



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, 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, 30 and 55 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



WARNING

ACUTE EYE IRRITATION (Category 2A)
ACUTE DERMAL IRRITATION (Category 4)

DO NOT get in eyes, on skin or clothing.
DO NOT mix with bleach or other household chemicals; harmful fumes may result.
DO NOT ingest.
DO NOT breathe vapor or mist. Use in well ventilated areas. Keep container closed when not in use.

KEEP OUT OF REACH OF CHILDREN

Hazard statement(s)

Causes serious eye irritation
Causes mild skin irritation

Precautionary statement (s)

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.
Wear eye protection/face protection.
Wash skin thoroughly after handling.



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If skin irritation or rash occurs: Get medical advice/attention.

IF ON SKIN: Wash with plenty of soap and water.

Wear protective gloves.

Call a POISON CENTER or doctor/physician if you feel unwell.

Avoid breathing fumes.

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 has been withheld as a trade secret in accordance to paragraph (i) of §1910.1200.

SECTION 4 – FIRST AID MEASURES

EYE CONTACT: In case of eye contact, immediately rinse eye thoroughly with plenty of water. Remove contact lenses, and continue rinsing for at least 15 minutes. If irritation persists, get medical attention.

SKIN CONTACT: Can be irritating to skin, prolonged contact can be more severe, no adverse effects during normal usage. In case of skin contact, rinse area 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: DO NOT induce vomiting. If fully conscious, drink 16 ounces of water. CALL A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY. NEVER give an unconscious person anything to ingest.

SECTION 5 – FIRE FIGHTING MEASURES

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

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.

FIRE AND EXPLOSION HAZARDS: None known.

SECTION 6 – ACCIDENTAL RELEASES MEASURES

Steps to be taken in Case Material is Released or Spilled: Avoid contact with skin and eyes

Small Spill: No special clean-up procedure is necessary for small (less than 1 gallon) spills. Flush spill area with water. 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. Dispose of collected material according to local, state, and federal regulations. Flush residue with large amount of water. Avoid direct discharge to surface waters.

SECTION 7- HANDLING AND STORAGE

HANDLING and STORAGE: Avoid contact with eyes, skin or clothing. May be harmful or if swallowed. Use with adequate ventilation. Avoid breathing vapors or mist. Do not eat, drink, or smoke in work area. Wash hand thoroughly after use. The containers (1, 5, 30 and 55 gallons) should be rinsed and recycled. Store in cool well-ventilated area, away from heat. Keep containers tightly closed. Avoid contact with



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combustible materials, wood, and organic materials. Store in original containers in a secure area away from children and pets.

DO NOT MIX WITH BLEACH, OR ANY OTHER PRODUCTS AS TOXIC FUMES MAY RESULT. KEEP OUT OF REACH OF CHILDREN.

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.

VENTILATION REQUIREMENT: Avoid prolonged breathing mists or dusts of this product. Use with adequate ventilation. Do not use in closed or confined spaces.

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 mist or dust is present, wear NIOSH-Approved respirator for dusts 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 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.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Crystal clear, pale 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: N.A.

CHEMICAL STABILITY: Stable under normal storage conditions.

POSSIBILITY OF HAZARDOUS REACTIONS: N. D.

CONDITIONS TO AVOID: Avoid elevated temperatures.

INCOMPATIBLE MATERIALS: Strong oxidizing agents, bleach, acids, and bases.



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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, solution concentration
Skin	Mild Irritant. Prolonged contact may cause dermatitis, and itching.
Inhalation	No adverse effects expected under typical use conditions.
Ingestion	Oral burns, vomiting, and gastrointestinal disturbance.

LD₅₀ ACUTE EYE IRRITATION: GHS Category 2A - Irritant

LD₅₀ ACUTE DERMAL IRRITATION - RABBITS: GHS Toxicity Category 4 – Mild Skin Irritation.

LD₅₀ ACUTE ORAL TOXICITY – RATS: GHS Toxicity >5,000 mg/kg

LD₅₀ ACUTE DERMAL TOXICITY - RABBITS: GHS Toxicity >5,000 mg/kg

LD₅₀ ACUTE INHALATION TOXICITY – RATS: GHS Toxicity Category 4

This product does not contain any substances 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.

Reproductive Toxicity: N.A.

Specific Target Organ Toxicity – Single Exposure: N.A.

Specific Organ Toxicity – Repeated Dose: N. A.

SECTION 12- ECOLOGICAL INFORMATION

L-(+)-LACTIC ACID:

Ecotoxicity

Toxicity to Algae: EC50/Algae >2.8 g/L 72h Pseudokirchnerella subcapitata.
EC50/Algae 3.5 g/L 70h Pseudokirchnerella subcapitata.

Toxicity to Fish: LC50: 130 mg/L 96h Pncorhynchus mykiss
LC50: 320 mg/L 96h Danio rerio

Toxicity to Micro-organisms: LC50>100 mg/L 3h

Toxicity to daphnia and other aquatic vertebrates: EC50 130 mg/L 48h Daphnia magna
EC50 250 mg/L 48h Daphnia magna



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Persistence / degradability: Readily biodegradable.

Bioaccumulative Potential: Does not bioaccumulate.

<u>Chemical Name</u>	<u>Log Pow</u>	<u>Bioconcentration factor (BCF)</u>
L-(+)-Lactic Acid	-0.62	

Mobility in soil No information available.

PBT and vPvB assessment This substance is not considered to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).

Other Adverse Effects No information available.

LAURAMINE OXIDE:

Ecotoxicity; Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

<u>Product</u>	<u>Species</u>	<u>Test Results</u>
Acute		
Algae	EC50 Algae	0.19 mg/l, 72 hours
Crustacea	EC50 Daphnia	3.1 mg/l, 48 hours
Fish	LC50 Fish	2.67 mg/l, 96 hours

Persistence and degradability: Expected to be readily biodegradable.

Bioaccumulative potential: No data available.

SECTION 13 – DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Rinse empty containers and recycle. Dispose of unused product 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

UN Number: N.A.

UN Proper Shipping Name: N.A.

DOT (Department of Transportation Proper Shipping Name): Not regulated by DOT.

Packaging Group: N.A.

TDG Classification: Not Regulated

IMDG Classification: Not Regulated



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IATA Classification: Passenger – Not Regulated

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

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

Precautions to be taken in Handling and Storing: Avoid exposure to excess heat, and prevent from freezing.

NFPA: 1, 0, 0. None

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

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



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Other Precautions: None required.

SDS ABBREVIATIONS:

N. A.:	Not Applicable
N. D.:	Not Determined
N.E.:	Not Established
C:	Ceiling Limit
HAP:	Hazardous Air Pollutant
VOC:	Volatile Organic Compound

R. A. Gaudreault

Although the information and recommendations set forth herein are presented in good faith and believed to be correct as of the date hereof, JELMAR offers no representations as to the completeness or accuracy thereof. Information is provided upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will JELMAR be responsible for damages of any nature whatsoever resulting from use of or reliance upon said information.

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