



CET, LLC

MATERIAL SAFETY DATA SHEET

CET CDS® decontamination solution

MSDS Ref. #000102
Version: US/Canada
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1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT: CDS® (Chemical Decontamination Solution; Part A and Part B)

SYNONYM(s): Hydrogen Peroxide, PGPE

Benzylamine and Tetrabutylammonium Hydroxide for Part B

MANUFACTURER: CET, LLC
13695 Rider Trail North
Earth City, Missouri 63045
Emergency Phone: 314-222-4640 (7:00am-4:30pm, CST)

2. COMPOSITION AND HAZARDOUS INGREDIENTS:

“Warning! Oxidizing and Corrosive Liquid”

PART A

Chemical Name	CAS #	Average Concentration		Exposure Limits
		Range;Wt%		
Hydrogen Peroxide	7722-84-1	20-22%		1ppm (TWA) ACGIH; 1ppm PEL (1.4mg/m ³) OSHA
Propylene Glycol, n-propyl ether	1569-01-3	21-23%		
Water	7732-18-5	Balance		

PART B

Chemical Name	CAS #	Average Concentration		Exposure Limits
		Range;Wt%		
N-Benzylamine	100-46-9	16-18%		2mg/m ³ STEL ACGIH; 2mg/m ³ CEIL OSHA (PEL)
Tetrabutylammonium Hydroxide, 55% solution In water	2052-49-5	11-12%		
Sodium Hydroxide	1310-73-2	1-2%		
Water	7732-18-5	Balance		

-Proprietary-

3. PHYSICAL DATA:

PART A

ODOR:	Sharp, pungent odor
APPEARANCE:	Colorless liquid
pH @ 20°C:	2.40
SOLUBILITY:	100% in water
SPECIFIC GRAVITY:	1.07 g/ml
VISCOSITY	2.4 cp

PART B

ODOR:	Ammonia-like odor
APPEARANCE:	Colorless liquid
pH @ 20°C:	13.8
SOLUBILITY:	100% in water
SPECIFIC GRAVITY:	1.02 g/ml
VISCOSITY	4.58 cp

4. HANDLING AND STORAGE

HANDLING: Store drums in upright position only. Empty drums as thoroughly as possible. Triple rinse before disposal. Avoid contamination; impurities accelerate decomposition. Never return product to original container.

STORAGE: Do not store near reducing agents, fuels, or other non-compatible materials. Store in a cool, dry, well-ventilated area in original container, Part A. For quality purposes, avoid temperatures above 95°F. Higher temperatures will accelerate decomposition resulting in loss of assay. Do not store in direct sunlight, or near sources of ignition or heat. Use first in, first out storage management.

VENTILATION: Provide mechanical local exhaust ventilation to prevent release of mist into the work area. If ventilation is inadequate or not available, use acid/gas cartridge or canister with full face protection.

5. SPILL AND LEAK PROCEDURES

Always approach spills from upwind. Ventilate the space involved. Small spills may be flushed to an approved sewer line with generous amounts of water. Combustible materials exposed to hydrogen peroxide should be rinsed immediately with large amounts of water to ensure that all the hydrogen peroxide is removed. Residual hydrogen peroxide which is allowed to dry on organic materials such as paper, fabrics, cotton, leather, wood, or other combustibles can cause the material to ignite and result in a fire. Consult a regulatory specialist to determine appropriate state and local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

6. HAZARDS IDENTIFICATION

a) **FIRST AID:**

Colorless Liquid with sharp odor

EYES: Immediately flush with water for at least 15 minutes, lifting upper and lower eyelids intermittently. See Medical doctor immediately.

SKIN: Remove contaminated clothing and thoroughly wash with soap and water. If irritation occurs and persists, contact a physician.

INHALATION: Remove to fresh air. If breathing discomfort occurs and persists, see a medical doctor. If breathing has stopped, give artificial respiration. See medical doctor immediately.

INGESTION: Rinse mouth with water. Dilute by giving 1 or 2 glasses of water. DO NOT induce vomiting. See medical doctor immediately.

FIRST AID NOTES: This product can be corrosive to skin, eyes, and mucous membranes. Consideration should be given to careful endoscopy as stomach or esophageal burns, perforations or strictures may occur. Careful gastric lavage with an endotracheal tube in place should be considered. Observation may be warranted. Treatment is controlled removal of exposure followed by symptomatic and supportive care.

b) **PERSONAL PROTECTIVE EQUIPMENT:**

EYES AND FACE: Use cup type chemical goggles. Full face shield may be used.

RESPIRATORY: Use approved acid/gas cartridge or canister with full facepiece unless break-through occurs, then use airline supplied or self-contained breathing apparatus with full facepiece.

PROTECTIVE CLOTHING: Rubber or neoprene gloves and footwear. Rubber or neoprene aprons or full protective clothing. Hydrogen peroxide is an ingredient in this product; completely submerge hydrogen peroxide contaminated clothing or other materials in water prior to drying. Residual hydrogen peroxide, if allowed to dry on materials such as paper, fabrics, cotton, leather, wood or other combustibles can cause the material to ignite and result in a fire.

7. FIRE FIGHTING MEASURES

FLAMMABLE LIMITS:

FLASH POINT (per Seta-Flash method, ASTM D-3828):

-Proprietary-

PART A: 154°F
PART B: 147°F
MIXED A AND B: 157°F

EXTINGUISHING MEDIA: Use water to keep fire exposed containers cool.

FIRE FIGHTING PROCEDURES: Use flooding quantities of water only. Use water spray to keep fire exposed containers cool. Fight fire from protected location or maximum distance. Chemical type extinguishers are not effective with hydrogen peroxide, which is an ingredient in this product. Use personal protective equipment and positive pressure self contained breathing apparatus.

FIRE POINT- No fire point. This material will not sustain a flame.

SENSITIVITY TO STATIC DISCHARGE: Not available.

SENSITIVITY TO IMPACT: Not available.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxygen that supports combustion.
Carbon monoxide, Carbon dioxide.

8. TOXICOLOGICAL INFORMATION

EYE EFFECTS: Severely irritating, corrosive

SKIN EFFECTS: Not Determined

DERMAL LD₅₀: Not Determined

ORAL LD₅₀: Not Determined

INHALATION LC₅₀: Not Determined

TARGET ORGANS: Eyes, skin, nose, throat, lungs

Additional Information: The toxicological data is based on the known properties of the components.

ACUTE EFFECTS FROM OVEREXPOSURE: No data available for this product. Liquid may cause severe burns and irreversible tissue damage to eyes. Inhalation of vapors causes lacrimation and irritation of the mucous membranes, eyes, and nasal passages.

CHRONIC EFFECTS FROM OVEREXPOSURE: No data available for this product. Product contains hydrogen peroxide. There are reports of limited evidence of carcinogenicity of hydrogen peroxide to mice administered high concentrations in

their drinking water (IARC Monograph 36, 1985). The U.S. Federal Drug Administration has concluded that there is insufficient evidence of carcinogenicity and the International Agency for Research on Cancer (IARC) has concluded that this chemical is not classifiable as to its carcinogenicity to humans (Group 3).

CARCINOGENICITY:

<u>Chemical Name</u>	<u>NTP Status</u>	<u>IARC Status</u>	<u>OSHA Status</u>	<u>Other</u>
Hydrogen Peroxide	Not listed	IARC Group3	Not Listed	(ACGIH) Listed (A3, Animal Carcinogen)

9. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: No data available for this product.

CHEMICAL FATE INFORMATION: No data available for this product. Hydrogen peroxide is completely miscible with water. Aqueous solutions of hydrogen peroxide degrade to oxygen and water.

10. TRANSPORT INFORMATION

PART A

DOT Name	Hydrogen peroxide, aqueous solutions
UN Number	UN2014
Dangerous Goods Class	5.1
Sub Risk Class	8 (Corrosive)
Packing Group	II
Transport Label(s) Required	OXIDIZER, CORROSIVE

PART B

DOT Name	Corrosive Liquid, n.o.s., (contains Tetrabutylammonium hydroxide, Benzylamine)
UN Number	UN1760
Dangerous Goods Class	8
Sub Risk Class	
Packing Group	II
Transport Label(s) Required	CORROSIVE

11. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40CFR355): Hydrogen Peroxide: TPQ= 1,000lbs, RQ= 1,000 lbs.

SECTION 302.4 REPORTABLE QUANTITY (40CFR 355) The following is the ingredient that is listed:

<u>Chemical Name</u>	<u>RQ</u>
Sodium Hydroxide	1,000 lbs

SECTION 311 HAZARD CATEGORY (40 CFR 370): Fire Hazard, Immediate (Acute) Health Hazard

SECTION 312 THRESHOLD PLANNING QUANTITY (40 CFR 370):
10,000 lbs for < 52% Hydrogen Peroxide

SECTION 313 REPORTABLE INGREDIENTS (40 CFR 372): Listed

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT)

CERCLA REGULATORY (40 CFR 302.4): 1000lbs for Sodium Hydroxide

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA 8(b) Inventory Item (40 CFR 710): Listed, Propylene glycol, n-propyl ether(Part A); Tetrabutylammonium hydroxide; Sodium Hydroxide; N-Benzylamine (Part B)

RCRA STATUS: Waste No.: D002 (corrosivity)

CANADA

WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM):

Hazard Classification: Class E (Corrosive), Class C (Oxidizer).
Ingredient Disclosure List: Listed

12. RATINGS:

HMIS® (Hazardous Materials Identification System) NFPA® RATING

PART A

HEALTH:	3	HEALTH	3
FLAMMABILITY	0	FLAMMABILITY	0
PHYSICAL HAZARD	2	REACTIVITY	2
PERSONAL PROTECTION (PPE)	H	SPECIAL	OX

PART B

HEALTH:	3	HEALTH	3
FLAMMABILITY	0	FLAMMABILITY	0
PHYSICAL HAZARD	2	REACTIVITY	2
PERSONAL PROTECTION (PPE)	H	SPECIAL	Corrosive

Key
4= Severe
3= Serious
2= Moderate
1= Slight
0= Minimal

HMIS RATINGS NOTES: Protection=H (Safety goggles, gloves, apron and a vapor respirator)

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The contents and format of this MSDS are in accordance with OSHA Hazard Communication Standard and Canada's Workplace Hazardous Materials Information System (WHMIS).

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