

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

1.1. Product identifier

Product form : Mixture
Product name : Hydroxylamine Hydrochloride, 50% w/v
Product code : LC15550

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

Use of the substance/mixture : For laboratory and manufacturing use only.

1.3. Details of the supplier of the safety data sheet

LabChem Inc
Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court
Zelienople, PA 16063 - USA
T 412-826-5230 - F 724-473-0647
info@labchem.com - www.labchem.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or 011-703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Acute Tox. 4 (Oral) H302
Acute Tox. 3 (Dermal) H311
Skin Irrit. 2 H315
Eye Irrit. 2A H319
Skin Sens. 1 H317
Carc. 2 H351
STOT RE 2 H373
Aquatic Acute 1 H400

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H302 - Harmful if swallowed
H311 - Toxic in contact with skin
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H351 - Suspected of causing cancer
H373 - May cause damage to organs (blood, liver, kidneys, spleen) through prolonged or repeated exposure
H400 - Very toxic to aquatic life

Precautionary statements (GHS-US)

: P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P260 - Do not breathe mist
P264 - Wash exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
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
P301+P312 - IF SWALLOWED: Call a poison center/doctor if you feel unwell
P302+P352 - IF ON SKIN: Wash with plenty of soap and water
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact

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lenses, if present and easy to do. Continue rinsing
P308+P313 - IF exposed or concerned: Get medical advice/attention
P312 - Call a poison center/doctor if you feel unwell
P330 - If swallowed, rinse mouth
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P362+P364 - Take off contaminated clothing and wash it before reuse
P391 - Collect spillage
P405 - Store locked up
P501 - Dispose of contents/container to comply with local, state and federal regulations

2.3. Other hazards

Other hazards not contributing to the classification : None under normal conditions.

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
Hydroxylamine Hydrochloride	(CAS No) 5470-11-1	50	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317 Carc. 2, H351 STOT RE 2, H373 Aquatic Acute 1, H400
Water	(CAS No) 7732-18-5	50	Not classified

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Suspected of causing cancer.

First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Immediately call a poison center or doctor/physician. Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. Wash contaminated clothing before reuse.

First-aid measures after eye contact : 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.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a POISON CENTER/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Causes damage to organs.

Symptoms/injuries after inhalation : Possible inflammation of the respiratory tract. May cause an allergic skin reaction.

Symptoms/injuries after skin contact : May cause an allergic skin reaction. Repeated exposure to this material can result in absorption through skin causing significant health hazard. Toxic in contact with skin. Causes skin irritation.

Symptoms/injuries after eye contact : Mild eye irritation. Causes serious eye irritation.

Symptoms/injuries after ingestion : Nausea. Vomiting. Swallowing a small quantity of this material will result in serious health hazard.

4.3. Indication of any immediate medical attention and special treatment needed

Obtain medical assistance.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

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5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Protective equipment : Safety glasses. Protective clothing. Gloves.
- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Avoid breathing mist. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
- Hygiene measures : Do not eat, drink or smoke when using this product. Wash exposed skin thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep container closed when not in use.
- Incompatible products : Strong oxidizers.
- Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Hydroxylamine Hydrochloride, 50% w/v	
ACGIH	Not applicable
OSHA	Not applicable
Hydroxylamine Hydrochloride (5470-11-1)	
ACGIH	Not applicable
OSHA	Not applicable
Water (7732-18-5)	
ACGIH	Not applicable
OSHA	Not applicable

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8.2. Exposure controls

Appropriate engineering controls	: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation.
Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: Wear protective gloves.
Eye protection	: Chemical goggles or safety glasses.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: Wear appropriate mask.
Other information	: Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Colorless
Odor	: None.
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Soluble in water. Water: Solubility in water of component(s) of the mixture : • Hydroxylamine Hydrochloride: 95 g/100ml
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong oxidizers.

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10.6. Hazardous decomposition products

Gaseous ammonia. Nitrogen oxides. Hydrogen chloride.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed. Dermal: Toxic in contact with skin.

Hydroxylamine Hydrochloride, 50% w/v	
LD50 oral rat	604 mg/kg
ATE US (oral)	604.000 mg/kg body weight
ATE US (dermal)	800.000 mg/kg body weight

Hydroxylamine Hydrochloride (5470-11-1)	
LD50 oral rat	200 - 2000 mg/kg (Rat)
LD50 dermal rabbit	400 - 2000 mg/kg (Rabbit)
ATE US (oral)	200.000 mg/kg body weight
ATE US (dermal)	400.000 mg/kg body weight

Water (7732-18-5)	
LD50 oral rat	≥ 90000 mg/kg
ATE US (oral)	90000.000 mg/kg body weight

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: May cause damage to organs (blood, liver, kidneys, spleen) through prolonged or repeated exposure.
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met. Harmful if swallowed. Toxic in contact with skin.
Symptoms/injuries after inhalation	: Possible inflammation of the respiratory tract. May cause an allergic skin reaction.
Symptoms/injuries after skin contact	: May cause an allergic skin reaction. Repeated exposure to this material can result in absorption through skin causing significant health hazard. Toxic in contact with skin. Causes skin irritation.
Symptoms/injuries after eye contact	: Mild eye irritation. Causes serious eye irritation.
Symptoms/injuries after ingestion	: Nausea. Vomiting. Swallowing a small quantity of this material will result in serious health hazard.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Very toxic to aquatic life.

Hydroxylamine Hydrochloride (5470-11-1)	
LC50 fish 1	7.2 mg/l (96 h; Pimephales promelas)
EC50 Daphnia 1	1.62 mg/l (48 h; Daphnia magna; Estimated value)

12.2. Persistence and degradability

Hydroxylamine Hydrochloride, 50% w/v	
Persistence and degradability	Not established.

Hydroxylamine Hydrochloride (5470-11-1)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable

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Hydroxylamine Hydrochloride (5470-11-1)	
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
Water (7732-18-5)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Hydroxylamine Hydrochloride, 50% w/v	
Bioaccumulative potential	Not established.
Hydroxylamine Hydrochloride (5470-11-1)	
Bioaccumulative potential	Not bioaccumulative.
Water (7732-18-5)	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on ozone layer	:
Effect on the global warming	: No known ecological damage caused by this product.
Other information	: Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with local, state and federal regulations.
Ecology - waste materials	: Hazardous waste due to toxicity. Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT	
Transport document description	: UN3287 Toxic liquid, inorganic, n.o.s. (Hydroxylamine Hydrochloride), 6.1, III
UN-No.(DOT)	: UN3287
Proper Shipping Name (DOT)	: Toxic liquid, inorganic, n.o.s.
Department of Transportation (DOT) Hazard Classes	: 6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132
Hazard labels (DOT)	: 6.1 - Poison inhalation hazard



DOT Symbols	: G - Identifies PSN requiring a technical name
Packing group (DOT)	: III - Minor Danger
DOT Special Provisions (49 CFR 172.102)	: IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 153
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203

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DOT Packaging Bulk (49 CFR 173.xxx)	: 241
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 220 L
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

Additional information

Other information : No supplementary information available.

ADR

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

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SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
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All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Hydroxylamine Hydrochloride (5470-11-1)

SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
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15.2. International regulations

CANADA

Hydroxylamine Hydrochloride, 50% w/v

WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects
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Hydroxylamine Hydrochloride (5470-11-1)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects Class E - Corrosive Material
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Water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
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EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

15.2.2. National regulations

Hydroxylamine Hydrochloride (5470-11-1)

Not listed on the Canadian IDL (Ingredient Disclosure List)

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Water (7732-18-5)

Not listed on the Canadian IDL (Ingredient Disclosure List)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Carc. 2	Carcinogenicity Category 2
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Met. Corr. 1	Corrosive to metals Category 1
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization Category 1
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
H290	May be corrosive to metals
H302	Harmful if swallowed
H311	Toxic in contact with skin
H312	Harmful in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H351	Suspected of causing cancer
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life

NFPA health hazard

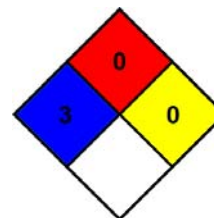
: 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.

NFPA fire hazard

: 0 - Materials that will not burn.

NFPA reactivity

: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 0 Minimal Hazard

Physical : 0 Minimal Hazard

Personal Protection : C

SDS US (GHS HazCom 2012)

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