Supercedes Date 08/26/2008 **Issuing Date** 07/28/2011

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name DEOX
Product Code 0010
Recommended use Cleaning agent
Chemical nature Acidic aqueous solution

Information on Manufacturer
CHEMSEARCH DIV. OF NCH CORP.
BOX 152170
IRVING, TX 75015

Emergency Telephone Number
CHEMTREC 1-800-424-9300

2. HAZARDS IDENTIFICATION

Emergency Overview

DANGER
POISON
Corrosive
Causes skin and eye burns
May cause delayed lung injury and burns
Harmful or fatal if swallowed

Color Red violet - purple **Physical State** Liquid **Odor** Pungent

Potential Health Effects

Principle Route of Exposure	Skin contact, Eye contact, Inhalation.
Primary Routes of Entry	Inhalation
Acute Effects	
Eyes	Corrosive to the eyes and may cause severe damage including blindness.
Skin	Causes skin burns.
Inhalation	Harmful by inhalation. Causes burns.
Ingestion	If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.
Chronic Toxicity	Inhaled corrosive substances can lead to a toxic edema of the lungs.
Target Organ Effects	Respiratory system, Skin, Eyes, Teeth.
Aggravated Medical Conditions	Skin disorders, Respiratory disorders.
Potential Environmental Effects	See Section 12 for additional Ecological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No
Hydrochloric acid	7647-01-0
Citric acid	77-92-9

4. FIRST AID MEASURES

General Advice	Do not get in eyes, on skin or on clothing. Do not breathe vapors or spray mist.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately.
Skin Contact	Remove immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately.
Inhalation	Move to fresh air. In case of shortness of breath, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
Ingestion	Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person.
Notes to physician	The product causes burns of eyes, skin and mucous membranes Control of circulatory system, shock therapy if needed

5. FIRE-FIGHTING MEASURES

Flash Point > 201 °F / > 94 °C **Method** Tag closed cup
Autoignition Temperature No information available.
Flammability Limits in Air % Hydrogen, by reaction with metals. **Upper** 75 **Lower** 4
Suitable Extinguishing Media
Water spray. Carbon dioxide (CO2). Alcohol-resistant foam. Dry chemical. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Specific hazards arising from the chemical
Material can create slippery conditions. Contact with metals may evolve flammable hydrogen gas.
Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA	**Health** 3	**Flammability** 1	**Instability** 0
HMIS	**Health** 3	**Flammability** 1	**Instability** 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use personal protective equipment. Ensure adequate ventilation. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.
Environmental Precautions	Prevent product from entering drains. Do not flush into surface water or sanitary sewer system.
Methods for Containment	Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
Methods for Cleaning Up	Pick up and transfer to properly labeled containers.

Neutralizing Agent Neutralize with lime milk or soda and flush with plenty of water.

7. HANDLING AND STORAGE

Handling Do not get in eyes, on skin or on clothing. Do not breathe vapors or spray mist.

Storage Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Metal containers must be lined. Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.

Storage Temperature **Minimum** 35 °F / 2 °C **Maximum** 100 °F / 38 °C

Storage Conditions **Indoor** X **Outdoor** X **Heated** **Refrigerated**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Hydrochloric acid	Ceiling: 2 ppm	Ceiling: 5 ppm Ceiling: 7 mg/m^3	IDLH: 50 ppm Ceiling: 5 ppm Ceiling: 7 mg/m^3
Citric acid	No data available	No data available	No data available

Engineering Measures Use with local exhaust ventilation. Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/Face Protection Tightly fitting safety goggles. Face-shield.

Skin Protection Wear suitable protective clothing, Impervious gloves.

Respiratory Protection In case of inadequate ventilation wear respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

General Hygiene Considerations Wear protective gloves/clothing. Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid	**Viscosity**	Non viscous
Color	Red violet - purple	**Odor**	Pungent
Appearance	Transparent	**pH**	0.7
Specific Gravity	1.04	**Evaporation Rate**	0.59 (Butyl acetate=1)
Percent Volatile (Volume)	98.2	**VOC Content (%)**	0
VOC Content (g/L)	0	**Vapor Pressure**	16.49 mmHg @ 70°F
Vapor Density	0.6 (Air = 1.0)	**Solubility**	Completely soluble
Boiling Point/Range	219 °F / 104 °C		

10. STABILITY AND REACTIVITY

Chemical Stability Stable. Hazardous polymerization does not occur.

Conditions to Avoid None known

Incompatible Products Strong bases, Strong oxidizing agents, Reducing agents, Metals.

Hazardous Decomposition Products Carbon oxides, Hydrogen chloride gas, Chlorine gas, Hydrogen, by reaction with metals.

Possibility of Hazardous Reactions None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information No information available.

Component Information

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Hydrochloric acid	700 mg/kg (Rat)	> 5010 mg/kg (Rabbit)	3124 ppm (Rat) 1 h	no data available	no data available
Citric acid	3000 mg/kg (Rat)	no data available	no data available	no data available	no data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Hydrochloric acid	no data available	no data available	no data available	no data available	eyes, respiratory system, skin, teeth
Citric acid	no data available	no data available	no data available	no data available	no data available

Carcinogenicity There are no known carcinogenic chemicals in this product.

Component	ACGIH	IARC	NTP	OSHA	Other
Hydrochloric acid	not applicable	not applicable	not applicable	not applicable	not applicable
Citric acid	not applicable	not applicable	not applicable	not applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information No information available.

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Hydrochloric acid	no data available	LC50 282 mg/L Gambusia affinis 96 h	no data available	no data available	N/A
Citric acid	no data available	LC50 1516 mg/L Lepomis macrochirus 96 h	EC50 = 14 mg/L 15 min	EC50 120 mg/L 72 h	-1.72

Persistence and Degradability No information available.

Bioaccumulation No information available.

Mobility No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal Dispose of in accordance with local regulations.
Container Disposal Empty containers should be taken for local recycling, recovery, or waste disposal.

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name	Corrosive liquid, acidic, organic, n.o.s.
Hazard Class	8
UN-No	UN3265
Packing Group	II
Description	UN3265, CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S., (Hydrochloric Acid, Citric Acid), 8, PG II

TDG

Proper shipping name	Corrosive liquid, acidic, organic, n.o.s.
Hazard Class	8
UN-No	UN3265
Packing Group	II
Description	UN3265, CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S., (Hydrochloric Acid, Citric Acid), 8, PG II

ICAO

UN-No	UN3265
Proper Shipping Name	Corrosive liquid, acidic, organic, n.o.s.*
Hazard Class	8
Packing Group	II
Shipping Description	UN3265, Corrosive liquid, acidic, organic, n.o.s., (Hydrochloric Acid, Citric Acid), 8, PG II

IATA

UN-No	UN3265
Proper Shipping Name	Corrosive liquid, acidic, organic, n.o.s.*
Hazard Class	8
Packing Group	II
ERG Code	8L
Shipping Description	UN3265, Corrosive liquid, acidic, organic, n.o.s., (Hydrochloric Acid, Citric Acid),8,PG II

IMDG/IMO

Proper Shipping Name	Corrosive liquid, acidic, organic, n.o.s.
Hazard Class	8
UN-No	UN3265
Packing Group	II
EmS No.	F-A, S-B
Shipping Description	UN3265, Corrosive liquid, acidic, organic, n.o.s., , (Hydrochloric Acid, Citric Acid), 8,PG II

15. REGULATORY INFORMATION

Inventories
TSCA Complies
DSL Complies

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40n of the Code of Federal Regulations, Part 372

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Hydrochloric acid	7647-01-0	5-10	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	No	No	No	No

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Hydrochloric acid	5000 lb	500 lb TPQ (gas only) 5000 lb
Citric acid	Not applicable	Not applicable

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class
E Corrosive material, D1B Toxic materials.

16. OTHER INFORMATION

Prepared By	Rachael Mohochi
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Reason for Revision	No information available.
Glossary	No information available.
List of References.	No information available.

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