



HI-VALLEY CHEMICAL

LABORATORY PRODUCTS

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SAFETY DATA SHEET

Hi Valley Chemical

Versene™ 100 Chelating Agent

1 PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: Versene™ 100 Chelating Agent
SDS Number: R-083
Revision Date: 4/29/2016
Version: 1
Supplier Details: High Valley Products, Inc.
1134 West 850 North
Centerville, Utah 84014
Emergency: PERS: 800-633-8253
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2 HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):

- Physical, Corrosive to Metals, 1
- Health, Skin corrosion/irritation, 2
- Health, Serious Eye Damage/Eye Irritation, 1
- Health, Acute toxicity, 4 Inhalation
- Health, Carcinogenicity, 2

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: **DANGER**

GHS Hazard Pictograms:



GHS Hazard Statements:

- H290 - May be corrosive to metals
- H315 - Causes skin irritation
- H318 - Causes serious eye damage
- H332 - Harmful if inhaled
- H351 - Suspected of causing cancer

GHS Precautionary Statements:

- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P234 - Keep only in original container.
- P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
- P264 - Wash skin thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P273 - Avoid release to the environment.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell.
- P303+361+353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+351+338 - IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P308+313 - IF exposed or concerned: Get medical advice/attention.
P310 - Immediately call a POISON CENTER or doctor/physician.
P330 - Rinse mouth.
P337+313 - If skin irritation occurs: Get medical advice/attention.
P363 - Wash contaminated clothing before reuse.
P390 - Absorb spillage to prevent material damage.
P405 - Store locked up.
P406 - Store in a corrosive resistant/_ container with a resistant inner liner.
P501 - Dispose of contents/container to local regulations.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

Cas#	%	Chemical Name
7732-18-5	56.0%	water
64-02-8	37-39%	Tetrasodium ethylenediamine tetraacetate
2836-32-0	3%	Sodium hydroxyacetate
1310-73-2	1.6%	Sodium hydroxide
5064-31-3	1%	Nitritotriacetic acid, trisodium salt

4 FIRST AID MEASURES

Inhalation: If inhaled, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.
Skin Contact: Promptly flush skin with water until all chemical is removed.
Eye Contact: Immediately flush eyes with large amounts of water for at least 15 minutes, lifting eyelids occasionally to facilitate irrigation.
Suitable emergency eye wash facility should be immediately available.
Ingestion: Do NOT induce vomiting. Give one cup (8 ounces or 240 ml) of water or milk if available and transport to a medical facility. Do not give anything by mouth unless the person is fully conscious.

5 FIRE FIGHTING MEASURES

Extinguishing media
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture
Nitrogen oxides. Carbon monoxide. Carbon Dioxide. Ammonia.

Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

Further information
This material will not burn until the water has evaporated.
Residue can burn

6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:
Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions:
Do not let product enter drains.

Methods and materials for containment and cleaning up:
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Handling Precautions:	Avoid contact with eyes, skin, or clothing. Avoid breathing vapors or mist. Wash thoroughly after handling.
Storage Requirements:	Store in cool/dry area. Keep away from incompatible materials. See section 10. Keep away from heat, sparks, and flames. Do not store in: Opened or unlabeled containers. Zinc. Aluminum. Aluminum alloys. Copper. Copper alloys

Personal Protective Equipment:	<p>Personal protective equipment</p> <p>Eye/face protection: Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).</p> <p>Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves 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.</p> <p>Full contact: Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested: Dermatril (KCL 740 / Aldrich Z677272, Size M)</p> <p>Splash contact: Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested: Dermatril (KCL 740 / Aldrich Z677272, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.</p> <p>Body Protection: 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.</p> <p>Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) 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).</p> <p>Control of environmental exposure: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.</p>
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Exposure Guidelines:

Sodium hydroxide (1310-73-2) [1.6%]

Components with workplace control parameters

CEIL	2 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
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C	2 mg/m ³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
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TWA 2 mg/m3 USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants

C 2 mg/m3 USA. ACGIH Threshold Limit Values (TLV)
Eye, skin, & Upper Respiratory Tract irritation

C 2 mg/m3 USA. NIOSH Recommended Exposure Limits

Nitilotriacetic acid, trisodium salt (5064-31-3) [1.0%] : no data available

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colorless. Colorless to slightly yellow.
Physical State:	Liquid
Odor:	Mild
Odor Threshold:	No data available
Solubility:	No data available
Spec Grav./Density:	1.31
Viscosity:	No data available
Boiling Point:	106 °C (223 °F)
Freezing/Melting Pt.:	-25 °C (-13 °F)
Flash Point:	closed cup No measurable flash point, Pensky-Martens
Partition Coefficient:	No data available
Vapor Pressure:	No data available
Vapor Density:	No data available
pH:	11.0 - 11.8
Evap. Rate:	< 0.8 Estimated.
Molecular weight:	380.2 g/mol
Auto-Ignition Temp:	No data available
Decomp Temp:	No data available
UFL/LFL:	No data available

10 STABILITY AND REACTIVITY

Reactivity:	No data available
Chemical Stability:	Stable under recommended storage conditions.
Conditions to Avoid:	Exposure to elevated temperatures can cause product to decompose.
Materials to Avoid:	Avoid contact with metals such as: Aluminum alloys. Copper. Copper alloys. Nickel. Flammable hydrogen may be generated from contact with metals such as: Zinc. Aluminum.
Hazardous Decomposition:	Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Ammonia. Nitrogen oxides.

11 TOXICOLOGICAL INFORMATION

Water (7732-18-5) [56.0%]

Information on toxicological effects

Acute toxicity: no data available

Inhalation: no data available

Dermal: no data available

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitisation: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:

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.

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

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.

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.

Reproductive toxicity: no data available

Specific target organ toxicity - single exposure: no data available

Specific target organ toxicity - repeated exposure: no data available

Aspiration hazard: no data available

Additional Information:

RTECS: ZC0110000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Sodium hydroxide (1310-73-2) [1.6%]

Information on toxicological effects

Acute toxicity: no data available

Inhalation: no data available

Dermal: no data available

Skin corrosion/irritation: Skin - rabbit Result: Causes severe burns. - 24 h

Serious eye damage/eye irritation: Eyes - rabbit Result: Corrosive - 24 h

Respiratory or skin sensitisation: Will not occur

Germ cell mutagenicity: no data available

Carcinogenicity:

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.

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

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.

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.

Reproductive toxicity: no data available

Specific target organ toxicity - single exposure: no data available

Specific target organ toxicity - repeated exposure: no data available

Aspiration hazard: no data available

Additional Information:

RTECS: WB4900000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

Nitrilotriacetic acid, trisodium salt (5064-31-3) [1.%]

Information on toxicological effects

Acute toxicity:

LD50 Oral - rat - male and female - 1,740 mg/kg (OECD Test Guideline 401)

Inhalation: no data available

Dermal: no data available

Skin corrosion/irritation: Skin - rabbit Result: No skin irritation - 24 h (OECD Test Guideline 404)

Serious eye damage/eye irritation: Eyes - rabbit Result: Irritating to eyes. - 24 h (OECD Test Guideline 405)

Respiratory or skin sensitisation: - guinea pig Result: Does not cause skin sensitisation. (OECD Test Guideline 406)

Germ cell mutagenicity: Mutagenicity (micronucleus test) mouse - male Result: negative

Carcinogenicity:

This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification. The National Cancer Institute (NCI) has found clear evidence for carcinogenicity. Found positive for carcinogenicity in EPA Genetox program.

Limited evidence of carcinogenicity in animal studies

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Trisodium nitrilotriacetate)

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

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.

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.

Reproductive toxicity: no data available

Specific target organ toxicity - single exposure: no data available

Specific target organ toxicity - repeated exposure: no data available

Aspiration hazard: no data available

Additional Information:

Repeated dose toxicity - rat - male - Oral - No observed adverse effect level - 9 mg/kg RTECS: MB8400000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Stomach - Irregularities - Based on Human Evidence

Water (7732-18-5) [56.0%]

Information on ecological effects

Toxicity: no data available

Persistence and degradability: not applicable

Bioaccumulative potential: no data available

Mobility in soil: no data available

Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: no data available

Sodium hydroxide (1310-73-2) [1.6%]

Information on ecological effects

Toxicity:

Toxicity to fish LC50 - *Gambusia affinis* (Mosquito fish) - 125 mg/l - 96 h.

LC50 - *Oncorhynchus mykiss* (rainbow trout) - 45.4 mg/l - 96 h

Toxicity to daphnia and Immobilization EC50 - *Daphnia* - 40.38 mg/l - 48 h.

other aquatic invertebrates

Persistence and degradability: The methods for determining the biological degradability are not applicable to inorganic substances.

Bioaccumulative potential: no data available

Mobility in soil: no data available

Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

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

Nitrilotriacetic acid, trisodium salt (5064-31-3) [1.%]

Information on ecological effects

Toxicity:

Toxicity to fish flow-through test LC50 - *Pimephales promelas* (fathead minnow) - 127 mg/l - 96 h

Toxicity to daphnia and static test EC50 - *Daphnia magna* (Water flea) - 560 - 1,000 mg/l - 48 h.

other aquatic invertebrates

Toxicity to algae static test EC50 - *Desmodesmus subspicatus* (*Scenedesmus subspicatus*) - >: 100 mg/l - 72 h

Persistence and degradability: Biodegradability aerobic - Exposure time 28 d Result: 96 % - Readily biodegradable. (OECD Test Guideline 302B)

Bioaccumulative potential: no data available

Mobility in soil: no data available

Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: no data available

13 DISPOSAL CONSIDERATIONS

Dispose of in accordance with local regulations.

14 TRANSPORT INFORMATION

UN3267, Corrosive liquid, basic, organic, n.o.s., 8, PGIII, (Sodium hydroxide, Tetrasodium ethylenediaminetetraacetate)

15 REGULATORY INFORMATION

Component (CAS#) [%] - CODES

Water (7732-18-5) [56.0%] TSCA

Chelating Agent (64-02-8) [37-39%] TSCA

Acetic acid, hydroxy-, monosodium salt (2836-32-0) [3%] TSCA

RQ(1000LBS), Sodium hydroxide (1310-73-2) [1.6%] CERCLA, CSWHS, MASS, OSHAWAC, PA, TSCA, TXAIR

Nitilotriacetic acid, trisodium salt (5064-31-3) [1.%] MASS, TSCA

Regulatory CODE Descriptions

RQ = Reportable Quantity
TSCA = Toxic Substances Control Act
CERCLA = Superfund clean up substance
CSWHS = Clean Water Act Hazardous substances
MASS = MA Massachusetts Hazardous Substances List
OSHAWAC = OSHA workplace Air Contaminants
PA = PA Right-To-Know List of Hazardous Substances
TXAIR = TX Air Contaminants with Health Effects Screening Level

16 OTHER INFORMATION

Disclaimer:

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

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