

EMS EnviroSafe Masonry Cleaner

ACID-FREE MASONRY CLEANER AND EFFLORESCENCE REMOVER

- **Stronger than Muriatic**
- **100% Acid Free**
- **Non-D.O.T. Regulated**
- **Removes Concrete**
- **Non-Fuming**
- **Non-Corrosive**
- **Removes Efflorescence**
- **Eliminates Mineral Stains**
- **No Neutralizing Step**
- **Safe on Glass**
- **Safe on Plants**
- **Safe on Skin**

Until now, the only effective way to remove mortar smear, grout residue, cement and efflorescence from brick, walls and finished concrete has been to use harsh mineral acids. While these acids eat away the calcium carbonate, they pose significant dangers to other parts of the building, the environment and to the person using the product.

EnviroSafe is not only the strongest masonry cleaner in the world, it is also the safest. Independent tests confirm that EnviroSafe, formed with EMS' patented SynTech®, the world's only synthetic acid, dissolves more calcium carbonate and efflorescence than Muriatic (Hydrochloric) or phosphoric acids, the active ingredients in virtually every other masonry cleaner on the market. Still, with EMS' SynTech, all that potency comes with a triple zero HMIS score.

EnviroSafe will safely and quickly clean pavers, block, brick, concrete, river rock, architectural concrete and retainer walls while dissolving all signs of efflorescence. Plus, it is color safe on even the lightest colors.

This non-fuming purely synthetic formula is non-D.O.T. regulated while exceeding OSHA & EPA approval standards. In fact, it is so safe that it carries a USDA Authorization Code of A1, deeming it safe for use in and around food processing areas and equipment. It is 100% biodegradable, water soluble, non-toxic, non-butyl and non-flammable.

EnviroSafe Masonry Cleaner is 100% acid free, so no neutralizing steps is required. This also means it will not etch glass, is non-corrosive, and will not harm plants or turf. Simply dilute, apply, agitate and rinse.



Technical Data

NITRATE LEVEL: **0% - None**
FORM: **Liquid**
ODOR: **Mild Odor**
COLD STABILITY: **19° F**
DETERGENCY: **Excellent**
TOXICITY: **Non Toxic**
WETTING ABILITY: **Excellent**
STORAGE STABILITY: **2 Years+**

SHIPPER REGULATIONS: **None**
FLASH POINT: **None**
BOILING POINT: **228° F**
SOLUBILITY IN WATER: **100%**
BIODEGRADABLE: **Yes/100%**
VOLATILE BY VOLUME: **N/A**
CARCINOGENS: **None**
VISCOSITY: **Thin**

Dissolving Properties

Efflorescence Dissolving Properties of Acids with 2 Minute Exposure

| Acid | % Dissolved |
|-----------------------------------|-------------|
| EnviroSafe Masonry Cleaner | 100 |
| Muriatic (Hydrochloric) | 98.9 |
| Sulfamic | 46.0 |
| Formic | 0.7 |
| Phosphoric | 63.5 |
| Citric | 0.0 |
| Lactic | 1.4 |
| Acetic | 1.3 |
| Glycolic | 1.2 |
| Gluconic | 1.1 |
| Rydlyme | 1.4 |
| Oxalic | 0.0 |
| Malic | 1.6 |

Test Conditions

16 ounces of 20% active solution
1 sq. ft. paver stone with heavy efflorescence
2 Minutes @ 70° F

Clearly, EnviroSafe out performs other acids when it comes to dissolving efflorescence, including Muriatic (Hydrochloric) which is highly corrosive.

Separate tests also show that EnviroSafe also dissolved nearly 15% more calcium carbonate than Muriatic (Hydrochloric) acid.

Metal Studies

Dept. of Transportation (D.O.T.) Test Protocols as per Section 173.154 Exceptions for Class 8 (corrosive materials): The material being tested must be proven to be non-destructive or not to cause irreversible alterations in human skin tissue. Testing was conducted on an albino rabbit.

Conclusion: EnviroSafe Masonry Cleaner was proven to be NON-DESTRUCTIVE on human skin tissue.

Metal Test Limits: D.O.T. Classifies a material to be CORROSIVE if it has a corrosion rate that exceeds 6.25 mmpy on SAE C1020 carbon steel.

Results of EnviroSafe: SAE 1020 carbon steel = 0.29 mmpy

Conclusion: EnviroSafe Mas is NON-CORROSIVE

Dilution Specifications

Light to moderate cleaning:
Dilute 10:1

Moderate to heavy cleaning:
Dilute 8:1

Heavy to extra heavy cleaning:
Dilute 4:1

Concrete Stripping:
Dilute 1:1

Apply to buildup, agitate, rinse. Repeat as needed.
May be left overnight to dissolve heavy buildup.

Toxicity Studies

Toxicity Limits: Test Procedure OECD 202, 48 hr.

LC 50 and LD 50 (rat oral) scores found EnviroSafe to be NON-TOXIC.

Mutagenicity Limits: OECD Guidelines Sec. 471 Chemicals

EnviroSafe was found NOT TO BE MUTAGENIC

Dermal Irritation & Corrosion Test

A modified Draize method was used as described in OECD Guidelines for the Testing of Chemicals Sec. 404 and complies with the requirements of OECD Principles of GLP, Annex revised as of July 1992.

EnviroSafe received a Primary Irritation Score of .09 +/-0.3 and is classified as a "Very Mild Skin Irritant"

Biodegradation & Aquatic Safety

Test Procedure: Hach Reactor Digestion method for Waste Water and Sea Water. Hach Reactor Digestion Method is a semi-micro adaptation of the Standard Methods.

Test Results Conclude EnviroSafe was found to be 100% Biodegradable

COD = **Low Detectable Limits**

BOD = **No Detectable Limits**

Classifications & Approvals

D.O.T., TDG, IMO, IATA, IMDG, SARA 313 311/312, California Prop 65
NON-Regulated

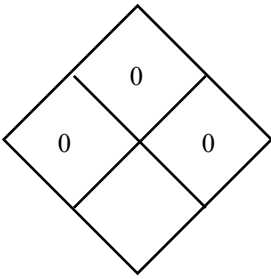
FDA

Approved as Safe (GRAS)
(CGMP) CFR 184.1923

USDA Authorization

A1, A2, A3, A4, A7, A8, C2,
G6 & G7

Additional Studies & Results: When tested, EnviroSafe Masonry Cleaner showed no potential for the generation of Carbon Dioxide under NIOSH 7903, OSHA & ACGIH testing protocols governing workplace environments.



Material Safety Data Sheet

This MSDS complies with OSHA's Hazard Communication Standard, 29 CFR 1910.1200 and OSHA FORM 174. OMB No. 1218-0072

Identity (Trade Name As Used On Label)

SECTION 1 - COMPANY/PRODUCT

Manufacturer's Name: Environmental Manufacturing Solutions, L.L.C.
Address: 7705 Progress Circle
Melbourne, Florida 32904
Phone Number (For Information): 321-837-0050
Emergency Phone Number: (Chemtrec) 800-424-9300

IDENTITY: ENVIROSAFE MASONRY CLEANER
CAUSE FOR MSDS: EPA, DfE Formula

MSDS Number: N/A
Date Prepared: Revised 06/01/09

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

SECTION 2 - HAZARD INGREDIENTS/IDENTITY INFORMATION

| COMPONENTS - Chemical Name & Component Names (Hazardous Components 1% or greater. Carcinogens 1% or more) | OSHA PEL | ACGIH TLV | OTHER LIMIT RECOMMENDED |
|---|----------|-----------|-------------------------|
| NONE AS PER 29CFR Part 1910.1200. PROPRIETARY TRADE SECRET PERMITTED | N/A | N/A | N/A |
| Non-Pollutant/Non-Regulated as per Chapter 62-761 F.A.C. | | | |
| NON-HAZARDOUS / NON DOT-REGULATED as per 49CFR 173.154(d)(1). | | | |
| See Section- Federal Register Vol. 48 No. 228 Nov. 25, 1983 Rules & Regulations | | | |

SECTION 3 - PHYSICAL / CHEMICAL CHARACTERISTICS

| | |
|-----------------------------|--|
| Boiling Point 212 ± 5° F | Specified Gravity (H2O = 1) 1.03 ± 0.02 |
| Vapor Pressure (mm Hg.) N/A | Melting Point N/A |
| Vapor Density N/A | Evaporation Rate (Butyl Acetate = 1) N/A |
| Solubility In Water Soluble | Appearance and Odor Light amber, mild odor |

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

| | | |
|---|----------------------------|---------|
| Flash Point (Method Used) Does not ignite | Flammable Does not ignite | LEL N/A |
| Extinguisher Media None | Special Fire Fighting None | UEL N/A |
| Unusual Fire and Explosion None expected | | |

SECTION 5 - REACTIVITY DATA

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|--|
| STABILITY Stable at normal temperatures and operating conditions. |
| CONDITIONS TO AVOID: Extreme conditions |
| Incompatibility (Materials to Avoid) Do not mix with strong oxidizing agents |
| Hazardous Decomposition or Byproducts None known |
| HAZARDOUS POLYMERIZATION: Will Not Occur |
| CONDITIONS TO AVOID: None Known |

SECTION 6 - HEALTH HAZARD DATA

| | | | | | | |
|-------------|------------|----|-------|----|------------|-----|
| ROUTE(S) OF | Inhalation | No | Skin? | No | Ingestion? | Yes |
|-------------|------------|----|-------|----|------------|-----|

HEALTH HAZARDS (*Acute and Chronic*) May irritate eyes if contact is made. May cause gastrointestinal irritation which may include nausea, vomiting, diarrhea, and abdominal discomfort. Do not induce vomiting. Drink plenty of water and seek medical attention.

| | | | | | | |
|-----------------|------|----|------|----|------|----|
| CARCINOGENICITY | NTP? | No | IARC | No | OSHA | No |
|-----------------|------|----|------|----|------|----|

SIGNS AND SYMPTOMS OF None Known. SEE HEALTH HAZARDS

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY None Known

EMERGENCY AND FIRST AID Skin: Remove contaminated clothing, wash with soap and water. Ingestion: Drink plenty of water and consult a physician.

Do not induce vomiting Eyes: Flush with water for at least 15 minutes or until irritation subsides.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to Be Taken in Case Material is Released or Spilled Spilled material should be washed away promptly with copious amounts of water.

Product material neutralizes with sufficient volumes of water.

Waste Disposal Method As with any material to be discarded, dispose of in accordance with Federal, State and Local regulations and laws

If possible, recycle used containers

Precautions to Be Taken in Handling and Storing Keep away from incompatible materials and avoid extreme conditions. Keep lid closed to avoid contamination.

As with any chemical use appropriate precautions when choosing where and how to store the product.

Other None Known

SECTION 8 - Control Measures

Respiratory Protection (*Specify Type*) None required under normal use conditions.

Ventilation Normal ventilation is generally adequate

Local N/A

Special N/A

Other N/A

Mechanical(*General*) N/A

Protective Gloves N/A

Eye Protection Chemical goggles or suitable safety glasses are suggested for use.

Other Protective Clothing or Equipment N/A

Work/Hygienic Practices None Known. Please use good common sense in any work environment