

PowerSolve Efflorescence Cleaner -- PE110

Section 1. Supplier Information

CMI Chemical Corporation
12336 Emerson Drive
Brighton, MI 48116
(248) 587-5600
Emergency Telephone: 1-800-424-9300

Section 2. Hazardous Ingredients

<u>Hazardous Component(s)</u>	<u>CAS #</u>	<u>PEL TWA</u>	<u>PEL Ceiling</u>	<u>TLV TWA</u>	<u>TLV STEL</u>	<u>MFG Limits</u>	<u>WGT %</u>
Hydrochloric acid	7647-01-0	N/E	5 ppm	N/E	5 ppm	5 ppm	20 - 30
Lactic acid, L(+)-	79-33-4	N/E	N/E	N/E	N/E	N/E	1 - 10

N/A = Not Applicable; N/E = Not Established; * = Mists; # = Skin; ' = Respirable Dust; " = Total Dust; ^ = Vapor; ** = Fumes; C = Ceiling Limit

All components of this product are listed on the Toxic Substances Control Act (TSCA) Inventory and the Canadian Domestic Substances List (DSL), or are exempt from the listing.

Section 3. Hazards Identification

<u>Primary Routes of Entry</u>	<u>Hazardous Materials Information System (HMIS) Ratings</u>
Inhalation: YES	Health: * 3 0 = Minimal 1 = Slight
Skin: YES	Fire: 0 2 = Moderate
Ingestion: YES	Reactivity: 0 3 = Serious 4 = Severe * = Chronic Hazard

Signs of Symptoms of Exposure:

INHALATION: Exposure to mists may cause coughing, sneezing, and other symptoms of respiratory tract irritation. Overexposure may result in lung tissue damage due to corrosive effects.

SKIN: Can be a severe skin irritant. May be corrosive and cause severe burns if not washed immediately.

EYES: This product is destructive to eye tissues on contact. Will cause severe burns that result in damage to the eyes and even blindness.

INGESTION: This product, if swallowed, can cause severe burns and complete tissue perforation of mucous membranes of the mouth, throat, esophagus, and stomach.

Chemical Listed as Potential Carcinogens:

NTP: NO

IARC: NO

OSHA: NO

Target Organs: Eyes, skin, respiratory system, and GI tract.

PowerSolve Efflorescence Cleaner -- PE110

Section 4. Emergency And First Aid Procedures

INHALATION: If adverse effects such as dizziness, nausea, or irritation are noted, move person to fresh air. If not breathing, give artificial respiration. Get medical attention!

SKIN: Immediately wash skin with large amounts of soap and water. Remove contaminated clothing and shoes; wash before reuse. Get medical attention if irritation persists after washing.

EYES: THE OBJECT IS TO FLUSH MATERIAL OUT IMMEDIATELY, THEN SEEK MEDICAL ATTENTION! Immediately flush eyes with large amounts of water for at least 15 minutes, holding lids apart to ensure flushing of the entire surface. Washing eyes within several seconds is essential to achieve maximum effectiveness. **SEEK MEDICAL ATTENTION IMMEDIATELY!**

INGESTION: DO NOT INDUCE VOMITING! Contact a physician immediately!

Section 5. Fire Fighting Measures

Flash Point: None. Method Used: N/A

Flammable Limits in Air % by Volume: LEL: N/E UEL: N/E

Extinguisher Media: Water, dry chemical, carbon dioxide, or foam.

Special Fire Fighting Procedures: Firefighters should wear a self-contained breathing apparatus with a full facepiece operated in pressure demand or other positive pressure mode, and protective clothing.

Unusual Fire And Explosion Hazards: Contact with metals may produce flammable hydrogen gas.

Section 6. Accidental Release Measures

If material is spilled, absorb with sand, earth, or similar inert material. Place in closed, labeled containers for proper disposal.

CERCLA (Superfund) Reportable Quantity (in lbs RQ Hydrochloric acid = 5,000 lbs. For product, RQ - 20,000 lbs.

Section 7. Handling and Storage

Handling: Avoid contact with skin and eyes; wash thoroughly after handling. Avoid breathing vapor; use with adequate ventilation.

Storage: Store in a dry location at room temperature. Keep container closed and maintain all original markings and labels.

Other: If this solution is mixed with water, heat will be given off. When diluting, always add this solution to water SLOWLY with constant mixing, in order to avoid splattering.

Section 8. Exposure Controls and Personal Protection

Respiratory Protection: Use NIOSH / MSHA approved respirator where high vapor or mist concentrations are present.

Local Exhaust: None normally required. Local exhaust may be needed under special circumstances such as poorly ventilated areas, evaporation from large surfaces, spraying, heating, etc.

Mechanical Exhaust: Mechanical ventilation should be sufficient to maintain exposure levels below exposure limits.

Protective Gloves: Wear chemical resistant gloves.

Eye Protection: Safety glasses with side shields. Do NOT wear contact lenses. Chemical goggles and/or faceshield should be worn where splashing is possible.

PowerSolve Efflorescence Cleaner -- PE110

Other Protection: Eye wash and safety shower should be readily available. Wear a chemical resistant apron and boots where splashing is possible.

Hygienic Practices: Protective equipment and clothing should be selected, used and maintained according to applicable standards and regulations. For further information, contact the clothing or equipment manufacturer. Do not eat, drink, or smoke while using this product. Wash hands prior to eating, drinking, smoking, or using restrooms. Cleanse skin thoroughly after contact, before breaks and meals, and at the end of the work shift.

Section 9. Physical and Chemical Properties

Boiling Point:	212 °F (initial)	Degree of water solubility: Negligible = Less than 0.1% Slight = 0.1% - 1% Moderate = 1% - 10% Appreciable = More than 10% Complete = 100%
Specific Gravity (H ₂ O=1):	1.10-1.15	
Vapor Pressure (mm Hg):	N/D	
Vapor Density (air=1)	N/D	
Solubility in Water:	Complete.	
Reactivity in Water:	Exothermic; generates heat.	
Weight per Gallon (lb/gal):	9.3 - 9.4 lb/gal	
% Volatile by Volume:	100 %	
% Solid by Weight:	0 %	
Appearance and Odor:	Clear, blue to blue-green liquid with an acrid, sharp, and pungent odor.	
Theoretical VOC: (>0.1 mm Hg @ 20 ° C)	N/E	
Analytical VOC : (EPA method 24)	0.4 - 0.6 lb/gal	
pH:	1.0 - 1.5 for 1% solution.	

Section 10. Stability and Reactivity

Stability: Stable. Hazard Polymerization: Will not occur.

Conditions to Avoid: DO NOT ADD WATER! Add product slowly to water. Heat will be generated.

Incompatibility (Materials to Avoid): Metal, cyanides, sulfides, or formaldehyde.

Hazardous Decomposition Products: Oxides of carbon.

Section 11. Toxicological Information

Hydrochloric acid [CASRN 007647010]

ACUTE TOXICITY Oral LD50 (rabbits) = 900 mg/kg
Inhalation LC50 (rat) = 2,810 ppm, 1 hr

The compound is corrosive to eyes and skin. Toxic effects described in animals from single inhalation exposures include respiratory irritation, corneal opacity, and corrosion of mucosal surfaces. Repeated and long-term inhalation exposures produced changes in the nasal cavity with necrosis, and reduced weight gain. Long-term exposures also produced decreased liver weights. By ingestion, a single exposure produced gastric mucosal damage. Administration of repeated oral doses produced decreased weight gain, mortalities, and nonspecific changes. Long-term dosing resulted in decreased relative and absolute spleen weights.

PowerSolve Efflorescence Cleaner -- PE110

Tests in animals demonstrate no carcinogenic activity. Tests have not been performed for mutagenic, developmental, or reproductive effects. [3,20-7,0,18-111298]

Lactic acid [CASRN 000079-33-4]

ACUTE TOXICITY

Oral LD50 (rat) = 3,730 mg/kg Eye irritation (rabbit): Severe
Oral LD50 (mouse) = 4,875 mg/kg Skin irritation (rabbit): Severe
Dermal LD50 (rabbit) > 2,000 mg/kg Skin irritation (guinea pig): Slight - none.

Skin: Tests on animals have shown that the effect of lactic acid on skin is species dependent. Human experience and results on guinea pigs have shown that it is an irritant and not corrosive. [15,20-11,11,0-070300]

Section 12. Ecological Information

Hydrochloric acid [CASRN 007647010]

ECOTOXICTY 96 hr - LC50 (mosquito fish) = 282 mg/l, slightly toxic [3,20-7,0,18-111298]

Lactic acid [CASRN 000079-33-4]

ECOTOXICITY

48 hr - LC50 (fish) = 320 mg/l EC50 (algae) = 3,500 mg/l (neutral)
48 hr - EC50 (daphnia) = 240 mg/l

Biodegradability: Readily biodegradable, according to appropriate OECD test.

Biochemical oxygen demand (BOD5) = 0.45 mg O2/mg

Biochemical oxygen demand (BOD20) = 0.60 mg O2/mg

Chemical oxygen demand (COD) = 0.90 mg O2/mg [15,20-11,11,0-070300]

Section 13. Disposal Considerations

Waste Disposal Methods (Federal, State, Local):

In accordance with all federal, state and local requirements.

RCRA Hazardous Waste Number: D002

Section 14. Transport Information

Hazardous Material Description:

(Proper shipping name, hazard class, hazard ID#, packing group)

Domestic ground non-bulk: HYDROCHLORIC ACID SOLUTION, 8, UN1789, PG II

Domestic ground bulk: HYDROCHLORIC ACID SOLUTION, 8, UN1789, PG II

International: HYDROCHLORIC ACID SOLUTION, 8, UN1789, PG II

Section 15. Regulatory Information

SARA 313 Information This product contains the following chemical(s) above deminis concentrations and may be subject to reporting under section 313:

Hydrochloric acid, CAS # 7647-01-0, 20-30 %

Section 16. Other Information

This MSDS contains revisions in the following sections: New format

Prepared by: John A. DiCerbo, IHIT Regulatory & Safety Coordinator

Revised by: Andrew J. Thomas Chemist

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MATERIAL SAFETY DATA SHEET

Page 5 of 5

PowerSolve Efflorescence Cleaner -- PE110

The development of this Material Safety Data Sheet (MSDS) relies upon information provided to us by each of our raw material suppliers. This MSDS will be updated as changes occur to their MSDS(s).

We believe the recommendations and technical information contained herein to be accurate. However, they are given without warranty or guarantee, expressed or implied, and we assume no responsibility for losses or damage, direct or indirect, as a result of their use.