



SECTION 1: Identification

Product identifier: Horizon Rev! Two

Other means of identification: Detergent/Disinfectant

SDS number: 1192

Recommended use: Detergent/Disinfectant

Recommended restrictions: Not for personal care

Manufacturer/Importer/Supplier/Distributor information

Company name: U.N.X. Incorporated
Address: 707 Arlington Blvd
 Greenville, NC 27858
Telephone: Office hour (Mon-Fri)
 8:00a.m. – 4:00p.m. (Eastern Time)
 OFFICE NUMBER: 252-756-8616
Contact Person Jamie Singleton
E-mail: unx@unxinc.com
Emergency phone number: CHEMTEL (800) 255-3924 (24 HOURS)

SECTION 2: Hazard(s) identification

Classification of the substance or mixture:

Physical hazards Not Classified.

Health hazards

Acute toxicity; Oral/Dermal/Inhalation: Category 4
 Skin corrosion/irritation: Category 1C
 Serious eye damage/eye irritation: Category 1
 Specific target organ toxicity,
 Single exposure: Category 2

Environmental hazards

Hazardous to the aquatic environment, Acute: Category 2
 Hazardous to the aquatic environment, Long-term hazard: Category 2

Label elements:



Signal word: Danger

SECTION 2: Hazard(s) identification (continued)

Hazard statements

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H371	May cause damage to organs.
H401	Toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.
P233	Keep container tightly closed.
P260	Do not breathe mist or vapor.
P264	Wash hands, arms, face and exposed skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this products.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P301+330+331	IF SWALLOWED: Immediately a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Do NOT induce vomiting.
P303+361+353	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 several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P362+P364	Take off contaminated clothing and wash it before reuse.

Storage:

P405	Store locked up.
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Disposal:

P501	Dispose of contents/container in accordance with local/ regional/ national/ international Regulations.
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Hazard(s) not otherwise classified (HNOC) None known.

SECTION 3: Composition/information on ingredients

Substance/Mixtures

Chemical name	CAS Number	Concentration (%)
Water	7732-18-5	85-95
Didecyldimethylammonium chloride	7173-51-5	5-15
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	68424-85-1	5-15
Alcohols, C12-15, ethoxylated	68131-39-5	0-5
Tetrasodium ethylenediamine tetraacetate	64-02-8	0-5
Ethanol	64-17-5	0-1

SECTION 4: First-aid measures

Description of first aid measures

General advice: Remove victims from the danger zone without endangering your own safety. Remove contaminated clothing (including underwear and shoes) immediately.

Inhalation: Move person to fresh air. If person is not breathing, call 911 or an ambulance then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Skin contact: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Eye contact: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Ingestion: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed:

Notes to physician: The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation: Irritation of nose, throat and airway.

Ingestion: May cause nausea and/or vomiting. Irritation of the mouth, throat, esophagus and gastrointestinal tract.

Skin contact/Skin irritation: Redness or rash may occur.

Eye contact: Causes irritation and burns of the eyes. Possible corneal damage. May cause conjunctivitis Lachrymation.

Indication of immediate medical attention and special treatment needed, if necessary:

Cases of eye contact and ingestion should be treated immediately. Have facilities in place to wash skin and eyes in case of exposure.

SECTION 5: Fire-fighting measures

Suitable extinguishing media: Water fog, foam, dry chemical powder, or carbon dioxide (CO₂).

Unsuitable extinguishing media: Do not use water jet as this can spread the fire. Do not use carbon dioxide in enclosed spaces with insufficient ventilation.

Specific hazards arising from the chemical: No unusual fire or explosion hazards noted. Product containers can melt in the heat of a fire. Packaging materials will be combustible and provide fuel for the fire. In the event of fire and/or explosion do not breathe fumes.

Special protective equipment and precautions for fire-fighters: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. During fire-fighting respirator with independent air-supply and airtight garment is required. Fight fire in early stages if safe to do so. Containers at risk of fire should be cooled with water and, if possible removed from the danger area. Do not allow contaminated extinguishing water to enter the soil, ground-water or surface waters.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures: Ventilate area of leak or spill. Ensure adequate ventilation/exhaust extraction. Put on protective equipment (see Section 8). Have emergency procedures in place for treating spillages, evacuating the area and informing the emergency services if necessary. Restrict access to the area until the spillage is treated, if large amounts of vapors are produced that will be hazardous to others, evacuate the area. When any other effects of spillages will affect the safety of others the area should be evacuated. Avoid ingestion, inhalation of vapors and contact with skin and eyes. Non-emergency personnel should be kept away from the area of spillage.

Environment precautions: Do not flush into surface water or sanitary sewers system. Avoid unauthorized discharge to the environment. Clean up any spillages immediately; prevent material from spreading and entering drains or sewage systems. Large spillages or uncontrolled discharge to water systems must be alerted to the Environmental Agency or other regulatory body. If spillages to land cannot be treated safely or if contamination will occur the Environment Agency must be alerted immediately. If the product has entered a foul drain or sewage system in significant amounts to cause a hazard then the local water treatment company must be informed.

Methods and materials for containment and cleaning up: Contain and recover liquid when possible. Small spillages should be absorbed with an inert, non-combustible absorbent. Large Spillages: Dam and absorb spillages with sand, earth or other inert material. Small quantities can be wiped up with absorbent material (e.g. cloth, fleece.) Fit drain covers where they are available if the spillage is likely to enter the drainage system. Collect spillage in containers, seal securely and deliver for disposal according to local regulations. Containers with collected spillage must be properly labeled with correct contents and hazard symbol. Flush area clean with lots of water. Be aware of potential for surfaces to become slippery. Ventilate area and allow drying before allowing access. Wash thoroughly after dealing with a spillage.

Reference to other sections: Refer to sections 8 and 13 for additional information.

SECTION 7: Handling and storage

Precautions for safe handling: Keep in a tightly closed container and protect from physical damage. Store in a cool, dry, and ventilated area. Keep away from sources of heat, moisture, incompatibilities, and away from direct sunlight. Do not mix with incompatible substances or mixtures. Avoid spilling the product. Do not wash out container and use it for other purposes. Avoid ingestion of the product, inhalation of any vapors/mists when produced and contact with skin and eyes. Do not eat, drink or smoke when handling. Wash at the end of each work shift, before eating, drinking, smoking and using the toilet. Remove contaminated clothing/footwear/equipment before entering eating areas or places that would expose others to the product. Do not use in areas close to drainage systems unless measures are in place to prevent access of product. Ensure emergency procedures are in place to treat spillages and cope with other situations such as evacuation. Provide eye washing and skin washing facilities, when handling large amounts a safety shower is recommended. Observe all warnings and precautions listed for the product.

Conditions for safe storage, including any incompatibilities: Store in closed original container at temperatures between 40°F and 80°F. If the product is transferred to another container, this should be made of a compatible material to the original container. Store away from heat, direct sunlight and moisture. Store in a stable situation to avoid spillages. It is advisable to store in a bunded area or use other protective measures such as a sump pallet or storage tray.

SECTION 8: Exposure control/personal protection

Control Parameters

Occupational exposure limits

US.OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Chemical Name	CAS-No.	Type	ppm	mg/m ³
Ethanol	64-17-5	PEL	1,000 ppm	1,900 mg/m ³

U.S. ACGIH Threshold Limit Values

Chemical Name	CAS-No.	Type	ppm	mg/m ³
Ethanol	64-17-5	STEL	1,000 ppm	

U.S. NIOSH: Pocket Guide to Chemical Hazards

Chemical Name	CAS-No.	Type	Value	
Ethanol	64-17-5	TWA	1,000 ppm	1,900 mg/m ³

Appropriate engineering controls:

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the defined exposure limit requirements or guidelines. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition for details.

SECTION 8: Exposure control/personal protection (continued)

Individual protection measures, such as personal protective equipment (PPE)

Eye Protection: Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Hand protection: Wear protective gloves. Butyl rubber, rubber (natural, latex), nitrile, polyvinyl chloride (PVC). Be aware that latex gloves can produce an allergic reaction in sensitive individuals. Gloves should have a breakthrough time sufficient for the amount of handling but allow dexterity for safe movement and handling. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. Gloves showing signs of degradation should be changed to avoid skin contamination. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. When removing used gloves apply proper technique by avoiding skin contact with the outer surface. When packages of the product are being handled during storage or transport it is advisable to wear protective gloves to prevent damage to the skin.

Personal Respirators (NIOSH Approved): If the exposure limit is exceeded, a full face piece respirator with high efficiency dust/mist filter may be worn up to 50 times the exposure limit. Wear suitable respiratory protection when vapors or mists are produced if the Workplace Exposure Limit is exceeded and there is insufficient ventilation or extraction. For emergencies or instances where the exposure levels are not known, use a full face piece positive-pressure, air-supplied respirator. Respirator must be fitted with a cartridge suitable for the chemical of concern. Consult with the supplier as to the compatibility of the equipment with the chemical of concern. CAUTION: Air purifying respirators do not protect the user in oxygen deficient atmospheres, use air supplied system.

Thermal Hazards: Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations: Wash hands, change out of clothes as soon as possible. Wash Clothes. Shower or bathe as soon as possible.

Other protective measures: Have an eye bath and safety shower close by.

SECTION 9: Physical and chemical properties

Appearance:	Liquid
Colour:	Yellow liquid
Odour:	Lemon Odor
Odour Threshold:	No data available
pH:	10-12 ± 0.5
Melting point/range:	No data available
Boiling point/range:	No data available
Flash point:	No data available
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Upper/lower flammability of explosive limits:	No data available
Vapour pressure (mm Hg):	No data available
Vapour density (Air=1):	No data available
Relative density:	No data available

SECTION 9: Physical and chemical properties (continued)

Solubility(ies): Excellent in warm water
Partition coefficient (n-octanol/water): No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Viscosity, dynamic: 25

Other Information: This product contains no phosphates.

SECTION 10: Stability and reactivity

Reactivity and/or chemical stability: No specific reactivity hazards associated with this product. Product is very stable under normal conditions.

Possibility of hazardous reactions: Hazardous polymerization will not occur.

Conditions to avoid: Avoid heat, direct sunlight, and moisture. Avoid storage with incompatible materials. Avoid storage in freezing conditions. Avoid storage near to unprotected drainage systems. It is advisable to store the product within some form of containment to prevent spillages reaching drainage systems. Do not allow the storage container to be left exposed to the atmosphere. Avoid storage in an unstable manner or in a situation that would result in exposure to the product.

Incompatible Materials: Strong oxidizing agents and anionic surfactants.

Hazardous Decomposition Products: Upon decomposition this product may yield oxides of nitrogen and ammonia, carbon dioxide, carbon monoxide and other low weight molecular hydrocarbons.

SECTION 11: Toxicological information

Acute toxicity: Toxicological testing has not been conducted with this material. The toxicology information listed below is based on the components of this material.

Category 4- Oral/Dermal/Inhalation: Harmful; if swallowed/in contact with skin/if inhaled.

Mixture of Quaternary Ammonium chlorides – ATE (Acute Toxicity Estimate)		
Oral LD ₅₀ 50 - 500 mg/kg (Rat)	Inhalation LC ₅₀ 0.054 – 0.51 mg/L	Dermal LD ₅₀ > 2000 mg/kg (Rabbit)

Didecyldimethylammonium chloride – ATE (Acute Toxicity Estimate)	
Oral LD ₅₀ 238 mg/kg (Rat)	Dermal LD ₅₀ 3,342 mg/kg (Rat)

Alcohols, C12-15, ethoxylated – ATE (Acute Toxicity Estimate)	
Oral LD ₅₀ 1,200 mg/kg (Rat)	Dermal LD ₅₀ 5000 mg/kg (Rat)

SECTION 11: Toxicological information (continued)

Tetrasodium ethylenediamine tetraacetate - Acute Toxicity Estimate (ATE)	
Oral LD ₅₀ 3,030 mg/kg (Rat)	Dermal LD ₅₀ >5,000 mg/kg (Rabbit)

Ethanol
A3 Confirmed animal carcinogen with unknown relevance to humans.

Skin Corrosion/ irritation: Category 2: Causes skin irritation. Not known to be corrosive.

Serious eye damage/irritation: Category 2A: Causes serious eye irritation.

Respiratory or skin sensitization: No information available.

Germ cell mutagenicity: Classification not possible. **Carcinogenicity:** Classification not possible.

Reproductive toxicity: Classification not possible.

Specific Target Organ Toxicity - Single Exposure: Classification not possible.

Aspiration hazard: Classification not possible.

SECTION 12: Ecological information

Toxicity: Do not allow to escape into waterways, wastewater or soil. Ecotoxicological studies of the product are not available. Please find below the data available to us from raw materials:

Aquatic ecotoxicity

Acute: Category 2: Toxic to aquatic life.

Chronic: Category 2: Toxic to aquatic life with long lasting effects.

Mixture of ADBAC/ADEBAC*		
EC ₅₀ Algae 0.063 mg/L 96 hrs	LC ₅₀ Daphnia 0.0058 – 0.016 mg/L 48 hrs	LC ₅₀ Fish 0.86 ppm 96 hrs

*Alkyl dimethyl benzyl ammonium chlorides / Alkyl dimethyl ethylbenzyl ammonium chlorides

Alcohols, C12-15, ethoxylated		
LC ₅₀ Fathead minnow 2.7 mg/L 96 h	EC ₅₀ Daphnia 0.4 – 0.75 mg/L 48 h	EC ₅₀ Algae 0.9 mg/L 96 h

Tetrasodium ethylenediamine tetraacetate
LC ₅₀ fathead minnow (Pimephelas promelas) 96 h: >100 mg/l

SECTION 12: Ecological information (continued)

Persistence and degradability: No data is available on the degradability of this product.

Bioaccumulative potential: No data available for this product.

Mobility in soil: Not available.

Other adverse effects: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

General information

Do not allow unauthorized disposal to the environment. If operators are exposed to vapors during the disposal process then suitable respiratory protection should be worn. All other personal protective equipment as described in section 8 should be worn.

Disposal methods:

Avoid unauthorized disposal. Do not dump into any sewers, on the ground, or into any body of water. All disposal practices must be in compliance with federal, state/provincial and local laws and regulations. In case of spill, dike, collect and contact local authorities about disposal.

SECTION 14: Transport information

UN Number:	Not Available
UN Proper Shipping Name:	Not Applicable
Transport hazard class(es):	
DOT Hazard Class:	Not Available
DOT Subsidiary Hazard Class:	Not Available
Packing group, if available:	Not Available
Environmental Hazards:	No
Special precautions for user:	Not DOT regulated.

Transport in bulk according to Annex II of MARPOL 73/78³ and the IBC Code ³: Not applicable

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Unless otherwise noted, no components are SARA TITLE 3 SECTION 313 40 CFR listed materials. The ingredients of this product are listed on the TSCA inventory.

US federal regulations: This product is U.S. EPA registered pesticide. This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 15: Regulatory information (continued)

CERCLA Hazardous Substance List (40 CFR 302.4) Not listed.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) Not listed.
Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
 Immediate Hazard – Yes
 Delayed Hazard – No
 Fire Hazard – Yes
 Pressure Hazard – No
 Reactivity Hazard – No

SARA 302 Extremely hazardous substance No
SARA 311/312 Hazardous chemical Yes
SARA 311/312 Tier II Hazard Ratings:

Component	CAS #	Fire Hazard	Reactivity Hazard	Pressure Hazard	Immediate Health Hazard	Chronic Health Hazard
Alcohols, C12-15, Ethoxylated	68131-39-5	No	No	No	Yes	No

SARA 313 (TRI reporting) Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List Not regulated.
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Not regulated.
Safe Drinking Water Act (SDWA) Not regulated.

The following components appear on one or more of the following state hazardous substance lists:

Component	CAS #	CA	FL	MA	MN	NJ	PA
Ethanol	64-17-5	No	No	Yes	No	No	Yes

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16: Other information including date of preparation or last revision

Chemical State: Liquid	Issue Date:	5-26-2015	2	Health
Chemical Type: Mixture	Revision Date:	-	0	Flammability
	Version #:	01	0	Physical Hazard
			C	Personal Protection

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