



Leading
Environmental
Enhancement for
Facilities

A concentrated, organic acid fortified, heavy-duty multi-purpose bathroom cleaner that is specially designed to address the environmental, safety and health concerns facing today's housekeeping professional. Readily biodegradable, this product will not accumulate in the environment and will not contribute to waste treatment plant sludge. Cleans away soap scum, mold, mildew, hard water deposits, rust stains, body oils, fats and dirt. Can be used to clean most surfaces such as windows, walls, floors, washroom fixtures, tubs, showers, toilet bowls and urinals. Especially effective on removing difficult stains from ceramic tile floors and grouting.



Organic Acid Washroom Cleaner Concentrate



ENVIRONMENTALLY RESPONSIBLE COMPARISON

Traditional Products	LEEF
Hydrochloric Acid	None
Phosphoric Acid	None
Nonylphenol ethoxylates	None
	Glycolic Acid
	Linear Alcohol Ethoxylates *
	Cocamidopropyl Betaine
	Diethylene Glycol Butyl Ether
	Tripropylene Glycol Methyl Ether*
pH 1-2	pH 4 – 5

Traditional Compound Descriptions:

Hydrochloric Acid – a very strong mineral acid and used to remove mineral deposits and soap scum. However, it is highly corrosive to metal and human eyes, skin and nose.

Phosphoric Acid – a relatively strong acid and used to remove mineral deposits and soap scum. However, it is irritating to human skin. Phosphate is plant nutrient that promotes algae blooms.

Nonylphenol ethoxylates – a non-ionic surfactant that is used to provide wetting and detergency. However, it is derived from a petroleum-based product. It has a suspected harmful biodegradable intermediate.

LEEF Compound Descriptions:

Glycolic Acid - A readily biodegradable organic acid that will not be an issue of environmental waste. It is used to remove mineral deposits and soap scum.

Linear Alcohol Ethoxylates * - listed as Positive Environmental Profile surfactant on EPA design for the Environment Formulator Initiative. A non-ionic surfactant made from linear primary alcohol that biodegrades readily to compounds with low toxicity.

Cocamidopropyl Betaine – A readily biodegradable surfactant that is commonly used in cleaners such as non-irritating shampoos and bubble baths.

Diethylene Glycol Butyl Ether - It is commonly used as a solvent in cleaners. It is biodegradable and is not easily absorbed through the skin.

Tripropylene Glycol Methyl Ether* - listed as Positive Environmental Profile builder on EPA design for the Environment Formulator Initiative. It is commonly used as a solvent in cleaners. It is biodegradable and is not easily absorbed through the skin.

PRODUCT SPECIFICATIONS

Dilution: 1:16
Color: Green
Odor: Mild Odor
pH: 4.0 – 5.0
Viscosity: Water thin
Foam: High
Abrasive: None
Phosphate: None
Solubility: Complete with water
Emulsification: Excellent

Detergency: Excellent
Rinsability: Excellent
Flash Point: None
Biodegradability: Complete
Storage/Stability: 1 year
Weight Per Gallon: 8.93 lbs. Per gallon
Freeze/Thaw Stability: Keep from freezing

SECTION 1-PRODUCT IDENTIFICATION AND SUPPLIER INFORMATION

Product Name: Organic Acid Restroom Cleaner – RTU
(1:8 dilution)
Generic Name: Bathroom Cleaner
Chemical Family: Detergent/solvent blend
Formula: Proprietary

Supplier's Name: Leading Environmental Enhancements for Facilities
Supplier's Address: 280 Seward Drive, Rutland, VT, 05701
Supplier's Phone #: 800-950-3738

SECTION 2-INGREDIENT INFORMATION

CHEMICAL NAME	CAS NO.	WT. %	PEL	TWA-TLV	STEL-TLV
Water	7732-18-5	to 100			
Glycolic Acid	79-14-1	0 to 5			
Primary Ethoxylated Alcohol C9	68439-46-3	0 to 5			
Cocamidopropyl Betaine	61789-40-0	0 to 5			
Tripropylene Glycol Methyl Ether	25498-49-1	0 to 5			
Diethylene Glycol Butyl Ether	112-34-5	0 to 5			

SECTION 3-PHYSICAL DATA

Boiling Point (°F): 212° F.
Vapor Pressure: 20mm Hg @68°F.
% Volatile: 90+
Solubility in Water: Complete
Physical Description: Thin light green liquid with characteristic odor
VOC Content: None

Specific Gravity: 1.010
Vapor Density (Air=1): >1
pH: 4.0 – 5.0
Evaporation Rate (Water=1): >1

SECTION 4-FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used): None
Upper Explosion Limit: N/A
Lower Explosion Limit: N/A
Extinguishing Media: Not applicable
Special Firefighting Procedures: None
Unusual Fire and Explosion Hazards: N/A

SECTION 5-REACTIVITY DATA

Stability: Stable
Hazards Decomposition Products: Not Known

Hazardous Polymerization: None
Incompatibility (Materials to Avoid): Strong Alkalis, Chlorine

SECTION 6-STORAGE AND HANDLING INFORMATION

Eye irritant. Skin irritant with prolonged or repeated contact. Keep out of reach of children. Wear protective gloves and eyewear when handling. Keep container closed during storage. For institutional and industrial use only. Avoid contact with eyes, skin and clothing. Avoid breathing of vapors or mists. Use in well-ventilated area.

SECTION 7-HEALTH HAZARDS AND FIRST AID

Effects of Overexposure:

Skin: Mild irritation with prolonged or repeated contact (dryness, redness)
Eyes: Eye irritant. May cause conjunctivitis, redness, swelling, tearing.
Inhalation: Mists are irritating to mucous membranes in the nose, throat, and lungs.
Ingestion: Irritating to the mouth and throat. May cause nausea, abdominal pain, vomiting.
First Aid Procedures:

Skin: Flush with water. Seek medical attention if irritation persists.
Eyes: Immediately flush with large quantities of water, holding eyelids open. Seek medical attention immediately.
Inhalation: Get to fresh air. Seek medical attention if irritation persists.
Ingestion: Do not induce vomiting. Drink large quantities of water. Seek medical attention immediately.

SECTION 8-SPECIAL PROTECTION INFORMATION

Respiratory Protection: No special requirements
Ventilation Requirements: No special requirements
Protective Gloves: Rubber gloves recommended
Eye Protection: Safety glasses recommended
Other Protective Equipment: None

SECTION 9-SPILL OR LEAK PROCEDURES

Steps to be taken in Case Material is Released or Spilled: Floors will become slippery. Avoid walking in product. Ventilate area well. Keep unessential personnel away. Mop up or otherwise absorb and hold disposal. Avoid discharge to storm sewer or open waterways.
Waste Disposal Method: Any method in accordance with local, state and federal laws. Best method is to recycle or reuse for intended purpose. Disposal to sanitary sewer permitted. Do not dispose of into storm drain, stream, river or to ground. Rinse container thoroughly before offering for recycling.

SECTION 10-REGULATORY INFORMATION

SARA Title III - Section 311/312 -Hazard Categories:

No - Fire Hazard
No - Sudden Release of Pressure Hazard
No - Reactivity Hazard
Yes - Immediate (acute) Health Hazard
No - Delayed (chronic) Health Hazard

Shipping Information:

FOR CONTAINERS > 1 Gallon : Cleaning Compound
Non-Hazardous
FOR 1 GALLON CONTAINERS : Cleaning Compound
Non-Hazardous
FOR CONTAINERS < 1 GALLON : Cleaning Compound

HMIS Hazardous Materials Identification System

Health	1
Flammability	0
Reactivity	0
Personal Protection	B

FOR EMERGENCY MEDICAL OR TRANSPORT INFORMATION: CHEM-TEL, Inc. @ 800-255-3924 (24 hours, 7 days per week)

This product contains the following toxic chemical(s) subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372.

CAS#	Chemical Name	Percent by Weight
	Not Applicable	

This product contains the following chemical(s) which have been established to be either a carcinogen or suspected carcinogen.

CAS#	Chemical Name	Percent by Weight
None	None	None

SECTION 11-OTHER INFORMATION

This company cannot anticipate all conditions of handling and use of this product. Therefore, this company accepts no responsibility for results obtained by the application of this information, or the safety and suitability of our products either alone or in combination with other products. It is the responsibility of the user to provide a safe workplace, using the health and safety information contained herein as a guide. This company will accept no liability for damages or loss incurred from the improper handling and use of this product