

Section 1 Identification

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CHEMTREC 24 Hour Emergency
Phone Number (800) 424-9300
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Product 1,6-HEXANEDIAMINE, 0.5 MOLAR SOLUTION

Synonyms Hexamethylenediamine Solution

Section 2 Hazards identification

Signal word: DANGER

Pictograms: GHS05 / GHS07

Target organs: Liver, Kidneys, Heart

**GHS Classification:**

Acute toxicity, oral (Category 4)

Acute toxicity, dermal (Category 4)

Skin corrosion (Category 1B)

STOT-SE (Category 3)

GHS Label information: Hazard statement:

H302: Harmful if swallowed.

H312: Harmful in contact with skin.

H314: Causes severe skin burns and eye damage.

H335: May cause respiratory irritation.

Precautionary statement:

P260: Do not breathe mist/vapours/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+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P312: Call a POISON CENTER or doctor if you feel unwell.

P303+P361+P353: IF ON SKIN (or hair): 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 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310: Immediately call a POISON CENTER or doctor.

P363: Wash contaminated clothing before reuse.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P405: Store locked up.

P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known

Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / information on ingredients

Chemical Name	CAS #	%	EINECS
Water	7732-18-5	92%	231-791-2
1,6-Hexanediamine	124-09-4	6%	204-679-6
Sodium hydroxide	1310-73-2	2%	215-185-5

Section 4 First aid measures

INGESTION: HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES EYE DAMAGE. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: CAUSES SEVERE SKIN BURNS. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Carbon dioxide, dry chemical, dry sand, alcohol foam.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from ignition sources.

Section 8 Exposure controls / personal protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	1,6-Hexanediamine	TWA: 0.5 ppm ; 2.3 mg/m ³	None established	None established

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical and chemical properties

Appearance: Clear, colorless liquid. Odor: Amine or fishy odor. Odor threshold: Data not available. pH: Data not available. Melting / Freezing point: 39-42°C (102-107°F)* Boiling point: 205°C (401°F)* Flash point: 85°C (185°F) COC	Evaporation rate (= 1): Data not available Flammability (solid/gas): Data not available. Explosion limits: Lower: 0.9% Upper: 4.1% Vapor pressure (mm Hg): 3 @ 60°C* Vapor density (Air = 1): 3.8* Relative density (Specific gravity): Approximately 1.0 Solubility(ies): Soluble in water.	Partition coefficient: Data not available Auto-ignition temperature: Data not available Decomposition temperature: Data not available. Viscosity: Data not available. Molecular formula: Mixture Molecular weight: Mixture
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*Hexanediamine

Section 10 Stability and reactivity

Chemical stability: Stable **Hazardous polymerization:** Will not occur.

Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition.

Incompatible materials: Strong oxidizers, acids, metals, organic compounds, organic nitro compounds.

Hazardous decomposition products: Carbon oxides, nitrogen oxides, ammonia and hydrogen cyanide, sodium oxide. Reacts with metals to form flammable and explosive hydrogen gas.

Section 11 Toxicological information

Acute toxicity: Oral-rat LD50: 792 mg/kg ; Inhalation-rat LC0: 0.95 mg/L/4hours ; Dermal-rabbit LD50: 1110 mg/kg [Hexanediamine]

Skin corrosion/irritation: Skin-rabbit - Corrosive [Hexanediamine]

Serious eye damage/irritation: Eyes-rabbit - Corrosive [Hexanediamine]

Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenicity: Data not available

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

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.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Ca Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Reproductive toxicity: Data not available

STOT-single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory effects.

STOT-repeated exposure: Data not available

Aspiration hazard: Data not available

Potential health effects:

Inhalation: Burning sensation. Cough, labored breathing, shortness of breath, sore throat.

Ingestion: Abdominal cramps, abdominal pain, burning sensation, shock or collapse.

Skin: May be absorbed through skin. Redness, burns, pain, blisters.

Eyes: Redness, pain, severe deep burns.

Signs and symptoms of exposure: See Potential health effects above. Exercise appropriate procedures to minimize potential hazards.

Additional information: RTECS #: MO1180000 [Hexanediamine]

Section 12 Ecological information

Toxicity to fish: Leuciscus idus (fish, fresh water), LC50 = 62 mg/L/96 hours [Hexanediamine]

Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacea), EC50 = 23.4 mg/L/48 hours [Hexanediamine]

Toxicity to algae: Selenastrum capricornutum (Algae), EC50 = 15 mg/L/72 hours [Hexanediamine]

Persistence and degradability: No data available **Bioaccumulative potential:** No data available

Mobility in soil: No data available **PBT and vPvB assessment:** No data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport information

UN/NA number: UN1760 **Shipping name:** Corrosive liquids, n.o.s., (1,6-Hexanediamine, Sodium hydroxide)

Hazard class: 8 **Packing group:** II **Reportable Quantity:** No

Marine pollutant: No

Exceptions: Limited quantity equal to or less than 1 Lt **2020 ERG Guide #** 154

Section 15 Regulatory information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Hexanediamine	Listed	Not listed	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.
Sodium hydroxide	Listed	1000 lbs (454 Kg)	D002	Listed	Not listed	

Section 16 Other information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Section 1 Identification

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Phone Number (800) 424-9300
For laboratory and industrial use only.
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Product	SEBACOYL CHLORIDE / HEXANE SOLUTION
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Synonyms	None
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Section 2 Hazards identification

Signal word: DANGER**Pictograms:** GHS02 / GHS05 / GHS07 / GHS08 / GHS09**Target organs:** Central nervous system, Peripheral nervous system, Reproductive system, Eyes, Skin**GHS Classification:**

Flammable liquid (Category 2)

Aspiration hazard (Category 1)

Skin corrosion (Category 1C)

STOT-SE (Category 3)

Reproductive toxicity (Category 2)

STOT-RE (Category 2)

Aquatic chronic (Category 2)

GHS Label information: Hazard statement:

H225: Highly flammable liquid and vapour.

H304: May be fatal if swallowed and enters airways.

H314: Causes severe skin burns and eye damage.

H336: May cause drowsiness or dizziness.

H361f: Suspected of damaging fertility.

H373: May cause damage to organs through prolonged or repeated exposure.

H411: Toxic to aquatic life with long lasting effects.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Lachrymator

Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / information on ingredients

Chemical Name	CAS #	%	EINECS
Hexane	110-54-3	96%	203-777-6
Sebacoyl chloride	111-19-3	4%	203-843-4

Section 4 First aid measures

INGESTION: HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: HARMFUL IF INHALED. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: MAY CAUSE BURNS. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY CAUSE BURNS. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Carbon dioxide, dry chemical, dry sand, alcohol foam.**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.**Specific Hazards:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Vapors formed from this product are heavier than air and may travel along the ground to a distant source of ignition and flash back instantly. Flame may not be visible in daylight.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.**Containment and Cleanup:** Remove all sources of ignition. Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances. Keep away from ignition sources.

Section 8 Exposure controls / personal protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	n-Hexane	TWA: 50 ppm / 176 mg/m ³	TWA: 500 ppm / 1800 mg/m ³	TWA: 50 ppm / 180 mg/m ³

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: Work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical and chemical properties

Appearance: Clear, colorless liquid.	Evaporation rate (Butyl acetate = 1): 4.3 (Hexane)	Partition coefficient: Data not available
Odor: Acrid, hydrocarbon odor.	Flammability (solid/gas): Data not available.	Auto-ignition temperature: Data not available
Odor threshold: Data not available.	Explosion limits: Lower: 1.0% Upper: 8.0%	Decomposition temperature: Data not available.
pH: Data not available.	Vapor pressure (mm Hg): 119 mm @ 37°C (Hexane)	Viscosity: Data not available.
Melting / Freezing point: Data not available	Vapor density (Air = 1): 3.3 (Hexane)	Molecular formula: Mixture
Boiling point: 90-96°C (195-206°F) (Hexane)	Relative density (Specific gravity): 0.70 @ 20°C	Molecular weight: Mixture
Flash point: -15°C (5°F) TOC (Hexane)	Solubility(ies): Negligible in water.	

Section 10 Stability and reactivity

Chemical stability: Stable **Hazardous polymerization:** Will not occur.

Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition.

Incompatible materials: Strong oxidizers and moisture.

Hazardous decomposition products: Oxides of carbon and chlorine gas.

Section 11 Toxicological information

Acute toxicity: Oral-rat LD50: 400 mg/kg [Sebacoyl chloride]

Skin corrosion/irritation: Data not available

Serious eye damage/irritation: Data not available

Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenicity: Data not available

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

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.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

CA Prop 65: ⚠️ **WARNING!** : This product can expose you to Hexane, which is known to the State of California to cause birth defects or other reproductive harm.

Reproductive toxicity: Data not available

STOT-single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

STOT-repeated exposure: Data not available

Aspiration hazard: Data not available

Potential health effects:

Inhalation: Vapors may be irritating to nose, throat and respiratory tract. High vapor concentrations may produce CNS depression.

Ingestion: Sebacoyl chloride is corrosive and may be fatal if swallowed. Hexane ingestion may result in vomiting, aspiration of vomitus into lungs must be avoided as even small quantities may result in aspiration pneumonitis.

Skin: May cause burns and can result in defatting and drying of the skin which may result in skin irritation and dermatitis. Can be fatal if absorbed through skin.

Eyes: May cause burns. High vapor concentrations may be irritating.

Signs and symptoms of exposure: See Potential health effects above. Exercise appropriate procedures to minimize potential hazards.

Additional information: RTECS #: MN9275000 [Hexane]

Section 12 Ecological information

Toxicity to fish: No data available

Toxicity to daphnia and other aquatic invertebrates: No data available

Toxicity to algae: No data available

Persistence and degradability: No data available

Bioaccumulative potential: No data available

Mobility in soil: No data available

PBT and vPvB assessment: No data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport information

UN/NA number: UN1208

Shipping name: Hexanes

Hazard class: 3

Packing group: II

Reportable Quantity: No

Marine pollutant: No

Exceptions: Limited quantity equal to or less than 1 L

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Section 15 Regulatory information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Hexane	Listed	Not listed	Not listed	Listed	Not listed	⚠️ WARNING - Reproductive Harm - www.P65Warnings.ca.gov.
Sebacoyl chloride	Listed	Not listed	Not listed	Listed	Not listed	

Section 16 Other information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.