

## **SAFETY DATA SHEETS**

**This SDS packet was issued with item:**

077147218

**The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).**

077076409 077076425 077076433

**The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).**

077076417 077077076 077077811 077077829 077078868



## Safety Data Sheet

### Section 1: Identification

**Product Name: EDTA (17% Solution)**

**Product Use:** Root canal chelating conditioner and cleanser

**Manufacturer:** Inter-Med, Inc. / Vista Dental Products

**Address:** 2200 South St. Suite A, Racine, WI 53404

**Phone:** (877) 418-4782 **Fax:** (262) 636-9760

**24 HR. Emergency Telephone Number CHEMTREC (North America) :** 800-424-9300

**24 HR. Emergency Telephone Number CHEMTREC (International) :** +1 (703) 527-3887

### Section 2: Hazard(s) Identification

#### 2.1. GHS Classification:

Health	Environmental	Physical
Skin Irritation – Category 3 – H316 Serious Eye Damage – Category 2B – H320 Acute Toxicity, Oral – Category 5 – H303	Not Applicable	Not Applicable

#### 2.2. GHS Label:

OSHA HCS 2012



**WARNING**



<i>Hazard Statements</i>	<i>Precautionary Statements</i>
H316: Causes mild skin irritation H320: Causes eye irritation H303: May be harmful if swallowed	P264: Wash hands thoroughly after handling P280: Wear protective gloves / eye protection P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P302+P352: IF ON SKIN: Wash with plenty of soap and water.

Refer to Section 15.2 for full text of EU Classifications and R/S Phrases.

### Section 3: Composition/Information on Ingredients

Chemical Components	CAS #	EINECS	Weight %
Water	7732-18-5	231-791-2	77%
EDTA (Disodium ethylenediaminetetraacetate dehydrate)	6381-92-6	unlisted	17%
Proprietary Ingredients	N/A	unlisted	6%

### Section 4: First-Aid Measures

#### 4.1. Description of first aid measures

**Eye Contact:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid, if irritation persists.

**Skin Contact:** Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

**Inhalation:** No specific treatment is necessary since this material is not likely to be hazardous by inhalation. If exposed to high level of dusts or fumes, remove from exposure and move to fresh air immediately. Get medical aid if cough or other symptoms develop.

**Ingestion:** If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Do not induce vomiting unless medical advice is given from a professional. Get medical aid if symptoms worsen.



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

**Symptoms/Injuries:** Mild irritation/redness in eyes or on skin after contact.

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

Consult a physician or contact Poison Control Center if chemical solution is ingested in large amounts. Physicians are required to treat victim symptomatically.

### Section 5: Fire-Fighting Measures

#### 5.1. Suitable Extinguishing Media:

Use dry chemical, foam, or carbon dioxide to extinguish fire.

#### 5.2. Fire Fighting Procedures:

Do not flush down sewers or other drainage systems. Exposed firefighters must wear NIOSH-approved positive pressure, self-contained breathing apparatus with full-face mask and full protective clothing.

#### 5.3. Unusual Fire and Explosion Hazards:

None.

#### 5.4. Combustion Products:

Ammonia and nitrogen oxides under fire conditions.

### Section 6: Accidental Release Measures

#### 6.1. Personal Precautions, Protective Equipment, and Emergency Procedures

Wear proper personal protective equipment as indicated in Section 8. Follow instructions listed in Section 6.3 to follow clean up procedures.

#### 6.2. Environmental Precautions

Follow all government regulations for waste disposal. Prevent release to the environment if possible. Do not flush waste



into sewer or waterways.

### 6.3. Methods and Materials for Containment and Cleaning Up

**Small Spills:** Wear gloves and safety glasses and pick up spill with absorbent material, such as paper towels or disposable cloths. Dispose absorbent material in suitable container and wash the exposed area with soap and water.

**Large Spills:** Wear proper protective equipment and absorb spill with inert, non-combustible material (e.g. vermiculite, sand, or earth). Dispose non-combustible material in suitable container and flush area with water.

## Section 7: Handling and Storage

### 7.1. Handling

For intraoral use only by trained and experienced dental professionals. Follow good hygiene practices. Do not smoke, eat or drink while using. Use suitable protective equipment when handling. Wash thoroughly after handling and avoid any chemical contact with eyes, skin, and clothing. Keep container tightly closed to avoid inhalation or accidental ingestion. Use with adequate ventilation.

### 7.2. Storage

Store in a tightly closed container. Store container at room temperature in a cool, dry, well-ventilated area away from incompatible substances. Keep containers upright when not in use. Shelf life is thirty months from date of manufacture, provided that it is stored properly.

## Section 8: Exposure Controls/Personal Protection

### 8.1. Exposure Limits / Engineering Controls

Chemical Components	ACGIH	NIOSH	OSHA – Final PELs
Water	Not available	Not available	Not available
EDTA (Disodium ethylenediaminetetraacetate dehydrate)	Not available	Not available	Not available

**Engineering Controls:** Use adequate ventilation to keep airborne concentrations low.



## 8.2. Personal Protective Equipment (PPE) Information

**Eye Protection:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin Protection:** Wear appropriate protective gloves and lab coat to prevent skin exposure. Use good personal hygiene and wash hands after use.

**Clothing Protection:** Wear appropriate protective clothing to prevent skin exposure.

**Respiratory Protection:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

## Section 9: Physical and Chemical Properties

### 9.1. Appearance / Color

**Physical State:** Liquid

**Appearance:** Clear, colorless liquid

**Odor:** Odorless or no characteristic odor

**Odor Threshold:** Not applicable

### 9.2. Important health, safety and environmental information

**Flashpoint:** Not applicable

**Autoignition Temperature:** Not applicable

**Boiling Point:** 100°C / 212°F

**Melting Point:** Not determined

**Freezing Point:** Not determined

**Vapor Pressure:** Not determined

**Relative Density:** Not determined

**Vapor Density (Air=1):** Not determined

**Solubility in Water:** Soluble

**Decomposition Temperature:** Not determined

**Pour Point:** Not applicable

**Lower Flammability Limit:** Not applicable

**Upper Flammability Limit:** Not applicable

**Specific Gravity:** 1.1

**Evaporation Rate (Water=1):** Not applicable

**Viscosity:** Not determined

**Octanol/Water Partition Coefficient:** Not determined

**pH:** 8.5



**Molecular Weight:** Mixture

## Section 10: Stability and Reactivity

**Chemical Stability:** Stable.

**Hazardous Polymerization:** Has not been reported.

**Hazardous Decomposition Products:** Nitrogen oxides, carbon monoxide, carbon dioxide, ammonia and/or derivatives.

**Incompatible Materials:** Strong oxidizing agents.

**Conditions to Avoid:** Incompatible materials.

## Section 11: Toxicological Information

**11.1. Signs and Symptoms of Overexposure:** Eye and skin irritation on contact.

**Eye Contact:** May cause eye irritation.

**Skin Contact:** May cause slight irritation.

**Inhalation:** May cause respiratory tract irritation.

**Ingestion:** May cause respiratory and digestive tract irritation.

### 11.2. Additional Toxicity Information

**Target Organ(s):** None known.

**Chronic Effects:** No information found.

**Acute Toxicity:** Not toxic.

#### Acute Toxicity Values

**RTECS#:**

**CAS# 7732-18-5:** ZC0110000

**CAS# 6381-92-6:** AH4410000

**CAS# 139-33-3:** AH4375000



**LD<sub>50</sub>/LC<sub>50</sub>:**

CAS# 7732-18-5:

Oral, rat: LD50 = &gt;90 mL/kg;&lt;BR.

CAS# 6381-92-6:&lt;BR.

CAS# 139-33-3:

Oral, mouse: LD50 = 2050 mg/kg;

Oral, rabbit: LD50 = 2300 mg/kg;

Oral, rat: LD50 = 2 gm/kg;&lt;BR.

**Carcinogenicity:**

CAS# 7732-18-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 6381-92-6: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 139-33-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No data available.**Teratogenicity:** No data available.**Reproductive Effects:** No data available.**Neurotoxicity:** No data available.**Mutagenicity:** No data available.**Other Studies:** No data available.

**Clinical Experience:** EDTA, 17% solution has been in the global market for more than 15 years. EDTA, 17% solution has been used for root canal treatments for over 20 years. EDTA, 17% solution is industry-accepted and approved for endodontic practice. EDTA is considered to be safe and effective treatment when used by dental professionals.

## Section 12: Ecological Information

Not established.

## Section 13: Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.**RCRA U-Series:** None listed.

To minimize exposure, refer to section 8 (exposure controls/personal protection).





## Section 14: Transport Information

### 14.1. U.S. Department of Transportation (DOT) (N/A = Not applicable)

**Proper Shipping Name:** N/A  
**Identification Number:** N/A  
**Hazard Class:** N/A  
**Packing Group:** N/A  
**U.S. DPT Labeling Requirements:** N/A  
**IATA Class:** N/A  
**IATA Packing Group:** N/A

Non-hazardous material / Not regulated. Not a DOT controlled material (USA).

### 14.2. Other Transportation Information

**By SEA (IMDG):** Not regulated

**By GROUND – Canada (TDG):** Not regulated

**By AIR (IATA):** Not regulated

## Section 15: Regulatory Information

### 15.1. U.S. Federal Regulations

**U.S. – O.S.H.A. Status:** This material is not hazardous under the criteria of the U.S. Federal Hazard Communication Standard.

#### TSCA

CAS# 7732-18-5 is listed on the TSCA inventory.

CAS# 6381-92-6 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form is on the inventory (40CFR720.3(u)(2)).

CAS# 139-33-3 is listed on the TSCA inventory.

#### Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

#### Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

**Section 12b**

None of the chemicals are listed under TSCA Section 12b.

**TSCA Significant New Use Rule**

None of the chemicals in this material have a SNUR under TSCA.

**SARA****CERCLA Hazardous Substances and corresponding RQs**

None of the chemicals in this material have an RQ.

**SARA Section 302 Extremely Hazardous Substances**

None of the chemicals in this product have a TPQ.

**SARA Codes**

CAS # 6381-92-6: acute.

**Section 313**

No chemicals are reportable under Section 313.

**Clean Air Act:**

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

**Clean Water Act:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:**

None of the chemicals in this product are considered highly hazardous by OSHA.

**STATE**

CAS# 7732-18-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 6381-92-6 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 139-33-3 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

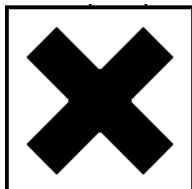
**California:** No Significant Risk Level: None of the chemicals in this product are listed.



## 15.2. European/International Regulations

### European Labeling in Accordance with EC Directives

**Hazard Symbol(s) and Classification:** "Xi" - Irritant



### EU Risk (R) and Safety (S) Phrases:

R36/37/38: Irritating to eyes, respiratory system, and skin.

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S28B: After contact with skin, wash immediately with plenty of water and soap.

### WGK (Water Danger/Protection)

CAS# 7732-18-5: No information available.

CAS# 6381-92-6: 2

CAS# 139-33-3: 2

### Canada - DSL/NDSL

CAS# 7732-18-5 is listed on Canada's DSL List.

CAS# 6381-92-6 is listed on Canada's DSL List.

CAS# 139-33-3 is listed on Canada's DSL List.

### Canada - WHMIS

WHMIS: Not available.

### Canadian Ingredient Disclosure List



## Section 16: Other Information

**National Fire Protection Association (NFPA) Ratings (estimated):** This information is intended solely for the use of individuals trained in the NFPA system.

**Health: 0**

**Flammability: 0**

**Reactivity: 0**

**Disclaimer:** The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. The information relates only to the specific material designated and does not relate to its use in combination with other materials or its use as to any particular process. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Inter-Med Inc. / Vista Dental Products be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Inter-Med Inc. / Vista Dental Products has been advised of the possibility of such damages.

**Prepared:** 3/13/2008      **Revised:** 7/21/2015

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Trade name : Chlor-XTRA™

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : An enhanced sodium hypochlorite solution designed for irrigation, debridement, and cleansing of root canals during and after instrumentation.

#### 1.3. Supplier

Inter-Med, Inc. / Vista Dental Products  
2200 South Street  
Racine, WI 53404  
T: (877)-418-4782

#### 1.4. Emergency telephone number

Emergency number : 800-424-9300 (North America) / +1 (703) 527-3887 (International)

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Skin corrosion/irritation Category 1B Causes severe skin burns and eye damage  
Serious eye damage/eye irritation Category 1 Causes serious eye damage

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger  
Hazard statements (GHS US) : Causes severe skin burns and eye damage  
Precautionary statements (GHS US) : Do not breathe mist, spray, vapors.  
Wash hands thoroughly after handling.  
Wear protective gloves, eye protection.  
If swallowed: rinse mouth. Do NOT induce vomiting  
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
If inhaled: Remove person to fresh air and keep comfortable for breathing  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
Immediately call a doctor, a POISON CENTER.  
Wash contaminated clothing before reuse.  
Store locked up.  
Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

#### 2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : Contact with acids liberates toxic gas.

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Not applicable

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according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Sodium hypochlorite	(CAS-No.) 7681-52-9	6	Skin Corr. 1B, H314 Eye Dam. 1, H318

Full text of hazard classes and H-statements : see section 16

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Give artificial respiration if necessary. If you feel unwell, seek medical advice.
- First-aid measures after skin contact : Wash off immediately and plentifully with water for at least 20 minutes. Take off immediately all contaminated clothing and wash it before reuse. Get immediate medical advice/attention.
- First-aid measures after eye contact : In case of eye contact, immediately rinse with clean water for 20-30 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
- First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Get medical advice/attention.

### 4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects after inhalation : Inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.
- Symptoms/effects after skin contact : Causes severe burns.
- Symptoms/effects after eye contact : Causes serious eye damage.
- Symptoms/effects after ingestion : May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.
- Unsuitable extinguishing media : None known.

### 5.2. Specific hazards arising from the chemical

- Fire hazard : On combustion, forms: carbon oxides (CO and CO<sub>2</sub>). Toxic and irritating gases are released. If the product is involved in a fire, it can release toxic chlorine gases
- Explosion hazard : No direct explosion hazard.

### 5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Exercise caution when fighting any chemical fire.
- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

- Protective equipment : Use personal protective equipment as required. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. In case of inadequate ventilation wear respiratory protection.

### 6.2. Environmental precautions

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.
- Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For disposal of residues refer to section 13: "Disposal considerations".

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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.  
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing before reuse. Handle in accordance with good industrial hygiene and safety practice.

#### 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a well-ventilated place. Keep cool.  
Incompatible materials : Acids. ammonia. Amines. Powdered metals. Oxidizing agent. Organic materials. Methanol.  
Storage temperature : 4 °C (39 °F)

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

Sodium hypochlorite (7681-52-9)		
AIHA	WEEL STEL (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup> (15-min. STEL)

#### 8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.  
Environmental exposure controls : Avoid release to the environment.

#### 8.3. Individual protection measures/Personal protective equipment

##### Hand protection:

Impermeable protective gloves

##### Eye protection:

Safety glasses with side shields

##### Skin and body protection:

Long sleeved protective clothing

##### Respiratory protection:

No respiratory protection needed under normal use conditions

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

- Physical state : Liquid  
Appearance : Clear.  
Color : Yellow  
Odor : Slight chlorine  
Odor threshold : No data available  
pH : 11.4 - 13  
Melting point : No data available  
Freezing point : No data available  
Boiling point : ≈ 100 °C (212 °F)  
Flash point : No data available  
Relative evaporation rate (butyl acetate=1) : No data available  
Flammability (solid, gas) : No data available  
Vapor pressure : 17.5 mm Hg (20° C)  
Relative vapor density at 20 °C : No data available  
Relative density : No data available  
Specific gravity / density : ≈ 1.1 (70 °F)  
Solubility : No data available



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Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Contact with acids liberates toxic gas.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

Reacts vigorously with strong oxidizers and acids.

### 10.4. Conditions to avoid

Keep out of direct sunlight.

### 10.5. Incompatible materials

Acids. Amines. ammonia. Powdered metals. Oxidizing agent. Organic materials. Methanol.

### 10.6. Hazardous decomposition products

On combustion, forms: carbon oxides (CO and CO<sub>2</sub>). Toxic and irritating gases are released.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)

#### Sodium hypochlorite (7681-52-9)

LD50 oral rat	8.91 g/kg
LD50 dermal rabbit	> 10000 mg/kg

Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: 11.4 - 13
Serious eye damage/irritation	: Causes serious eye damage. pH: 11.4 - 13
Respiratory or skin sensitization	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)

#### Sodium hypochlorite (7681-52-9)

IARC group	3 - Not classifiable
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Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
Specific target organ toxicity – single exposure	: Not classified (Based on available data, the classification criteria are not met)
Specific target organ toxicity – repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)
Viscosity, kinematic	: No data available
Likely routes of exposure	: Ingestion. Inhalation. Skin and eyes contact.
Symptoms/effects after inhalation	: Inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.
Symptoms/effects after skin contact	: Causes severe burns.

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Symptoms/effects after eye contact : Causes serious eye damage.  
Symptoms/effects after ingestion : May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : This material has not been tested for environmental effects.

##### Sodium hypochlorite (7681-52-9)

LC50 fish 1	0.06 - 0.11 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	0.033 - 0.044 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 fish 2	4.5 - 7.6 mg/l (Exposure time: 96 h - Species: Pimephales promelas [Static])

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

Other information : Avoid release to the environment.

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

### SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN1791 Hypochlorite solutions, 8, II  
UN-No.(DOT) : UN1791  
Proper Shipping Name (DOT) : Hypochlorite solutions  
Class (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136  
Packing group (DOT) : II - Medium Danger  
Hazard labels (DOT) : 8 - Corrosive



DOT Packaging Non Bulk (49 CFR 173.xxx) : 202  
DOT Packaging Bulk (49 CFR 173.xxx) : 242

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DOT Special Provisions (49 CFR 172.102)	: A7 - Steel packaging must be corrosion-resistant or have protection against corrosion. B2 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks are not authorized. B15 - Packaging must be protected with non-metallic linings impervious to the lading or have a suitable corrosion allowance. IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). 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. IP5 - IBCs must have a device to allow venting. The inlet to the venting device must be located in the vapor space of the IBC under maximum filling conditions. N34 - Aluminum construction materials are not authorized for any part of a packaging which is normally in contact with the hazardous material. T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3) TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively. TP24 - The portable tank may be fitted with a device to prevent the build up of excess pressure due to the slow decomposition of the hazardous material being transported. The device must be in the vapor space when the tank is filled under maximum filling conditions. This device must also prevent an unacceptable amount of leakage of liquid in the case of overturning.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 154
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 1 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 30 L
DOT Vessel Stowage Location	: B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
DOT Vessel Stowage Other	: 26 - Stow "away from" acids
Emergency Response Guide (ERG) Number	: 154
Other information	: No supplementary information available.

### Transportation of Dangerous Goods

Transport document description	: UN1791 HYPOCHLORITE SOLUTION, 8, II
UN-No. (TDG)	: UN1791
Proper Shipping Name (Transportation of Dangerous Goods)	: HYPOCHLORITE SOLUTION
TDG Primary Hazard Classes	: 8 - Class 8 - Corrosives
Packing group	: II - Medium Danger
Explosive Limit and Limited Quantity Index	: 1 L
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	: 1 L

### Transport by sea

Transport document description (IMDG)	: UN 1791 HYPOCHLORITE SOLUTION, 8, II
UN-No. (IMDG)	: 1791
Proper Shipping Name (IMDG)	: HYPOCHLORITE SOLUTION
Class (IMDG)	: 8 - Corrosive substances
Packing group (IMDG)	: II - substances presenting medium danger

### Air transport

Transport document description (IATA)	: UN 1791 Hypochlorite solution, 8, II
UN-No. (IATA)	: 1791
Proper Shipping Name (IATA)	: Hypochlorite solution

# Chlor-XTRA™

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Class (IATA) : 8 - Corrosives  
Packing group (IATA) : II - Medium Danger

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

##### Sodium hypochlorite (7681-52-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

CERCLA RQ	100 lb
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#### 15.2. International regulations

##### CANADA

##### Sodium hypochlorite (7681-52-9)

Listed on the Canadian DSL (Domestic Substances List)

##### EU-Regulations

##### Sodium hypochlorite (7681-52-9)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

##### National regulations

##### Sodium hypochlorite (7681-52-9)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on the Japanese ISHL (Industrial Safety and Health Law)  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on the TCSI (Taiwan Chemical Substance Inventory)

#### 15.3. US State regulations

No additional information available

### SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 01 February 2019

Full text of H-phrases:

H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage

SDS US (GHS HazCom 2012)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*



## Safety Data Sheet

### Section 1: Identification

**Product Name:** CHX-Plus™

**Product Use:** Enhanced 2% chlorhexidine gluconate solution that kills biofilm bacteria in root canals

**Manufacturer:** Inter-Med, Inc. / Vista Dental Products

**Address:** 2200 South St. Suite A, Racine, WI 53404

**Phone:** (877) 418-4782 **Fax:** (262) 636-9760

**24 HR. Emergency Telephone Number CHEMTREC (North America) :** 800-424-9300

**24 HR. Emergency Telephone Number CHEMTREC (International) :** +1 (703) 527-3887

### Section 2: Hazard(s) Identification

#### 2.1. GHS Classification:

Health	Environmental	Physical
Acute Toxicity, Oral – Category 5 – H303 Skin Irritation – Category 3 – H316 Serious Eye Damage – Category 2B – H320	Not Applicable	Not Applicable

#### 2.2. GHS Label:

OSHA HCS 2012



**WARNING**



<i>Hazard Statements</i>	<i>Precautionary Statements</i>
H303: May be harmful if swallowed H316: Causes mild skin irritation H320: Causes eye irritation	P264: Wash hands thoroughly after handling P280: Wear protective gloves / eye protection P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P302+P352: IF ON SKIN: Wash with plenty of soap and water.

Refer to Section 15.2 for full text of EU Classifications and R/S Phrases.

### Section 3: Composition/Information on Ingredients

Chemical Components	CAS #	EINECS	Weight %
Chlorhexidine Gluconate	18472-51-0	unlisted	2%
Surfactant Blend	N/A	unlisted	<1%

### Section 4: First-Aid Measures

#### 4.1. Description of first aid measures

**Eye Contact:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid, if irritation persists.

**Skin Contact:** Wash with soap in water.

**Inhalation:** No specific treatment is necessary since this material is not likely to be hazardous by inhalation. If exposed to excessive levels of dust or fumes, remove to fresh air and obtain medical attention if cough or any other symptoms develop.

**Ingestion:** Give large volumes of water. Do not induce vomiting. Obtain medical attention or consult a physician if ingested in large amounts.

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

**Symptoms/Injuries:** Mild irritation/redness in eyes or on skin after contact. Very hazardous in case of ingestion. Non-



corrosive for skin. Non-sensitizer for skin. Non-permeator by skin.

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

Consult a physician or contact Poison Control Center if chemical solution is ingested in large amounts. Physicians are required to treat victim symptomatically.

### Section 5: Fire-Fighting Measures

#### 5.1. Suitable Extinguishing Media:

Use dry chemical, foam, or carbon dioxide to extinguish fire.

#### 5.2. Fire Fighting Procedures:

Do not flush down sewers or other drainage systems. Exposed firefighters must wear NIOSH-approved positive pressure, self-contained breathing apparatus with full-face mask and full protective clothing.

#### 5.3. Unusual Fire and Explosion Hazards:

Thermal decomposition may produce toxic fumes of ammonia, hydrogen chloride, and oxides of carbon and nitrogen.

#### 5.4. Combustion Products:

Ammonia and nitrogen oxides under fire conditions.

### Section 6: Accidental Release Measures

#### 6.1. Personal Precautions, Protective Equipment, and Emergency Procedures

Wear proper personal protective equipment as indicated in Section 8. Follow instructions listed in Section 6.3 to follow clean up procedures.

#### 6.2. Environmental Precautions

Follow all government regulations for waste disposal. Prevent release to the environment if possible. Do not flush waste into sewer or waterways.





### 6.3. Methods and Materials for Containment and Cleaning Up

**Small Spills:** Wipe up small amounts with chemical resistant or damp rag which is washed with large amounts of water after each use. After cleaning, flush away traces with water.

**Large Spills:** Absorb with inert, damp non-combustible material, then flush area with water.

## Section 7: Handling and Storage

### 7.1. Handling

For intraoral use only by trained and experienced dental professionals. Follow good hygiene practices. Do not smoke, eat or drink while using. Use suitable protective equipment when handling. Wash thoroughly after handling and avoid any chemical contact with eyes, skin, and clothing. Keep container tightly closed to avoid inhalation or accidental ingestion. Use with adequate ventilation when necessary.

### 7.2. Storage

Store in a tightly closed container. Store container at room temperature in a cool, dry, well-ventilated area away from incompatible substances. Keep containers upright when not in use. Shelf life is thirty months from date of manufacture, provided that it is stored properly. Store at room temperature between 15°-30°C (59°-86°F).

## Section 8: Exposure Controls/Personal Protection

### 8.1. Exposure Limits / Engineering Controls

Chemical Components	ACGIH	NIOSH	OSHA – Final PELs
Chlorhexidine Gluconate	unlisted	unlisted	unlisted
Surfactant Blend	unlisted	unlisted	unlisted

**Engineering Controls:** General ventilation recommended.

### 8.2. Personal Protective Equipment (PPE) Information

**Eye Protection:** Use proper protection – wear safety glasses, as a minimum.

**Skin Protection:** Wash thoroughly after handling.

**Clothing Protection:** Wear gloves. No extra needed under normal conditions of use.

**Respiratory Protection:** S38: In case of insufficient ventilation wear suitable respiratory equipment.



## Section 9: Physical and Chemical Properties

### 9.1. Appearance / Color

**Physical State:** Liquid

**Appearance:** Blue liquid

**Odor:** Odorless or no characteristic odor

**Odor Threshold:** Not applicable

### 9.2. Important health, safety and environmental information

**Flashpoint:** Not applicable

**Autoignition Temperature:** Not applicable

**Boiling Point:** 100°C / 212°F

**Melting Point:** Not determined

**Freezing Point:** Not determined

**Vapor Pressure, mm Hg:** 17.535

**Relative Density:** Not determined

**Vapor Density (Air=1):** 0.62

**Solubility in Water:** Soluble

**Decomposition Temperature:** Not determined

**Pour Point:** Not applicable

**Lower Flammability Limit:** Not applicable

**Upper Flammability Limit:** Not applicable

**Specific Gravity:** 1.01

**Evaporation Rate (Water=1):** Not applicable

**Viscosity:** Not determined

**Octanol/Water Partition Coefficient:** Not determined

**pH:** 5.40

**Molecular Weight:** Mixture

## Section 10: Stability and Reactivity

**Chemical Stability:** Stable.

**Hazardous Polymerization:** No.

**Hazardous Decomposition Products:** Ammonia, hydrogen chloride, oxides of carbon and nitrogen.

**Incompatible Materials:** Strong oxidizing agents, strong alkalies and strong mineral acids.



**Conditions to Avoid:** None known.

## Section 11: Toxicological Information

### 11.1. Signs and Symptoms of Overexposure

**Eye Contact:** May cause mild eye irritation and could aggravate pre-existing eye disease.

**Skin Contact:** May cause slight to moderate irritation.

**Inhalation:** No significant signs or symptoms indicative of any adverse health hazard.

**Ingestion:** Slightly toxic. Ingestion of large amounts may cause pain, nausea, stomach cramps, and vomiting.

### 11.2. Additional Toxicity Information

**Target Organ(s):** None known.

**Chronic Effects:** No information found.

**Acute Toxicity:** Slightly toxic.

## Section 12: Ecological Information

No information available.

## Section 13: Disposal Considerations

Dispose of in compliance with governmental regulation (EC 1975L0442-20/11/2003).

To minimize exposure, refer to section 8 (exposure controls/personal protection).



## Section 14: Transport Information

### 14.1. U.S. Department of Transportation (DOT) (N/A = Not applicable)

**Proper Shipping Name:** N/A  
**Identification Number:** N/A  
**Hazard Class:** N/A  
**Packing Group:** N/A  
**U.S. DPT Labeling Requirements:** N/A  
**IATA Class:** N/A  
**IATA Packing Group:** N/A

Not a DOT controlled material (USA). Not regulated.

### 14.2. Other Transportation Information

**By SEA (IMDG):** Not regulated

**By GROUND – Canada (TDG):** Not regulated

**By AIR (IATA):** Not regulated

## Section 15: Regulatory Information

### 15.1. U.S. Federal Regulations

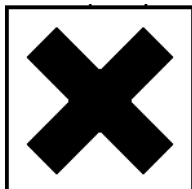
**U.S. – O.S.H.A. Status:** This material is not hazardous under the criteria of the U.S. Federal Hazard Communication Standard.



## 15.2. European/International Regulations

### European Labeling in Accordance with EC Directives

**Hazard Symbol(s) and Classification:** “Xi” - Irritant



### EU Risk (R) and Safety (S) Phrases:

R36/38: Irritating to eyes, and skin.

S38: In case of insufficient ventilation wear suitable respiratory equipment.

## Section 16: Other Information

**National Fire Protection Association (NFPA) Ratings (estimated):** This information is intended solely for the use of individuals trained in the NFPA system.

**Health: 1**

**Flammability: 0**

**Reactivity: 0**

**Disclaimer:** The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. The information relates only to the specific material designated and does not relate to its use in combination with other materials or its use as to any particular process. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Inter-Med Inc. / Vista Dental Products be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Inter-Med Inc. / Vista Dental Products has been advised of the possibility of such damages.

**Prepared:** 6/03/2011      **Revised:** 7/21/2015



## Safety Data Sheet

### Section 1: Identification

**Product Name:** Rinse-n-Dry™

**Product Use:** Penetrates lateral canals and isthmuses for improved drying and cleansing

**Manufacturer:** Inter-Med, Inc. / Vista Dental Products

**Address:** 2200 South St. Suite A, Racine, WI 53404

**Phone:** (877) 418-4782 **Fax:** (262) 636-9760

**24 HR. Emergency Telephone Number CHEMTREC (North America) :** 800-424-9300

**24 HR. Emergency Telephone Number CHEMTREC (International) :** +1 (703) 527-3887

### Section 2: Hazard(s) Identification

#### 2.1. GHS Classification:

Health	Environmental	Physical
Skin Irritation – Category 2 – H315 Eye Irritation – Category 2B – H320 Respiratory tract irritation – Category 3 – H335	Not Applicable	Highly Flammable Liquid – Category 2 – H225

#### 2.2. GHS Label:

OSHA HCS 2012



**DANGER**





<i>Hazard Statements</i>	<i>Precautionary Statements</i>
H225: Highly flammable liquid and vapor. H315+H320: Causes skin and eye irritation. H335: May cause respiratory irritation.	P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking. P233: Keep container tightly closed. P264: Wash hands thoroughly after handling. P280: Wear protective gloves / eye protection. P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P403+P235: Store in a well ventilated place and keep cool. P501: Dispose of contents/container to an approved waste disposal plant.

Refer to Section 15.2 for full text of EU Classifications and R/S Phrases.

### Section 3: Composition/Information on Ingredients

Chemical Components	CAS #	EINECS	Weight %
Ethanol	64-17-5	200-578-6	95%
Ethyl Acetate	141-78-6	205-500-4	<5%

### Section 4: First-Aid Measures

#### 4.1. Description of first aid measures

**Eye Contact:** Flush eyes with water for at least 15 minutes and seek medical advice.

**Skin Contact:** Wash skin with soap and water for at least 15 minutes. Take off immediately any contaminated clothing.

**Inhalation:** Remove to fresh air; Give artificial respiration if not breathing; If breathing is difficult.

**Ingestion:** If swallowed, do NOT induce vomiting; seek medical advice immediately and show this container or label. Loosen tight clothing such as a collar, tie, belt or waistband. Rinse mouth with water.





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

**Symptoms/Injuries:** Skin or eyes may become irritated and rashes or burning sensation can occur. If inhaled, it may cause irritation of mucous membranes and respiratory tract. If ingested, red skin, rise in body temperature, accelerated heart action, central nervous system depression, dizziness, headache, nausea, disturbances of heart rate, cramps and other symptoms may be developed.

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

Consult a physician or contact Poison Control Center if chemical solution is ingested in large amounts. Physicians are required to treat victim symptomatically.

**Note to Physician:** Symptoms vary with alcohol level of the blood. Mild alcohol intoxication occurs at blood levels between 0.05-0.15%. Approximately 25% of individuals show signs of intoxication at these levels. Above 0.15% the person is definitely under the influence of ethanol; 50-95% of individuals are clinically intoxicated at these levels. Severe poisoning occurs when the blood is ethanol level is 0.3- 0.5%. Above 0.5% the individual will be comatose and death can occur. The unabsorbed ethanol should be removed by gastric lavage after intubating the patient to prevent aspiration. Avoid the use of depressant drugs or the excessive administration of fluids.

## Section 5: Fire-Fighting Measures

#### 5.1. Suitable Extinguishing Media:

Apply alcohol-type or all-purpose foam by manufacturer's recommended techniques for large fires. Use carbon dioxide or dry chemical media for small fires.

#### 5.2. Fire Fighting Procedures:

Do not flush down sewers or other drainage systems. Exposed firefighters must wear NIOSH-approved positive pressure, self-contained breathing apparatus with full-face mask and full protective clothing. Use water spray to cool fire-exposed containers and structures. Use water spray to disperse vapors because re-ignition is possible.

#### 5.3. Unusual Fire and Explosion Hazards:

Vapors may travel to source of ignition and flash back. Vapors may settle in low or confined spaces. May produce a floating fire hazard. Static ignition hazard can result from handling and use. Closed containers exposed to heat may explode. Extremely flammable.



#### 5.4. Combustion Products:

Carbon oxides (CO, CO<sub>2</sub>).

## Section 6: Accidental Release Measures

### 6.1. Personal Precautions, Protective Equipment, and Emergency Procedures

Wear proper personal protective equipment as indicated in Section 8. Follow instructions listed in Section 6.3 to follow clean up procedures. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations and avoid inhalation. Vapours can accumulate in low areas.

### 6.2. Environmental Precautions

Follow all government regulations for waste disposal. Prevent further release to the environment if possible. Do not flush waste into sewer or waterways.

### 6.3. Methods and Materials for Containment and Cleaning Up

**Small Spills:** Shut off ignition sources. Do not touch spilled material. Stop leak if you can do it without risk. Ventilate the area of spill or leak. Use water spray to reduce vapors. For small spills, take up with sand or other absorbent material and place into sealed container for disposal.

**Large Spills:** Shut off ignition sources. Use water spray to reduce vapors. No smoking, flames, or flares in spill area! Keep unnecessary people away. Ventilate area. Wear appropriate protective equipment, isolate hazard area and deny entry. Take up spill with vermiculite, dry sand, earth, or similar material, and deposit into sealed containers. For very large spills, call fire department immediately.

## Section 7: Handling and Storage

### 7.1. Handling

For intraoral use only by trained and experienced dental professionals. Follow good hygiene practices. Do not smoke, eat or drink while using. Use suitable protective equipment when handling. Wash thoroughly after handling and avoid any chemical contact with eyes, skin, and clothing. Keep container tightly closed to avoid inhalation or accidental ingestion. Use with adequate ventilation. Product is flammable – keep it away from heat, sparks, and flames. Treat empty containers as hazardous since vapors may collect in containers.



## 7.2. Storage

Store in a tightly closed container. Store container at room temperature in a cool, dry, well-ventilated area away from incompatible substances (refer to section 10 for this information). Keep containers upright when not in use. Shelf life is eighteen months from date of manufacture, provided that it is stored properly.

## Section 8: Exposure Controls/Personal Protection

### 8.1. Exposure Limits / Engineering Controls

Chemical Components	ACGIH – TLV*	NIOSH – REL*	OSHA – Final PELs*
Ethanol	1,000 ppm	1,000 ppm	1,000 ppm
Ethyl Acetate	400 ppm	400 ppm	400 ppm

\* **TLV – Threshold Limit Value** (should not be exceeded at any time) / **REL – Recommended Exposure Limit** (should not be exceeded at any time) / **PEL – Permissible Exposure Limit** (averaged over an 8-hour workshift)

**Engineering Controls:** Use adequate ventilation to keep airborne concentrations low. Emergency shower and eyewash should be nearby while handling the product.

### 8.2. Personal Protective Equipment (PPE) Information

**Eye Protection:** Splash proof chemical safety goggles should be worn.

**Skin Protection:** Wear appropriate protective gloves and lab coat to prevent skin exposure. Use proper glove removal technique (without touching glove's outer surface) to avoid contact with this product. Dispose of contaminated gloves in accordance with applicable laws and good laboratory practices. Use good personal hygiene and wash hands after use.

**Clothing Protection:** Wear appropriate protective clothing to prevent skin exposure (e.g. lab coat or apron).

**Respiratory Protection:** None needed under normal conditions of use with adequate ventilation. A NIOSH/MSHA chemical cartridge respirator should be worn if PEL or REL or TLV is exceeded.

## Section 9: Physical and Chemical Properties

### 9.1. Appearance / Color

**Physical State:** Liquid

**Appearance:** Clear, colorless liquid

**Odor:** Alcohol odor



**Odor Threshold:** Not determined

## 9.2. Important health, safety and environmental information

**Flashpoint:** 17°C / 63°F – closed cup

**Autoignition Temperature:** 363°C / 685°F (for 100% ethanol)

**Boiling Point:** 80.2°C / 176.4°F, at 20°C

**Melting Point:** Not determined

**Freezing Point:** < -59°C (< -75°F)

**Vapor Pressure:** 40 mm Hg, at 20°C

**Relative Density:** 6.80 lbs/gal, at 15.56°C / 60°F

**Vapor Density (Air=1):** 1.4

**Solubility in Water:** Soluble

**Decomposition Temperature:** Not determined

**Pour Point:** Not determined

**Lower Flammability Limit:** 3.3 % (V)

**Upper Flammability Limit:** 19 % (V)

**Specific Gravity:** 0.8158 at 15.56°C

**Evaporation Rate (Water=1):** 2.8

**Viscosity:** Not determined

**Octanol/Water Partition Coefficient:** Not determined

**pH:** No information available

**Molecular Weight:** Mixture

## Section 10: Stability and Reactivity

**Chemical Stability:** Stable.

**Hazardous Polymerization:** Will not occur.

**Hazardous Decomposition Products:** Carbon monoxide and carbon dioxide may form.

**Incompatible Materials:** Strong oxidizing agents, ammonia, peroxides, strong inorganic acids, and alkali metals.

**Conditions to Avoid:** Incompatible materials, heat, and sources of ignition. Extreme temperatures and direct sunlight.



## Section 11: Toxicological Information

**11.1. Signs and Symptoms of Overexposure:** Central nervous system depression, narcosis, damage to the heart. To the best of our knowledge, the chemical, physical, and toxicological properties have been thoroughly investigated.

**Eye Contact:** May cause eye irritation and can cause corneal damage.

**Skin Contact:** May cause moderate skin irritation. Repeated exposure may cause skin dryness or cracking.

**Inhalation:** May cause respiratory tract irritation. Vapors may cause dizziness or suffocation.

**Ingestion:** May cause gastrointestinal irritation with nausea, vomiting, and diarrhea.

### 11.2. Additional Toxicity Information

**Target Organ(s):** Eyes, Liver, Kidneys, Central Nervous System.

#### Acute Toxicity Values

##### RTECS:

CAS# 64-17-5: KQ6300000.

CAS# 67-56-1: PC1400000.

CAS# 67-63-0: NT8050000.

##### LD50/LC50:

##### CAS# 64-17-5:

Inhalation, mouse: LC50 = 39 gm/m<sup>3</sup>/4H

Inhalation, rat: LC50 = 20000 ppm/10H

Oral, mouse: LD50 = 3450 mg/kg

Oral, rabbit: LD50 = 6300 mg/kg



Oral, rat: LD50 = 7060 mg/kg.

**CAS# 67-56-1:**

Inhalation, rat: LC50 = 64000 ppm/4H

Oral, mouse: LD50 = 7300 mg/kg

Oral, rabbit: LD50 = 14200 mg/kg

Oral, rat: LD50 = 5628 mg/kg

Skin, rabbit: LD50 = 15800 mg/kg.

**CAS# 67-63-0:**

Oral, mouse: LD50 = 3600 mg/kg

Oral, rabbit: LD50 = 6410 mg/kg

Oral, rat: LD50 = 5045 mg/kg

Skin, rabbit: LD50 = 12800 mg/kg.

**Carcinogenicity:**

CAS# 64-17-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 67-56-1: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 67-63-0: IARC: Group 3 (not classifiable as to carcinogenicity)

**Epidemiology:**

Prenatal exposure to ethanol is associated with a distinct pattern of congenital malformations that have collectively been termed the "fetal alcohol syndrome". Among the characteristics of this syndrome are intrauterine and postnatal growth deficiency, a distinctive pattern of physical malformation, and behavioral/cognitive impairment such as fine motor dysfunction and mental retardation. Not all affected children have all of the features of the syndrome. Central Nervous System depressant. Alcohol component enhances effect.





**Teratogenicity:** No information found.

**Reproductive:** No information found.

**Mutagenicity:** No information found.

**Neurotoxicity:** No information found.

## Section 12: Ecological Information

Not established.

## Section 13: Disposal Considerations

Vapors may collect in empty containers. Treat empty containers as hazardous. Dispose of spill-clean up and other wastes in accordance with Federal, State, and local regulations.

To minimize exposure, refer to section 8 (exposure controls/personal protection).

## Section 14: Transport Information

**14.1. U.S. Department of Transportation (DOT)** (N/A = Not applicable)

**Proper Shipping Name:** Ethanol solutions

**Identification (UN) Number:** 1170

**Hazard Class:** 3

**Packing Group:** II

**Marine Pollutant:** No

**Poison Inhalation Hazard:** No







#### 14.2. Other Transportation Information

##### By SEA (IMDG):

**Proper Shipping Name:** Ethanol solutions

**Identification (UN) Number:** 1170

**Hazard Class:** 3

**Packing Group:** II **EMS-No:** F-E, S-D

**Marine Pollutant:** No

##### By GROUND – Canada (TDG):

**Proper Shipping Name:** Ethanol solutions

**Identification (UN) Number:** 1170

**Hazard Class:** 3

**Packing Group:** II

##### By AIR (IATA):

**Proper Shipping Name:** Ethanol solutions

**Identification (UN) Number:** 1170

**Hazard Class:** 3

**Packing Group:** II

## Section 15: Regulatory Information

#### 15.1. U.S. Federal Regulations

##### Federal EPA

**Comprehensive Environmental Response Compensation, and Liability Act of 1980 (CERCLA)** requires notification of the National Response Center of release quantities of Hazardous Substances equal to or greater than the reportable quantities (RQs) in CFR. Components present in this product at a level which could require reporting under this statute are:

Chemical Components	CAS #	Upper Bound Conc. %
Acetone	67-64-1	0.0002
Methanol	67-56-1	0.0015
Acetaldehyde	75-07-0	0.0010

**Superfund Amendments and Reauthorization Act of 1986 (SARA)** Title III requires emergency planning based on threshold planning quantities and release reporting based on reportable quantities in 40 CFR 355 (used for SARA 302, 304, 311, and 312). Components present in this product at a level which could require reporting under this statute are: none.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)** Title III requires submission of annual reports of



release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all MSDS's that are copied and distributed for this material. Components present in this product at a level which could require reporting under the statute are: none

**Toxic Substances Control Act (TSCA) Status:** The ingredients of this product are on the TSCA inventory.

#### State Right to Know

California Proposition 65: This product contains trace levels of acetaldehyde known to the State of California to cause cancer.

Massachusetts: Hazardous substances and extraordinarily hazardous substances must be identified. Components present which could require reporting:

Extraordinarily Hazardous ( $\Rightarrow$  0.0001%): Acetaldehyde (CAS 75-07-0)

upper bound conc. .0010%

Hazardous ( $\Rightarrow$ 1%): Ethanol (CAS 64-17-5) upper bound conc. 92.3%

Pennsylvania: Hazardous substances must be identified.

Hazardous ( $\Rightarrow$ 1%): Ethanol (CAS 64-17-5) upper bound conc. 92.3%

California SCAQMD Rule 443.1 (VOC's)

*A Volatile Organic Compound (VOC) is any volatile compound of carbon excluding methane, carbon monoxide, carbonic acid, metallic carbides, or carbonates, ammonium carbonate, 1,1,1 tri-chloroethane, methylene chloride, (FC-23), (CFC-113), (CFC-12), (CFC-11), (CFC-22), (CFC-114) and (CFC-115).*

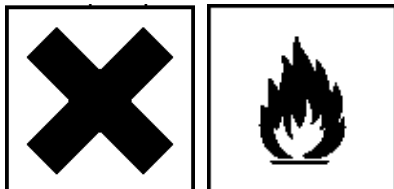
VOC 800g/l; vapor pressure 41.4 mm Hg @20C for undenatured ethanol, 190 proof



## 15.2. European/International Regulations

### European Labeling in Accordance with EC Directives

**Hazard Symbol(s) and Classification:** “Xi” – Irritant, “Xn” – Harmful, “F” – Highly Flammable



### EU Risk (R) and Safety (S) Phrases:

R11: Highly flammable.

R36/37/38: Irritating to eyes, respiratory system, and skin.

R66: Repeated exposure may cause skin dryness or cracking.

S9: Keep container in a well-ventilated place.

S15: Keep away from heat.

S36/37: Wear suitable protective clothing and gloves.

S60: This material and its container must be disposed of as hazardous waste.

### Canada - DSL/NDSL

CAS# 64-17-5 is listed on Canada's DSL/NDSL List.

CAS# 67-56-1 is listed on Canada's DSL/NDSL List.

CAS# 67-63-0 is listed on Canada's DSL/NDSL List.

### Canadian Ingredient Disclosure List

CAS# 64-17-5 is listed on Canada's Ingredient Disclosure List.

CAS# 67-56-1 is listed on Canada's Ingredient Disclosure List.

CAS# 67-63-0 is listed on Canada's Ingredient Disclosure List.

### Canada - WHMIS

B2 – Flammable and combustible material – Flammable liquid

D2B – Poisonous and infectious material – Other effects – Toxic



B2 – Flammable Liquid



D2B – Toxic



## Section 16: Other Information

**National Fire Protection Association (NFPA) Ratings (estimated):** This information is intended solely for the use of individuals trained in the NFPA system.

**Health: 2**

**Flammability: 3**

**Reactivity: 0**

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