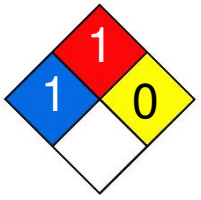
Material Safety Data Sheets



Revision 2

1. IDENTIFICATION

Product Name	**Hydroxylamine hydrochloride**
Other Names	hydroxyl ammonium chloride; Hydroxylamine HCl; Hydroxyamine hydrochloride
Uses	
Chemical Family	No Data Available
Chemical Formula	NH_2OH . HCl
Chemical Name	No Data Available
Product Description	No Data Available
Company	**Arman sina.co**
Contact Information	info@armansina.com **www.armansina.com**

2. HAZARD IDENTIFICATION

Hazard Categories

Carcinogenicity, category 2
Specific target organ toxicity (repeated exposure), category 2
Acute toxicity, category 4, oral and dermal
Eye irritation, category 2
Skin irritation, category 2
Skin sensitization, category 1
Substance or mixture corrosive to metals, category 1

Signal Word

Warning

Hazard Statements

H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H302+H312	Harmful if swallowed or in contact with skin.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H290	May be corrosive to metals.

Precautionary Statements

Prevention	P201	Obtain special instructions before use.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	P273	Avoid release to the environment.
Response	P302+P352	IF ON SKIN: Wash with plenty of water/…
	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+P310	IF exposed or concerned: Immediately call a POISON CENTER/doctor.
Storage	Store locked up. Store in corrosive resistant container with a resistant inner liner.	

symbol

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Hydroxylamine hydrochloride	NH_2OH . HCl	5470-11-1	100 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed — If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Do NOT induce vomiting. Give nothing to eat or drink.

Eye — In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing.

Skin — After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. In case of skin reactions, consult a physician.

Inhaled — Call a POISON CENTER/doctor. Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

Advice to Doctor — Consult a doctor in case of discomfort showing the SDS for the product.

5. FIRE FIGHTING MEASURES

General Measures — Do not allow run-off from fire-fighting to enter drains or water courses. Do not inhale explosion and combustion gases. Use water spray/stream to protect personnel and to cool endangered containers. In case of fire: Evacuate area.

Flammability Conditions — No Data Available

Extinguishing Media — The product itself does not burn.
Co-ordinate fire-fighting measures to the fire surroundings.

Fire and Explosion Hazard — May be combustible at high temperatures Decompostion may be initiated by action of localized heat. Nitrogen oxides, Hydrogen chloride, ammonia and/or derivatives are hazardous decomposition products. Decomposition starts at temperatures above 115° C. Decomposes violently or explosively when heated above 140° C

Hazardous Products of Combustion — In case of fire may be liberated:
Hydrogen chloride (HCl)
Nitrogen oxides (NOx)

Special Fire Fighting Instructions — DO NOT fight fire when fire reaches explosives. Protective equipment and precautions for firefighters
Wear a self-contained breathing apparatus and chemical protective clothing.

Personal Protective Equipment — As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

Flash Point — No Data Available

Lower Explosion Limit — No Data Available

Upper Explosion Limit — No Data Available

Auto Ignition Temperature — No Data Available

Hazchem Code — No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Clear spills immediately.
Clean Up Procedures	Spilled product must never be returned to the original container for recycling. Clean contaminated articles and floor according to the environmental legislation. Collect in closed and suitable containers for disposal.
Containment	No Data Available
Decontamination	No Data Available
Environmental Precautionary Measures	Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.
Evacuation Criteria	No Data Available
Personal Precautionary Measures	Avoid dust formation. Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Remove all sources of ignition.

7. HANDLING AND STORAGE

Handling	Technical Measures/Precautions: provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials. Safe Handling Advice: Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe vapours/dust. Handle in accordance with good industrial hygiene and safety practice.
Storage	Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials. Hygroscopic. Moisture sensitive..
Container	Keep container tightly closed and in a well-ventilated place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	Respiratory protection Respiratory protection necessary at: aerosol or mist formation If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn. Wash hands before breaks and after work. Avoid contact with eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.
Exposure Limits	No information available.
Biological Limits	No information available.
Engineering Measures	Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

Personal Protection Equipment	Wear suitable protective clothing. When handling with chemical substances, protective clothing must be worn. Eye/face protection Eye glasses with side protection Skin protection Wear suitable gloves. When handling with chemical substances, protective gloves must be worn. In the case of wanting to use the gloves again, clean them before taking off and air them well. Check leak tightness/impermeability prior to use.
Special Hazards Precaustions	No Data Available
Work Hygienic Practices	No Data Available

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Crystals or powder
Odour	No Data Available
Colour	White to yellowish
pH	2.5-3.5 (50 g/l; H2O; 20 °C)
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	151 °C
Freezing Point	No Data Available
Solubility	Solubility in water: 830 g/l (20 °C)
Specific Gravity	No Data Available
Flash Point	No information available.
Auto Ignition Temp	306 ° C (1013 hPa)
Evaporation Rate	No information available.
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	157 ° C (1013 hPa)
Density	1.67 g/cm³ (20 °C)
Specific Heat	No Data Available
Molecular Weight	69.49 g/mol
Net Propellant Weight	No Data Available
Octanol Water Coefficient	-2.66 (20 ° C)
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.
Potential for Dust Explosion	Not applicable.

Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	No information available.
Reactions That Release Gases or Vapours	No information available.
Release of Invisible Flammable Vapours and Gases	No information available. No information available.

10. STABILITY AND REACTIVITY

General Information	Reactive with oxidizing agents Moisture sensitive; Hygroscopic; keep container tightly closed. Also incompatible with heat + sodium acetate or ether, carbonyl compounds, copper sulfate, zinc and phosphorus chlorides, aldehydes, ketones, iron and its salts, heavy metals salts, combustible and flammable materials (e.g. alkyl resins, asphalt, gasoline, grease, methyl acetone, polystyrene, polyurethane). Hydroxylamine Hydrochloride reacts with alkalis to give free Hydroxylamine, which decomposes, especially in the presence of heavy metal ions and at elevated temperatures
Chemical Stability	The product is chemically stable under standard ambient conditions (room temperature) .
Conditions to Avoid	Heat. Incompatible materials. Exposure to moisture.
Materials to Avoid	Alkalis. Organic materials. Oxidizing agents.
Hazardous Decomposition Products	Ammonia. Hydrogen chloride. Nitrogen oxides (NOx).
Hazardous Polymerisation	No Data Available

11. TOXICOLOGICAL INFORMATION

General Information	No Data Available .
Acute	Acute Toxicity Component Information LD50/oral/rat = = 141 mg/kg Oral LD50 Rat LD50/oral/mouse = 408 mg/kg Oral LD50 Mouse Product Information LD50/oral/rat = VALUE- Acute Tox Oral = 141mg/kg LD50/oral/mouse = Value - Acute Tox Oral = 408mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity	No Data Available
Persistence/Degradability	No Data Available
Mobility	No Data Available
Environmental Fate	No Data Available
Bioaccumulation Potential	Partition coefficient: n-octanol/water: -2.66 (20 ° C)
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Appropriate disposal / Product Dispose according to legislation. Consult the appropriate local waste disposal expert about waste disposal. Appropriate disposal / Package Dispose according to legislation. Handle contaminated packages in the same way as the substance itself.

Special Precautions for Land Fill

14. TRANSPORT INFORMATION

Land Transport

Proper Shipping Name	Hydroxylamine Hydrochloride; Corrosive solids, toxic
Class	8
Subsidiary Risk(s)	No Data Available
EPG	No Data Available
UN Number	UN2923
Hazchem	No Data Available
Pack Group	III
Special Provision	No Data Available

Sea Transport

Proper Shipping Name	Hydroxylamine Hydrochloride; Corrosive solids, toxic
Class	8
Subsidiary Risk(s)	No Data Available
UN Number	UN2923
Hazchem	No Data Available
Pack Group	III
Special Provision	No Data Available
EMS	No Data Available

Marine Pollutant No

Air Transport

Proper Shipping Name	Hydroxylamine Hydrochloride; Corrosive solids, toxic
Class	8
Subsidiary Risk(s)	No Data Available
UN Number	UN2923
Hazchem	No Data Available
Pack Group	III
Special Provision	No Data Available

15. OTHER INFORMATION

Revision	2
Key/Legend	**< Less Than** **> Greater Than** **AICS Australian Inventory of Chemical Substances** **atm Atmosphere** **CAS Chemical Abstracts Service (Registry Number)** **cm² Square Centimetres** **CO2 Carbon Dioxide** **COD Chemical Oxygen Demand** **deg C (° C) Degrees Celcius** **deg F (° F) Degrees Farenheit** **g Grams** **g/cm³ Grams per Cubic Centimetre** **g/l Grams per Litre** **HSNO Hazardous Substance and New Organism** **IDLH Immediately Dangerous to Life and Health** **immiscible Liquids are insoluable in each other.** **inHg Inch of Mercury** **inH2O Inch of Water** **K Kelvin** **kg Kilogram** **kg/m³ Kilograms per Cubic Metre** **lb Pound** **LC50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50%** (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours. **LD50 LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one** half) of a group of test animals. **ltr or L Litre** **m³ Cubic Metre** **mbar Millibar** **mg Milligram** **mg/24H Milligrams per 24 Hours** **mg/kg Milligrams per Kilogram** **mg/m³ Milligrams per Cubic Metre** **Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present.** **mm Millimetre** **mmH2O Millimetres of Water** **mPa.s Millipascals per Second** **N/A Not Applicable** **NIOSH National Institute for Occupational Safety and Health** **NOHSC National Occupational Heath and Safety Commission** **OECD Organisation for Economic Co-operation and Development** **Oz Ounce** **PEL Permissible Exposure Limit** **Pa Pascal** **ppb Parts per Billion** **ppm Parts per Million** **ppm/2h Parts per Million per 2 Hours** **ppm/6h Parts per Million per 6 Hours** **psi Pounds per Square Inch** **R Rankine** **RCP Reciprocal Calculation Procedure** **STEL Short Term Exposure Limit** **TLV Threshold Limit Value** **tne Tonne** **TWA Time Weighted Average** **ug/24H Micrograms per 24 Hours** **UN United Nations** **wt Weight**