



MATERIAL SAFETY DATA SHEET

Section 1: Product & Company Identification

Product Name: HydroForce® Glass Cleaner (aerosol)

Product Number (s): 14412

Product Use: glass cleaner

Manufacturer / Supplier Contact Information:

In United States:

CRC Industries, Inc.

885 Louis Drive

Warminster, PA 18974

www.crcindustries.com

1-215-674-4300 (General)

(800) 521-3168 (Technical)

(800) 272-4620 (Customer Service)

In Canada:

CRC Canada Co.

2-1246 Lorimar Drive

Mississauga, Ontario L5S 1R2

www.crc-canada.ca

1-905-670-2291

In Mexico:

CRC Industries Mexico

Av. Benito Juárez 4055 G

Colonia Orquídea

San Luís Potosí, SLP CP 78394

www.crc-mexico.com

52-444-824-1666

24-Hr Emergency – CHEMTREC: (800) 424-9300 or (703) 527-3887

Section 2: Hazards Identification

Emergency Overview

CAUTION: May Cause Eye Irritation. Contents Under Pressure.

Appearance & Odor: Clear liquid, ammonia odor

Potential Health Effects:

ACUTE EFFECTS:

EYE: May cause mild irritation including redness and burning.

SKIN: No adverse effects expected for a single exposure. Prolonged or repeated contact can cause irritation and defatting of the skin.

INHALATION: Inhalation of a small amount is not expected to cause health effects. Prolonged exposure may cause dizziness or throat irritation.

INGESTION: Ingestion of a small amount is not expected to cause health effects. Ingestion of a larger amount may cause irritation to gastrointestinal tract as well as more severe health effects including blood disorders.

CHRONIC EFFECTS: None known

TARGET ORGANS: By ingestion: Blood, liver, kidneys

Medical Conditions Aggravated by Exposure: Pre-existing skin or eye disorders

See Section 11 for toxicology and carcinogenicity information on product ingredients.

Section 3: Composition/Information on Ingredients

COMPONENT	CAS NUMBER	% by Wt.
Water	7732-18-5	85 - 95
Liquefied Petroleum Gas	68476-86-8	3 - 8
2-Butoxyethanol	111-76-2	2 - 3
Ethanol	64-17-5	1 - 2
Ammonium hydroxide solution	1336-21-6	1 - 2

Section 4: First Aid Measures

Eye Contact: Immediately flush with plenty of water for 15 minutes. Call a physician if irritation persists.

Skin Contact: Remove contaminated clothing and wash affected area with soap and water. Call a physician if irritation persists. Wash contaminated clothing prior to re-use.

Inhalation: Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Call a physician.

Ingestion: Do not induce vomiting. Call a physician.

Note to Physicians: This product contains 2-Butoxyethanol which, if ingested in significant quantities, may result in red blood cell hemolysis.

Section 5: Fire-Fighting Measures

Flammable Properties: This product is not flammable in accordance with aerosol flammability definitions. (See 16 CFR 1500.3(c)(6)).

Flash Point: None
Autoignition Temperature: None

Upper Explosive Limit: ND
Lower Explosive Limit: ND

Fire and Explosion Data:

Suitable Extinguishing Media: Use extinguishing agents appropriate for surrounding fire.

Products of Combustion: None

Explosion Hazards: Aerosol containers, when exposed to heat from fire, may build pressure and explode.

Protection of Fire-Fighters: Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition.

Section 6: Accidental Release Measures

Personal Precautions: Use personal protection recommended in Section 8.

Environmental Precautions: Take precautions to prevent contamination of ground and surface waters. Do not flush into sewers or storm drains.

Methods for Containment & Clean-up: Dike area to contain spill. Ventilate the area with fresh air. If in confined space

or limited air circulation area, clean-up workers should wear appropriate respiratory protection. Recover or absorb spilled material using an absorbent designed for chemical spills. Place used absorbents into proper waste containers.

Section 7: Handling and Storage

Handling Procedures: Use with adequate ventilation. Avoid contact with skin and eyes. Wash hands after use. Do not expose aerosol containers to heat or flame. Do not incinerate container. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. For product use instructions, please see the product label.

Storage Procedures: Store in a cool dry area out of direct sunlight. Aerosol cans must be maintained below 120°F / 49°C to prevent cans from rupturing.

Aerosol Storage Level: I

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines:

COMPONENT	OSHA		ACGIH		OTHER		UNIT
	TWA	STEL	TWA	STEL	TWA	SOURCE	
Water	NE	NE	NE	NE	NE		
Liquefied Petroleum Gas	1000	NE	1000	NE	NE		ppm
2-Butoxyethanol	50 (s)	NE	20	NE	NE		ppm
Ammonium hydroxide solution	NE	NE	NE	NE	NE		
Ethanol	1000	NE	NE	1000			ppm
N.E. – Not Established (c) – ceiling (s) – skin (v) – vacated							

Controls and Protection:

Engineering Controls: Area should have ventilation to provide fresh air. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at the source, preventing dispersion into the general work area. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations.

Respiratory Protection: None required for normal work where adequate ventilation is provided. If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use NIOSH-approved self-contained positive pressure respirators in low circulation areas and for emergencies. Air monitoring is needed to determine actual employee exposure levels.

Eye/face Protection: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

Skin Protection: Use protective gloves such as nitrile or rubber. Also, use full protective clothing if there is prolonged or repeated contact of liquid with skin.

Section 9: Physical and Chemical Properties

Physical State: liquid
Color: clear

Odor: ammonia
Odor Threshold: ND
Specific Gravity: 0.9952
Initial Boiling Point: ~ 212°F / 100°C
Freezing Point: ~ 30°F / -1°C
Vapor Pressure: ND
Vapor Density: > 1 (air = 1)
Evaporation Rate: slow
Solubility: soluble in water
Coefficient of water/oil distribution: ND
pH: 10.5
Volatile Organic Compounds: wt %: 9.6 g/L: 95.1 lbs./gal: 0.8

Section 10: Stability and Reactivity

Stability: Stable

Conditions to Avoid: Keep away from heat, direct sunlight, open flames or sparks. Dropping of containers may cause bursting.

Incompatible Materials: Strong oxidizers

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide

Possibility of Hazardous Reactions: No

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

Acute Toxicity:

<u>Component</u>	<u>Oral LD50 (rat)</u>	<u>Dermal LD50 (rabbit)</u>	<u>Inhalation LC50 (rat)</u>
Water	> 90 mL/kg	No data	No data
Liquefied Petroleum Gas	No data	No data	658 mg/L/4H
2-Butoxyethanol	530 mg/kg	400 - 500 mg/kg	450 ppm/4H
Ammonium hydroxide solution	350 mg/kg	No data	No data
Ethanol	7060 mg/kg	No data	20,000 ppm/10H

Chronic Toxicity:

<u>Component</u>	<u>OSHA Carcinogen</u>	<u>IARC Carcinogen</u>	<u>NTP Carcinogen</u>	<u>Irritant</u>	<u>Sensitizer</u>
Water	No	No	No	No	No
Liquefied Petroleum Gas	No	No	No	No	No
2-Butoxyethanol	No	No	No	eye, skin	No
Ammonium hydroxide solution	No	No	No	eye, skin, respiratory	Unknown
Ethanol	No	No	No	eye	No

Reproductive Toxicity: No information available
Teratogenicity: No information available
Mutagenicity: No information available
Synergistic Effects: No information available

Section 311/312 Hazard Categories:	Fire Hazard	No
	Reactive Hazard	No
	Release of Pressure	Yes
	Acute Health Hazard	Yes
	Chronic Health Hazard	No

Section 313 Toxic Chemicals: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:
2-Butoxyethanol (glycol ethers category): 2.85%

Clean Air Act:

Section 112 Hazardous Air Pollutants (HAPs): None

Occupational Safety and Health Administration:

This product is regulated by the Hazard Communications Standard.

U.S. State Regulations:**California Safe Drinking Water and Toxic Enforcement Act (Prop 65):**

This product may contain the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm:

methanol (0.07%)
methyl isobutyl ketone (0.02%)
1,4-dioxane (< 0.004 ppm)
ethylene oxide (< 0.001 ppm)

Consumer Products VOC Regulations: In states with Consumer Products VOC regulations, this product is compliant as a Glass Cleaner.

State Right to Know:

New Jersey: 111-76-2, 68476-86-8, 1336-21-6
Pennsylvania: 111-76-2, 68476-86-8, 1336-21-6
Massachusetts: 111-76-2, 68476-86-8, 1336-21-6
Rhode Island : 111-76-2, 68476-86-8, 1336-21-6

Canadian Regulations:**Controlled Products Regulations:**

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

WHMIS Hazard Class: A, D1A, D2A, D2B

Canadian DSL Inventory: All ingredients are either listed on the DSL Inventory or are exempt.

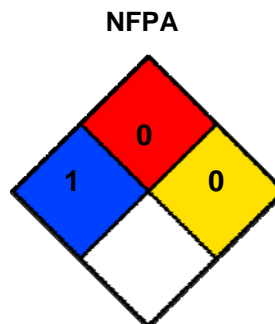
European Union Regulations:

RoHS Compliance: This product is compliant with Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003. This product does not contain any of the restricted substances as listed in Article 4(1) of the RoHS Directive.

Additional Regulatory Information: None

Section 16: Other Information

HMIS® (II)	
Health:	1
Flammability:	0
Reactivity:	0
PPE:	B



Ratings range from 0 (no hazard) to 4 (severe hazard)

Prepared By: Michelle Rudnick
CRC #: 411A
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Changes since last revision: formula change to reduce VOC content

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this MSDS consult your supervisor, a health & safety professional, or CRC Industries.

ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstract Service
CFR: Code of Federal Regulations
DOT: Department of Transportation
DSL: Domestic Substance List
g/L: grams per Liter
HMIS: Hazardous Materials Identification System
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
IMDG: International Maritime Dangerous Goods
IMO: International Maritime Organization
lbs./gal: pounds per gallon
LC: Lethal Concentration
LD: Lethal Dose

NA: Not Applicable
ND: Not Determined
NIOSH: National Institute of Occupational Safety & Health
NFPA: National Fire Protection Association
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PMCC: Pensky-Martens Closed Cup
PPE: Personal Protection Equipment
ppm: Parts per Million
RoHS: Restriction of Hazardous Substances
STEL: Short Term Exposure Limit
TCC: Tag Closed Cup
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Information System