



PROFESSIONAL CLEANING PRODUCTS

## SAFETY DATA SHEET

### 1 - PRODUCT AND COMPANY IDENTIFICATION

**Product Name**

**CLR PRO<sup>®</sup> CALCIUM, LIME & RUST REMOVER**

**Restrictions on Use**

Incompatible with strong oxidizing agents, metals (except stainless steel, chrome), acids, bases, and bleach...

**Product Use**

Aqueous Acidic Cleaner for Removal of Calcium, Lime, and Rust from Hard Surfaces  
Commercial Package: (1, 5, 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

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### 2 – HAZARDS IDENTIFICATION

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



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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 sewers and 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, and 55 gallons) should be rinsed and recycled. Store in cool well-ventilated area, away from heat. 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.



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**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

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



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### 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.

**LD<sub>50</sub> ACUTE EYE IRRITATION:** GHS Category 2A - Irritant

**LD<sub>50</sub> ACUTE DERMAL IRRITATION - RABBITS:** GHS Category 4 – Mild Skin Irritation.

**LD<sub>50</sub> ACUTE ORAL TOXICITY – RATS:** >5,000 mg/kg

**LD<sub>50</sub> ACUTE DERMAL TOXICITY - RABBITS:** >5,000 mg/kg

**LD<sub>50</sub> ACUTE INHALATION TOXICITY – RATS:** Not Toxic.

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

#### LACTIC ACID:

##### Ecotoxicity

EC50/48h/Daphnia = 240mg/l LC50/48h/Fish = 320 mg/l

EC50/Algae = 3500 mg/l(neutral) No data available.

##### Persistence / degradability

Readily biodegradable, according to appropriate OECD test.

Biochemical oxygen demand (BOD)<sub>5</sub> = 0.45 mg O<sub>2</sub> /mg

Biochemical oxygen demand (BOD)<sub>20</sub> = 0.60 mg O<sub>2</sub>/mg

Chemical oxygen demand (COD) = 0.90 mg O<sub>2</sub> /mg

##### Bioaccumulation

None.

#### GLUCONIC ACID:

##### Ecotoxicity

Fish 96-h LC50 > 1000.0 mg/L

Daphnid 48-h LC50 > 1000.0 mg/L

Green algal 96-h EC50 > 1000.0 mg/L



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Fish Chronic Value (ChV) > 100.0 mg/L

Daphnid ChV > 100.0 mg/L

Algal ChV > 100.0 mg/L

### Persistence / degradability

No bioconcentration in aquatic organisms and rapid biodegradation/disappearance in the environment, i.e. 40% in 5 days.

### Bioaccumulation

None.

### LAURAMINE OXIDE:

#### Ecotoxicity

Acute Aquatic Toxicity

Reviewed Category  $\leq 1$  mg/L

Algae  $IC_{50}$  0.01 mg/L

Invertebrate  $EC_{50}$  1.01 mg/L

Fish  $LC_{50}$  2.6 mg/L

#### Persistence / degradability

Biodegradation: % degraded in 28 days  $\geq 60\%$  ThOD/ThCO<sub>2</sub> ( $\geq 70\%$  DOC)

### DIPROPYLENE GLYCOL n-Butyl ETYHER:

#### Ecotoxicity

Material is practically non-toxic to aquatic organisms on an acute basis ( $LC_{50}/EC_{50}/EL_{50}/LL_{50}$  >100 mg/L in the most sensitive species tested).

#### Fish Acute & Prolonged Toxicity

$LC_{50}$ , guppy (*Poecilia reticulata*), static, 96 h: 841 mg/l

#### Aquatic Invertebrate Acute Toxicity

$LC_{50}$ , water flea *Daphnia magna*, static, 48 h, immobilization: > 1,000 mg/l

#### Movement & Partitioning

Bioconcentration potential is low (BCF less than 100 or log Pow less than 3). Potential for mobility in soil is very high (Koc between 0 and 50).

**Henry's Law Constant (H):** 3.78E-07 atm\*m<sup>3</sup>/mole; 25 °C Estimated.

**Partition coefficient, n-octanol/water (log Pow):** 1.13 Estimated.

**Partition coefficient, soil organic carbon/water (Koc):** 10 - 21 Estimated.

#### Persistence and Degradability

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).

#### Indirect Photodegradation with OH Radicals

#### Rate Constant Atmospheric Half-life Method



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4.97E-11 cm<sup>3</sup>/s 2.6 h Estimated.

### OECD Biodegradation Tests:

#### Biodegradation Exposure Time Method

91 % 28 d OECD 301E Test

96 % 28 d OECD 302B Test

**Theoretical Oxygen Demand:** 2.35 mg/mg

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### 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.

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### 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

**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.

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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





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CANADA (NDSL)  
PHILIPPINES

NO  
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.

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### SECTION 16 – OTHER INFORMATION

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**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

**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

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**Revision: GHS Format; Section 2 - Correct Information; Section 11**

**R. A. Gaudreault**

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