

# MATERIAL SAFETY DATA SHEET (MSDS)

DURUS INTERNATIONAL CORPORATION  
PRODUCT: **DURUS® Cement Wash - Dry Mix Part**  
MSDS Date: January 1, 2003

## SECTION I. Product and Company Identification

**Manufacturer:** Durus International Corporation  
1217 Palolo Avenue  
Honolulu, HI 96816  
TEL: (808) 733-8682  
FAX: (808) 737-1808

**Emergency Response Notification: (888) 387-8708 TOLL FREE**

Product Name: DURUS® Cement Wash - Dry Mix Part

Generic Name: Cementitious Coating

Formula: Type II Low Alkali Portland Cement

Special Hazards: Possible IRRITANT

HMIS Hazard Rating	
Health:	1 Slight
Fire:	0 Negligible
Reactivity:	0 Negligible
PPE:	E

## SECTION II. Hazardous Ingredients/Identification Information

<u>Material or Component</u>	<u>Chemical Family</u>	<u>CAS #</u>
SILICATE, PORTLAND CEMENT	Calcium Salts	65997-15-1

Substances similar to the following are known to be present in Portland Cement:

3CaO.SiO <sub>2</sub> (CAS #12168-85-3)	2CaO.SiO <sub>2</sub> (CAS #10034-77-2)
3CaO.Al <sub>2</sub> O <sub>3</sub> (CAS #12042-78-3)	4CaO.Al <sub>2</sub> O <sub>3</sub> .Fe <sub>2</sub> O <sub>3</sub> (CAS #12068-35-8)
CaSO <sub>4</sub> .XH <sub>2</sub> O (CAS #13397-24-5)	Additionally small amounts of CaO, MgO, K <sub>2</sub> SO <sub>4</sub> , Na <sub>2</sub> SO <sub>4</sub> may also be present.

## SECTION III. Physical Data

Boiling Point:	N/A	Solubility in Water:	Cement - (.1-1.0%)
Melting Point:	N/A	Packing Density:	N/A
Vapor Pressure (mm Hg.):	N/A	Percent Volatiles:	N/A
Vapor Density (Air=1):	N/A	Evaporation Rate (Butyl Acetate=1):	N/A
Specific Gravity (Water=1):	3.15	Odor:	None
Appearance:	Gray powder (Portland cement) with white or tan aggregates (silica sand)		

## SECTION IV. Fire and Explosion Hazard Data

Flammability:	Portland cements are non-flammable and non-explosive.
Flash Point:	N/A
Extinguishing Media:	N/A
Special Fire Fighting Procedures:	N/A
Unusual Fire and Explosion Hazards:	None

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## SECTION V. Health Hazard Data

### Health Effects:

<u>Skin Contact:</u>	May cause inflammatory skin or tissue irritation at site of contact.
First Aid:	Wash skin thoroughly with soap and water. Remove contaminated clothing. If symptoms persist, consult physician.
<u>Eye Contact:</u>	May cause mild burn or irritation.
First Aid:	Rinse eyes immediately and thoroughly with water for at least 15 minutes. Consult physician.
<u>Ingestion:</u>	May cause discomfort to the GI tract such as irritation, nausea, GI disorders, ulceration, diarrhea or constipation, usually resulting from the ingestion of materials.
First Aid:	Drink large amounts of water to dilute. Consult physician.
<u>Inhalation:</u>	Inhalation can cause irritation to the upper respiratory system.
First Aid:	Consult physician if irritation of respiratory passages occurs.

## SECTION VI. Stability, Reactivity and Polymerization

Stability:	Product is stable. Keep dry until used.
Conditions to avoid (Stability):	None known
Incompatibility:	None

## SECTION VI. Stability, Reactivity and Polymerization (Continued)

Hazardous Polymerization:	Will not occur
Hazardous Decomposition Products:	None
Conditions to avoid (Polymerization):	None known

## SECTION VII. Spill Procedures and Disposal Considerations

### Steps to be taken in the event of Spills, Leaks, or Release:

Use dry clean-up methods that do not disperse the dust into the air.

### Waste Disposal Method:

Dispose of in accordance with Federal, State and Local environmental regulations.

## SECTION VIII. Control and Protective Measures

Respiratory Protection:	NIOSH/MSHA approved dust respirators - Minimum: 10 x PEL or less
Ventilation:	Use sufficient local exhaust fans to control airborne dust levels.
Eye Protection:	Safety glasses; or in dusty environments, use tight fitting goggles
Skin Protection:	Avoid skin contact. Wear long sleeve shirt and long pants. Chemical resistant rubber or plastic gloves recommended.

## SECTION IX. Storage and Handling

Storage and Handling Conditions:	Store in a cool dry area. Keep container tightly closed.
Transportation Information:	Portland cement is not hazardous materials for purpose of transportation under the U.S. Department of Transportation Table of Hazardous Materials, 49 CFR S172.101.

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Product Name: DURUS® Cement Wash - Liquid Part

Generic Name: Acrylic Polymer  
Chemical Family: Aqueous Acrylic Emulsion  
Formula Identification: Proprietary Blend

<u>Hazard Rating</u>	<u>Scale</u>
Toxicity: 1	4=Extreme
Fire: 0	3=High
Reactivity: 0	2=Moderate
PPE: -	1=Slight
	0=Insignificant

Special Hazards: IRRITANT

## SECTION II. Hazardous Ingredients/Identification Information

<u>Material or Component</u>	<u>CAS REG. #</u>	<u>%</u>
Aqueous Acrylic Emulsion	Non-hazardous	46-48
Individual residual monomers	Not required	+/- .1
Ammonia	7664-41-7	.2 max
Water	7732-18-5	52-54

## SECTION III. Typical Physical/Chemical Data

Appearance: Milky  
Color: White to Light Green - Cream Color  
State: Liquid  
Odor Characteristic: Ammonia Odor  
pH: 9.5-10  
Viscosity: 50 CPS maximum  
Specific Gravity (Water=1): 1-1.2  
Vapor Density (Air=1): < 1 Water  
Vapor Pressure (mm Hg.): 17 mm Hg @ 20°C/68°F Water  
Melting Point: 0°C/32°F Water  
Boiling Point: 100°C/212°F Water  
Solubility in Water: Dilutable  
Percent Volatility: 52-54% Water  
Evaporation Rate (BAC=1): < 1 Water

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## SECTION IV. Fire and Explosion Hazard Data

Flash Point: Material can splatter above 100°C/212°F. Polymer film can burn.  
Extinguishing Media: Use extinguishing media appropriate for surrounding fire.  
Personal Protective Equipment: Wear self-contained breathing apparatus (pressure-demand MSHA/NIOSH approved or equivalent) and full protective gear.

## SECTION V. Health Hazard Data

Health Effects:

Inhalation: Inhalation of vapor or mist can cause the following:  
- headache - nausea - irritation of nose, throat, and lungs  
First Aid: Move subject to fresh air.

Eye Contact: Direct contact with material can cause the following:  
- slight irritation  
First Aid: Flush eyes with a large amount of water for at least 15 minutes.  
Consult physician if irritation persists.

Skin Contact: Prolonged or repeated skin contact can cause the following:  
- slight skin irritation  
First Aid: Wash affected skin areas thoroughly with soap and water.  
Consult a physician if irritation persists.

Ingestion: May cause gastrointestinal irritation, nausea, vomiting, diarrhea.  
First Aid: If swallowed, give 2 glasses of water to drink. Consult a physician. Never give anything by mouth to an unconscious person.

## SECTION VI. Stability, Reactivity and Polymerization

Stability: This material is considered stable. However, avoid temperatures above 177°C/350°F, the onset of polymer decomposition. Thermal decomposition is dependent on time and temperature.

Hazardous Decomposition Products: Thermal decomposition may yield acrylic monomers.

Hazardous Polymerization: Product will not undergo polymerization.

Incompatible Materials: There are no known materials which are incompatible with this product.

## SECTION VII. Spill Procedures and Disposal Considerations

Personal Protection: Appropriate protective equipment must be worn when handling a spill of this material. See PERSONAL PROTECTION MEASURES Section for recommendations. If exposed to material during clean-up operations, see the FIRST AID PROCEDURES Section for actions to follow.

Procedures: Keep spectators away. Floor may be slippery; use care to avoid falling. Contain spills immediately with inert materials (e.g. sand, earth). Transfer liquids and solid diking material to separate suitable containers for recovery or disposal. CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

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Waste Disposal Method: Coagulate the emulsion by the stepwise addition of ferric chloride and lime. Remove the clear supernatant and flush to a chemical sewer. Incinerate liquid and contaminated solids in accordance with local, state, and federal regulations.

### **SECTION VIII. Control and Protective Measures**

Respiratory Protection: None required if airborne concentrations are maintained below the TWA/TLV's listed in the COMPONENT EXPOSURE INFORMATION Section. For airborne concentrations up to 10 times the TWA/TLV's listed in the COMPONENT EXPOSURE INFORMATION Section wear a MSHA/NIOSH approved (or equivalent) half-mask, air-purifying respirator. Air-purifying respirators should be equipped with organic vapor cartridges.

Eye Protection: Use chemical splash goggles (ANSI Z87.1 or approved equivalent).

Hand Protection: The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection:  
- Neoprene

### **SECTION IX. Storage and Handling**

Ventilation: Use local exhaust ventilation with a minimum capture velocity of 100 ft./min. (30 m/min.) at the point of vapor evolution. Refer to the current edition of Industrial Ventilation: A Manual of Recommended Practice published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

Other Protective Equipment: Facilities storing or utilizing this material should be equipped with an eyewash facility.

Storage Conditions: Keep from freezing; material may coagulate. The minimum recommended storage temperature for this material is 1°C/34°F. The maximum recommended storage temperature for this material is 49°C/120°F.

Handling Procedures: Monomer vapors can be evolved when material is heated during processing operations. See FACILITY CONTROL MEASURES Section for types of ventilation required.