns and eye damage (H314); toxic by skin absorption (H311). May cause an allergic skin reaction (H317, skin sensitiser).

D. CMR effects (carcinogenicity, mutagenicity, reproductive toxicity):

Classified Carc. 1B (H350) and Muta. 2 (H341) under GHS/CLP. IARC: Group 2B – possibly carcinogenic to humans; ACGIH: A3 (confirmed animal carcinogen with unknown relevance to humans).

E. Sensitizing effects:

May cause an allergic skin reaction (H317, Skin Sens. 1).

F. Specific target organ toxicity (STOT) – single exposure:

Corrosive/systemic effects reflected in the acute toxicity and skin corrosion classifications above; may cause CNS effects (tremor, ataxia) at high exposure.

G. Specific target organ toxicity (STOT) – repeated exposure:

Repeated exposure has been associated with effects on the liver, kidneys, lungs and blood (haemolysis) in animal studies; classify and handle as for a systemic toxicant on repeated exposure.

H. Aspiration hazard:

Not classified based on available data (aqueous solution); aspiration risk from vomiting should still be avoided (do not induce vomiting).

Product-specific toxicological information:

Identification	Acute Toxicity	Genus
Hydrazine hydrate (80%) CAS: 7803-57-8	LD50 oral: ~60–129 mg/kg (as hydrazine)	Rat
	LD50 dermal: ~91 mg/kg (as hydrazine, rabbit)	Rabbit
	LC50 inhalation: ~570 ppm (4h, as hydrazine)	Rat

SECTION 12: ECOLOGICAL INFORMATION

Very toxic to aquatic life with long lasting effects.

12.1 Toxicity:

Identification	Acute Toxicity	Species	Genus
Hydrazine hydrate CAS: 7803-57-8	LC50: ~0.75–1.5 mg/L (96h, as hydrazine)	Pimephales promelas	Fish
	EC50: ~1.8 mg/L (48h, as hydrazine)	Daphnia magna	Crustacean

12.2 Persistence and degradability:

Rapidly oxidised/degraded in the environment (reactive reducing agent), but very toxic to aquatic organisms even at low concentrations – prevent any environmental release.

12.3 Bioaccumulative potential:

Low bioaccumulation potential (log Pow -1.37; highly water-soluble).

12.4 Mobility in soil:

Koc	Henry	Dry Soil	Moist Soil
Low (highly water-soluble/reactive)	Negligible (low volatility from water)	Reactive, degrades on contact with soil oxides	Highly mobile/soluble

12.5 Results of PBT and vPvB assessment:

Not persistent (rapidly degraded); does not meet the P/B criteria of Annex XIII despite high acute aquatic toxicity (T criterion met).

12.6 Other adverse effects:

Very toxic to aquatic life with long lasting effects (H410) – strict containment of any spill is essential.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods:

Do not discharge to drains, watercourses or soil. Dispose of via a licensed hazardous waste contractor; typically neutralised/oxidised (e.g. controlled hypochlorite or peroxide treatment under competent technical supervision) prior to further treatment, or incinerated at a licensed facility with appropriate NOx abatement. For packaging: rinse residues under controlled conditions before disposal; do not reuse.

Refer to national and local regulations on waste management, including the Hazardous and Other Wastes (Management and Transboundary Movement) Rules.

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land (ADR 2023 / RID 2023):

14.1 UN number	UN2030
14.2 UN proper shipping name	HYDRAZINE, AQUEOUS SOLUTION, WITH MORE THAN 37% HYDRAZINE, BY MASS
14.3 Transport hazard class(es)	8 (subsidiary: 3, 6.1)
14.4 Packing group	II
14.5 Environmental hazard	Yes
14.6 Special precautions for user	Physico-chemical properties: see section 9
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

Transport of dangerous goods by sea (IMDG 41-22):

14.1 UN number	UN2030
14.2 UN proper shipping name	HYDRAZINE, AQUEOUS SOLUTION, WITH MORE THAN 37% HYDRAZINE, BY MASS
14.3 Transport hazard class(es)	8 (subsidiary: 3, 6.1)
14.4 Packing group	II
14.5 Marine pollutant	Yes
14.6 Special precautions for user	EmS Codes: F-A, S-C | Limited quantities: 0 (Limited quantities not permitted) | Segregation group: Not relevant
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

Transport of dangerous goods by air (IATA/ICAO 2024):

14.1 UN number	UN2030
14.2 UN proper shipping name	HYDRAZINE, AQUEOUS SOLUTION, WITH MORE THAN 37% HYDRAZINE, BY MASS
14.3 Transport hazard class(es)	8 (subsidiary: 3, 6.1)
14.4 Packing group	II
14.5 Environmental hazard	Yes
14.6 Special precautions for user	Physico-chemical properties: see section 9
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the product in question:

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of local circumstances, in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

Other legislation:

Manufacture, Storage and Import of Hazardous Chemicals Rules 1989
The Factories Act, 1948 (Act No. 63 of 1948), as amended by the Factories (Amendment) Act, 1987 (Act 20 of 1987)
The Chemical Accidents (Emergency Planning, Preparedness, and Response) Rules, 1996
Public Liability Insurance Act, 1991
Manufacture, Storage and Import of Hazardous Chemicals Rules 1989 – this product is listed as a hazardous chemical requiring an on-site emergency plan above threshold quantities.

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with Annex 4 – Guidance on the preparation of Safety Data Sheets of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Texts of the legislative phrases mentioned in sections 2 and 3:

H226: Flammable liquid and vapour.
H301: Toxic if swallowed.
H311: Toxic in contact with skin.
H331: Toxic if inhaled.
H314: Causes severe skin burns and eye damage.
H317: May cause an allergic skin reaction.
H350: May cause cancer.
H341: Suspected of causing genetic defects.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3.

Advice related to training:

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

PubChem (National Library of Medicine); European Chemicals Agency (ECHA) classification and labelling inventory; United Nations Economic Commission for Europe (UNECE) Model Regulations; ACGIH Threshold Limit Values. IARC Monographs; ACGIH TLV documentation.

Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road | IMDG: International maritime dangerous goods code | IATA: International Air Transport Association | ICAO: International Civil Aviation Organisation | COD: Chemical Oxygen Demand | BOD5: 5-day biochemical oxygen demand | BCF: Bioconcentration factor | LD50: Lethal Dose 50 | LC50: Lethal Concentration 50 | EC50: Effective Concentration 50 | Log-POW: Octanol-water partition coefficient | Koc: Partition coefficient of organic carbon | IARC: International Agency for Research on Cancer

END OF SAFETY DATA SHEET