



PROFESSIONAL CLEANING PRODUCTS

SAFETY DATA SHEET

1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name	CLR PRO® INDUSTRIAL SYSTEMS FLUSH
Restrictions on Use	Incompatible with strong oxidizing agents, metals (except stainless steel, chrome, aluminum, brass and copper), acids, bases, and bleach.
Product Use	Aqueous Acidic Cleaner for Removal of Calcium, Lime Scale and Rust from Industrial Equipment, Heat Exchangers, Cooling Systems, and Steam Generators Commercial Packages (1,5, 55, and 275 gallons)
Manufacturer:	Jelmar, LLC
Address:	5550 W. Touhy Ave. Skokie, IL 60077 USA 1(847) 675-8400
Emergency Phone Number:	1(800) 323-5497 (USA) 8:30 A.M. – 4:30 P.M. CST Monday – Friday
Emergency 24-hour Contact:	Chemtrec 1(800) 424-9300

2 – HAZARDS IDENTIFICATION

COMPLIES WITH 29CFR 1900.1200 DATED MAY 2012

CLASSIFICATION

Skin Irritation, Category 2
Eye Irritation, Category 2A

LABEL ELEMENTS



Signal Word	Warning
Hazard statements	Causes serious eye irritation Causes skin irritation

Precautionary statement(s)

DO NOT get in eyes, on skin or clothing.
Wear eye protection/face protection.
Wear protective gloves.
Wash skin thoroughly after handling.
Take off contaminated clothing and wash it before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Call a POISON CENTER or doctor/physician if you feel unwell.



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Keep out of reach of children.

Hazard(s) not otherwise classified (HNOC)

DO NOT MIX with other household cleaners or chemicals including bleach, as toxic fumes may result.

Unknown Acute Toxicity: Not applicable

SECTION 3 - COMPOSITION /INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS#</u>	<u>OSHA HAZARD</u>	<u>% by Weight</u>
1. Lactic Acid	79-33-4	YES	5.00-18.00
2. Lauramine Oxide	1643-20-5	YES	1.50-7.50

The exact percentages (concentration) of mixture have been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

SECTION 4 – FIRST AID MEASURES

FIRST AID MEASURES

EYE CONTACT: In case of eye contact, immediately rinse thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice.

SKIN CONTACT: In case of skin contact, immediately rinse thoroughly with water for at least 15 minutes. Remove contaminated clothing and shoes, wash thoroughly before reuse. If irritation persists, get medical attention.

INHALATION: Not a significant route of exposure. Remove to fresh air. If breathing is difficult, GET MEDICAL ATTENTION IMMEDIATELY.

INGESTION: If swallowed, DO NOT induce vomiting, drink a glass of water followed with milk. Call POISON CENTER or doctor immediately. NEVER give an unconscious person anything to ingest.

MOST IMPORTANT SYMPTOMS AND EFFECTS: May cause skin irritation and serious eye irritation. Effects may vary depending on length of exposure, solution concentration. Symptoms may include stinging, redness, tearing, and blurred vision of the eyes. Prolonged skin contact may cause redness, discomfort and itching. Accidental ingestion may result in oral burns, vomiting and gastrointestinal disturbance.

NOTES TO PHYSICIAN: Provide general supportive measures and treat symptomatically. Provide SDS to physician. Symptoms may be delayed.

SECTION 5 – FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA: Not flammable. Use appropriate media for area. Use water spray, dry chemical, alcohol-resistant foam or carbon dioxide.

UNSUITABLE EXTINGUISHING MEDIA: Do not use water jet, as this will spread the fire.

HAZARDOUS COMBUSTION PRODUCTS: Carbon Monoxide. Thermal decomposition can lead to irritating gases and vapors.

FIRE FIGHTING METHODS: Evacuate area of personnel. Wear protective NIOSH-approved self-contained breathing apparatus. Remain upwind of fire to avoid hazardous vapors and decomposition products. Use water spray to cool fire-exposed containers. Run-off of large quantities of product from fire control may cause pollution. Contact appropriate agencies.



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FIRE AND EXPLOSION HAZARDS: None known.

SECTION 6 – ACCIDENTAL RELEASES MEASURES

PERSONAL PRECAUTIONS: Avoid contact with skin and eyes. Ensure adequate ventilation. Avoid breathing vapors or mist. Use personal protective equipment, see Section 8. Isolate area and deny entry to unnecessary and unprotected personnel.

METHODS FOR CONTAINMENT AND CLEAN UP:

Small Spill: No special clean-up procedure is necessary for small (less than 1 gallon) spills. Flush spill area with water. Area may be slippery. Wear rubber gloves.

Large Spill: Use personal protection recommended in Section 8. Isolate area and deny entry to unnecessary and unprotected personnel. Dam spill, and absorb with earth, sand or similar material. Place in non-leaking containers. Flush residue with large amount of water. Area may be slippery. Dispose of collected material according to local, state, and federal regulations. Avoid direct discharge to sewers and surface waters.

SECTION 7- HANDLING AND STORAGE

HANDLING: Avoid contact with eyes, skin or clothing. Use appropriate personal protective equipment (see Section 8). Use with adequate ventilation. Avoid breathing vapors or mist. Observe good industrial hygiene practices when handling this material. Do not eat, drink, or smoke in work area. Wash hands thoroughly after use. Avoid exposure to excess heat. **DO NOT MIX WITH OTHER HOUSEHOLD CLEANERS OR CHEMICALS INCLUDING BLEACH, AS TOXIC FUMES MAY RESULT.** Keep out of reach of children.

STORAGE: Store in cool well-ventilated area, away from heat. Prevent from freezing. Keep containers tightly closed. Avoid contact with combustible materials, wood, and organic materials. Store in original containers in a secure area away from children and pets.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES:

<u>COMPONENT</u>	<u>OSHA</u>		<u>ACGIH</u>	
	<u>PEL</u>	<u>STEL/C</u>	<u>TWA</u>	<u>STEL/C</u>
1. Lactic Acid	N.E.	N.E.	N.E.	N.E.
2. Lauramine Oxide	N.E.	N.E.	N.E.	N.E.

ENGINEERING CONTROLS: Use with adequate ventilation. Do not use in closed or confined spaces. Avoid prolonged breathing of vapor or mists of this product. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If occupational exposure limits have not been established, maintain airborne levels to an acceptable level.

RESPIRATORY PROTECTION: In an industrial setting, respiratory protection must be worn if ventilation does not eliminate symptoms or keep levels below recommended exposure limits. If vapor or mist is present, wear NIOSH-Approved respirator for vapors and mists, NIOSH-Approved self-contained breathing apparatus, NIOSH-Approved full-face piece positive-pressure, air-supplied respirator. DO NOT exceed limits established by respirator manufacturer. Emergency responders should wear self-contained breathing apparatus (SCBA) to avoid inhalation of product.

EYE PROTECTION: Industrial users wear safety goggles. Do not wear contact lenses. Emergency



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responders should wear full eye and face protection.

SKIN PROTECTION: Rubber gloves with protective cuff. Emergency responders should wear impermeable gloves.

OTHER PROTECTION: Emergency responders should wear chemical type (impermeable) protective clothing and footwear where direct contact with chemicals in this product is possible.

WORK/HYGIENIC PRACTICES: Wash thoroughly with soap and water after use or handling. Routinely wash work clothing and protective equipment to remove contaminants. Use good industrial hygiene practices when handling this product.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, lime-green liquid	Flammability:	Not Flammable
Odor: Slightly acidic	Upper/Lower Flammability	N.A.
Odor Threshold: N.D.	Vapor Pressure:	N.D.
pH: @20°C 2.10-2.30	Vapor Density (mm Hg):	N.D.
Melting Point: N.D.	Relative Density @20°C:	1.040 – 1.060
Freezing Point: N.D.	Solubility in water:	100%
Boiling Point: 99°C / 210°F	Partition Coefficient;	N.D.
Boiling Point Range: N.A.	n-octanol/water	
Flash Point: None	Auto Ignition Temperature:	N.A.
Evaporation Rate: N.D.	Decomposition Temperature:	N.A.
	Viscosity:	N.D.

SECTION 10 – STABILITY AND REACTIVITY

REACTIVITY: No hazardous reactions if stored and handled as prescribed/indicated.

CHEMICAL STABILITY: Stable under normal storage conditions.

POSSIBILITY OF HAZARDOUS REACTIONS: None known.

CONDITIONS TO AVOID: Avoid elevated temperatures. **DO NOT MIX WITH OTHER HOUSEHOLD CLEANERS OR CHEMICALS INCLUDING BLEACH, AS TOXIC FUMES MAY RESULT.**

INCOMPATIBLE MATERIALS: Strong oxidizing agents, metals (except stainless steel, chrome, aluminum, brass and copper), bleach, acids, and bases.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition can lead to release of irritating gases, vapors and carbon oxides. In the event of fire: see Section 5.

SECTION 11 – TOXICOLOGICAL INFORMATION

Routes of Exposure Eyes, Skin, Inhalation, Ingestion.

Eyes Irritant: Avoid eye contact. Effects may vary depending on length of exposure and/or solution concentration.

Skin Irritant: Prolonged contact may cause dermatitis, and itching. Effects may vary depending on length of exposure and/or solution concentration.

Inhalation No adverse effects expected under typical use conditions.

Ingestion No adverse effects expected under typical use conditions. Accidental ingestion may result in oral burns, vomiting, and gastrointestinal disturbance.



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Symptoms: May cause serious eye irritation. Effects may vary depending on length of exposure and/or solution concentration. Symptoms may include stinging, redness, tearing, and blurred vision of the eyes. May cause skin irritation. Symptoms may include redness, discomfort and itching. Accidental ingestion may result in oral burns, vomiting and gastrointestinal disturbance.

Information on Toxicological Effects:

Numerical Measures of Toxicity:

Constituent	Oral LD50	Dermal LD50	Inhalation LC50
Lactic Acid	3,543 mg/kg (rat)	> 2,000 mg/kg (rabbit)	>7.94 mg/L (rat, 4h, aerosol)
Lauramine Oxide	1,064 mg/kg (rat)	> 2,000 mg/kg (rat)	No data
Product Acute Toxicity Estimate	>5,000 mg/kg	>5,000 mg/kg	Not assessed

Eye Irritation: GHS Category 2A - Irritant

Skin Irritation: GHS Category 2 – Skin Irritation.

Skin Sensitization: Product is not classified based on available data.

Respiratory Sensitization: Product is not classified based on available data.

Carcinogenicity: This product does not contain any substances at greater than 0.1% that are considered carcinogenic by the National Toxicology Program (NTP) Report on Carcinogens and have not been found to be potential carcinogens in the International Agency for Research on Cancer (IARC) Monographs or found to be potential carcinogens by OSHA.

Mutagenicity: Product is not classified based on available data.

Reproductive Toxicity: Product is not classified based on available data.

Specific Target Organ Toxicity – Single Exposure: Product is not classified based on available data.

Specific Organ Toxicity – Repeated Exposure: Product is not classified based on available data.

Aspiration Hazard: Product is not classified based on available data.

SECTION 12- ECOLOGICAL INFORMATION

Ecotoxicity:

Constituent	Organism and Species	Results
Lactic Acid	Fish (<i>Oncorhynchus mykiss</i>)	96h LC50: 130 mg/L
	Crustacea (<i>Daphnia magna</i>)	48h EC50: 130 mg/L
	Algae (<i>Pseudokirchnerella subcapitata</i>)	72h EC50: 3.5 g/L (growth rate)
	Microorganisms (Activated Sludge)	3h EC50: >88.2 mg/L
Lauramine Oxide	Fish (<i>Danio rerio</i>)	96h LC50: 31.8 mg/L
	Fish (<i>Pimephales promelas</i>)	120d LC50: 0.87 mg/L
	Crustacea (<i>Daphnia magna</i>)	48h EC50: 3.9 mg/L
	Crustacea (<i>Daphnia magna</i>)	21d LC50: 0.96 mg/L
	Algae (<i>Pseudokirchnerella subcapitata</i>)	72h EC50: 0.20 mg/L
	Microorganisms (<i>Pseudomonas putida</i>)	18h EC10: 24 mg/L



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Persistence / Degradability:

Constituent	Results
Lactic Acid	Readily biodegradable: 75% (OECD 301B)
Lauramine Oxide	Readily biodegradable: 95.3% (OECD 301B)

Bioaccumulative Potential:

Constituent	Log Pow	Bioconcentration Factor (BCF)
Lactic Acid	-0.54	No data
Lauramine Oxide	1.85 @ 20 °C	No data

Mobility in soil: No information available.

PBT and vPvB assessment: Not considered to be PBT or vPvB.

Other Adverse Effects: No information available.

SECTION 13 – DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Rinse empty containers and recycle. Dispose of unused product in a permitted hazardous waste management facility following all local, state, and federal regulations.

Follow label warnings, since containers may retain some residue of the product. Processing, use or contamination of this product may change the waste management options. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. State and local disposal regulations may differ from federal disposal regulations.

SECTION 14 - TRANSPORTATION INFORMATION

DOT (Department of Transportation) (Land Transport): Not regulated

Hazard Class/Label: N.A.

Packaging Group: N.A.

UN Number: N.A.

Proper Shipping Name: N.A.

IMDG (Marine Transport): Not regulated

Hazard Class/Label: N.A.

Packaging Group: N.A.

UN Number: N.A.

Proper Shipping Name: N.A.

Marine Pollutant: No

IATA (Air Transport): Not regulated

Hazard Class/Label: N.A.

Packaging Group: N.A.

UN Number: N.A.

Proper Shipping Name: N.A.



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SECTION 15 – REGULATORY INFORMATION

FEDERAL REGULATIONS:

TSCA INVENTORY STATUS: All components of this product are listed on the TSCA Inventory or are exempt from TSCA Inventory requirements.

SARA TITLE III SECTION 311/312 CATEGORY:

IMMEDIATE (ACUTE) HEALTH HAZARD: YES
DELAYED (CHRONIC) HEALTH HAZARD: NO
FIRE HAZARD: NO
SUDDEN RELEASE OF PRESSURE: NO
REACTIVE HAZARD: NO

SARA SECTIONS 302/304/313/HAP: NO

INTERNATIONAL CHEMICAL INVENTORY STATUS:

EUROPEAN UNION (EINECS) YES
JAPAN (METI) YES
AUSTRALIA (ACIS) YES
KOREA (KECL) YES
CANADA (DSL) YES
CANADA (NDSL) NO
PHILIPPINES YES

STATES RIGHT TO KNOW: California, New Jersey, Pennsylvania, Minnesota, Massachusetts, and Wisconsin. Complies with listed States Right to Know Acts.

The following statement is made in order to comply with the California State Drinking Water Act. California Proposition 65: This product does not contain any chemicals known to the State of California to cause cancer and/or to cause birth defects and other reproductive harm.

SECTION 16 – OTHER INFORMATION

Date of Revision: 16-January-2024

Minor editorial and formatting changes.

Total VOC (wt. %): 0% - does not include any CARB applicable exemptions (Volatile Organic Compounds)/California Air Resources Board

CLR PRO® INDUSTRIAL SYSTEMS FLUSH CHEMICAL FATE INFORMATION: 28-day biodegradation. The matter is readily biodegradable. OECD 301D

SDS ABBREVIATIONS:

ACGIH:	American Conference of Governmental Industrial Hygienists
C:	Ceiling Limit
EC50:	Effective Concentration to 50% of a test population
HAP:	Hazardous Air Pollutant
IATA:	International Air Transport Association
IMDG:	International Maritime Dangerous Goods
LC50:	Lethal Concentration to 50% of a test population
LD50:	Lethal Dose to 50% of a test population



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N. A.:	Not Applicable
N. D.:	Not Determined
N.E.:	Not Established
NIOSH:	National Institute for Occupational Safety & Health
OECD:	Organisation for Economic Cooperation and Development
PBT:	Persistent, Bioaccumulative and Toxic
PEL:	Permissible Exposure Limits
STEL:	Short-Term Exposure Limit
TSCA:	Toxic Substances Control Act
TWA:	Time-Weighted Average
UN:	United Nations
vPvB:	Very Persistent and Very Bioaccumulative
VOC:	Volatile Organic Compound

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