MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Identification

1.1 Product identifiers

Product Name : **Phenyl hydrazine**

CAS No. : 100-63-0

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

Recommended uses : Laboratory chemicals

Uses advised against: Food, drug, pesticide or biocidal product use.

1.3 Details of the supplier of the safety data sheet

Company : Krishna Solvechem Limited.
B/503, Sahayog, S. V. Road,
Kandivali (West), Mumbai – 400067. India.

Telephone : +91-22-6123 0222

Email : exports@kscl.co.in

1.4 Emergency telephone number

Emergency Phone : +91-8657457330

SECTION 2: Hazards identification

2.1 Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity – oral, dermal, inhalation	(Category 3)
Skin and Eye Irritation	(Category 2)
Skin sensitization	(Category 1)
Specific target organ toxicity (repeated exposure)	(Category 1)
Germ cell mutagenicity	(Category 2)
Acute aquatic toxicity	(Category 1)

2.2 Label elements

Pictogram :

Signal word Danger

Hazard statement (s) Causes damage to organs through prolonged or repeated Exposure
May cause an allergic skin reaction
Suspected of causing genetic defects

	Toxic if inhaled or swallowed Toxic in skin contact with skin Causes skin irritation Causes serious eye irritation May cause cancer Very toxic to aquatic life
Precautionary statement (s)	
Prevention	
	Obtain special instructions before use Wear protective gloves/protective clothing/eye protection/face protection Avoid release to the environment Avoid breathing dust/fume/gas/mist/vapors/spray Use only outdoors or in a well-ventilated area
	Inhalation : IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing Call a POISON CENTER or doctor/physician if you feel unwell
	Eyes: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention
	Disposal: Dispose of contents/container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)	None identified

SECTION 3: Composition / information on ingredients

3.1

Component	CAS-No	Weight %
Phenyl hydrazine	100-63-0	<=100

SECTION 4: First aid measures

4.1 Description of first aid measures

General Advice:	Consult a physician. Show this safety data sheet to the doctor in attendance
If inhalation :	Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.
In case of skin contact :	Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.
In case of eye contact :	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Ingestion :	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician

4.2	**Most important symptoms and effects :**	The most important known symptoms and effects are described in the labelling (see section 2.2) and /or in section 11
4.3	**Notes to Physician :**	Treat symptomatically

SECTION 5: Firefighting effects

5.1 Extinguishing media

Suitable extinguishing media :	Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam.
Unsuitable Extinguishing Media: :	No information available

5.2	**Flash Point :**	89 °C
	Method :	Closed cup

	Autoignition Temperature:	No information available
	Explosion Limits:	
	Upper	No data available
	Lower	1.1 % (V)
	Sensitivity to Mechanical Impact	No information available
	Sensitivity to Static Discharge	No information available
	Specific Hazards Arising from the Chemical :	Carbon oxides, nitrogen oxides (NOx)
	Hazardous Combustion Products :	Carbon Oxides, nitrogen oxides (NOx)
5.4	**Protective Equipment and Precautions for Firefighters:**	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove allsources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into theenvironment must be avoided.

6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing andplace in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid exposure - obtain special instructions before use.Avoid contact with skin and eyes. Avoid inhalation ofvapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostaticcharge.
For precautions see section 2.2.

7.2	Conditions for safe storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which areopened must be carefully resealed and kept upright to prevent leakage.

Light sensitive. Store under inert gas. Air sensitive.

SECTION 8: Exposure controls/personal protection

8.1 Exposure controls

Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handlingthe product.

Personal protective equipment -

Eye / Face protection

Face shield and safety glasses Use equipment for eye protection tested and approved underappropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection and body protection

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. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.Wash and dry hands.

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator withmulti-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge intothe environment must be avoided.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	Form: Liquid
b) Odour	No information available
c) Odour Threshold	No information available
d) pH	No information available
e) Melting point / freezing point	18 - 21 °C
f) Initial boiling point and	238 - 241 °C

	boiling range	
	g) Flash point	89 °C – Closed cup
	h) Evaporation rate	No information available
	i) Flammability (solid, gas)	Not applicable
	j) Upper/lower flammability or explosive limits	No data available Lower : 1.1 % (V)
	k) Vapour pressure	1,35 hPa at 60 °C
	l) Vapour density	4.33
	m) Specific Gravity	1.098 g / ml
	n) Solubility	No data available
	o) Partition coefficient: n octanol/water	No data available
	p) Auto-ignition temperature	No information available
	q) Decomposition temperature	No data available
	r) Viscosity	No information available
	s) Molecular formula	C6 H8 N2
	t) Molecular Weight	108.14 g/mol

SECTION 10: Stability and Reactivity

10.1	**Reactive Hazard :**	No data available
10.2	**Chemical stability :**	Stable under recommended storage conditions.
10.3	**Possibility of hazardous reactions :**	None under normal processing.
10.4	**Conditions to avoid :**	Heat, flames and sparks
10.5	**Incompatible materials:**	Strong oxidizing agents
10.6	**Hazardous decomposition products :**	In the event of fire see section 5
10.7	**Hazardous Polymerization**	No data available

SECTION 11: Toxicological information

11.1
Information on toxicological effects
Acute toxicity:
LD50 Oral - rat - 188 mg/kg
Remarks: Behavioral: Excitement. Behavioral: Muscle contraction or spasticity.
LC50 Inhalation - rat - 2.610 mg/m3 LC50 Inhalation - mouse - 2.120 mg/m3

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation :	No information available
Sensitization:	Hazardous polymerization may occur
Carcinogenicity :	Carcinogenicity - rat – Subcutaneous Tumorigenic: Carcinogenic by RTECS criteria. Liver: Tumors. Skin and Appendages: Other: Tumors.Possible human carcinogen
IARC:	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Mutagenic Effects:	In vitro tests showed mutagenic effects. Ames test S. typhimurium Histidine reversion (Ames) Mouse DNA damage
Reproductive Effects:	Reproductive toxicity – rat – Intraperitoneal Effects on new born : Behavioral
Developmental Effects :	No information available.
Teratogenicity:	No information available.
STOT - single exposure :	None known
STOT - repeated exposure:	None known
Aspiration hazard :	No information available.
Additional Information :	RTECS: MV8925000 Liver injury may occur., Kidney injury may occur., Blood disorders

SECTION 12: Ecological information

12.1 Toxicity:

Toxicity to fish	LC50 - Danio rerio (zebra fish) - 0,16 - 0,25 mg/l - 48,0 h
Toxicity to daphnia andother aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 2 - 5 mg/l - 48 h
Toxicity to algae	EC50 - Desmodesmus subspicatus (green algae) - 3,2 mg/l

12.2 Persistence and degradability:

Biodegradability	Biotic/Aerobic - Exposure time 28 d Result: 97 % - Readily biodegradable.
Bioaccumulation/ Accumulation	No information available

12.3 Mobility: No information available

SECTION 13: Disposal considerations

13.1 Waste treatment methods: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

14.1 UN number :	ADR/RID: 2572 IMDG: 2572 IATA: 2572		
14.2 UN proper shipping name			
ADR/RID :	PHENYLNYDRAZINE		
IMDG :	PHENYLHYDRAZINE		
IATA :	Phenylhydrazine		
14.3 Transport hazard class(es)	ADR/RID: 6.1	IMDG: 6.1	IATA: 6.1
14.4 Packaging group:	ADR/RID: II	IMDG: II	IATA: II

SECTION 15: Regulatory information

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

No data available

15.2 Chemical safety Assessment

For this product a chemical safety assessment was not carried out.

SECTION 16: Other information

16.1	**Prepared By:**	Regulatory affairs Krishna Solvechem Limited
	Email:	exports@kscl.co.in
	Creation Date:	23-Mar-2012
	Revision Date:	19-Jun-2023
	Print Date:	19-Jun-2023
	Revision Summary:	This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under29 C F R 1910.1200 to align with the Globally Harmonized System ofClassification and Labeling of Chemicals (GHS).

16.2 Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.