BORNEO SDN BHD
earth friendly chemistry

E P™ Waterproofing System

The solution to *all* masonry problems.

EP Waterproofing System™ permanently waterproofs and preserves concrete, brick, block and all masonry surfaces & structures with one easy application.

For industrial, commercial and residential use on homes, rooftops, r.c gutters warehouses, wall and floors, commercial buildings, factories, basements, subways, tunnels, roads and reservoirs.

EP Waterproofing System™ is a remarkably superior to other waterproofing products because it cures, hardens, protects and waterproofs from within. EP Waterproofing System™ is non- toxic, non-flammable and non-caustic and has over 18 Accredited International Tests.

***Colour**	Translucent
***State**	Liquid
****Vapour***	(Air + 1) –N/A
****Specific Gravity:***	(Water = 1) – 1.34@ 20 Degrees C.
****Solubility in Water:***	Dilutable
***Evaporation Rate**:	(BAC = 1) : Same as water.
****Percent Volatile by Weight:***	N/A
***pH**:	6.0
****Boiling Point:***	100 degrees Celsius. Water
***Freezing Point:**	0 degrees Celsius. Water

***Theoretical Coverage*:** 5-7 sq/metres per litre
Method: Hand or Mechanical Sprayer.

Consists of : 5 Litre Min 18 Litre 220 Litre drum
Shelf Life: 12 months minimum from date of manufacture when maintained in protected storage @ 5 – 38 degrees Celsius

E P Borneo Sdn Bhd Lot 71 & 72 Wong Kwok Commercial Centre
Jln Bundusan Off Jln Bundusan Penampang Sabah Malaysia
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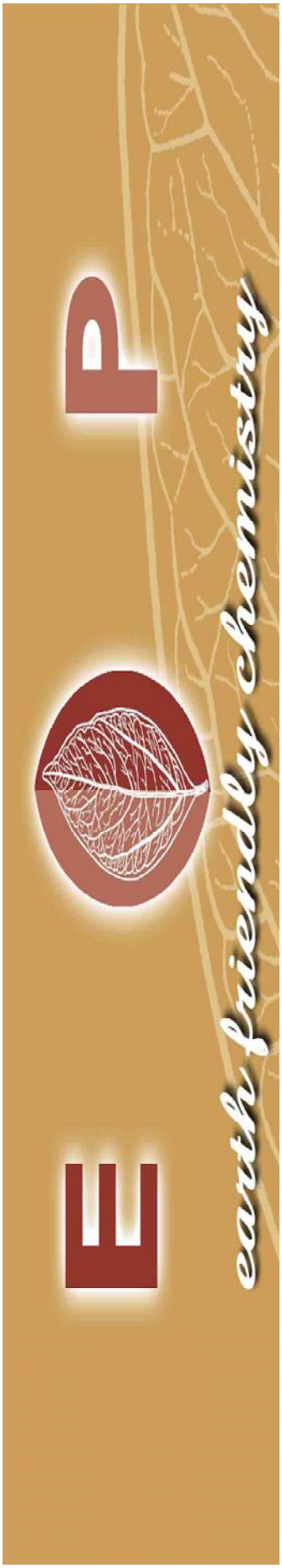

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E P Waterproofing System™

Is not a Surface coating.

Penetrates (4-6 inches ASTM Tested) into concrete

Does *NOT* aerate.

Insulates, cures, hardens and waterproofs concrete, brick, plaster, mortar, and most natural stone.

Causes a chemical reaction that solidifies the component parts of concrete and masonry into one single mass.

Increases the tensile strength and prevents concrete floors from surface cracking, crumbling, dusting and rutting. *Increasing the wearing quality.*

Applied to “green “ or “set” concrete, E P Waterproofing System™ allows newly placed or poured concrete to cure properly whilst insulating against iron oxide (Rusting) effecting the integrity of the re-inforcing steel.

Forms a better bond between old and new concrete, such as concrete slab repairs and screeding. It will enable the new concrete to cure properly by preventing the rapid absorption of moisture from the new concrete into the old.

Neutralizes the lime and alkali in the masonry and eliminates dampness. It therefore prevents saponification* of paints by stopping the leaching of the lime and alkali into the oils of the paint, enabling the paint to last from 2 to 5 times longer (depending on the quality of the paint)
*See (Saponification of Paints and Coatings)

Permanently insulates and waterproofs walls and floors, inside or outside, damp or dry, new or old, above or below grade, painted or unpainted.

E P Waterproofing System™ is *guaranteed* to stop any hair-line cracking, un-even shrinkage from existing structures.

E P™ increases the bond between the cement and the various aggregates, making a dense, hard and waterproof core.

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Application Instructions

1. Apply EP Waterproofing System™ immediately after concrete has set, after final floating or when forms have been removed.

2. Use a low-pressure sprayer (Back -pack type) or any spray, operated at no more than 20 Psi.

3. Spray entire surface area using approximately 1 Litre per 5 – 7 square metres, 55 – 75 square foot. Allow to dry.

4. Area may be opened to reasonable foot traffic at this time or when concrete has hardened sufficiently.

E P™ Waterproofing System is best applied by spray method, this is not only fast and effective but also gives the correct application rate.

Allow several days for completion of curing process and penetration. (for new concrete curing and waterproofing)

Allow to dry completely prior to the application of paint if that is desired. EP Waterproofing System™ will provide a long lasting, problem free bond for paints and floor coverings, prevents peeling, blistering and cracking.

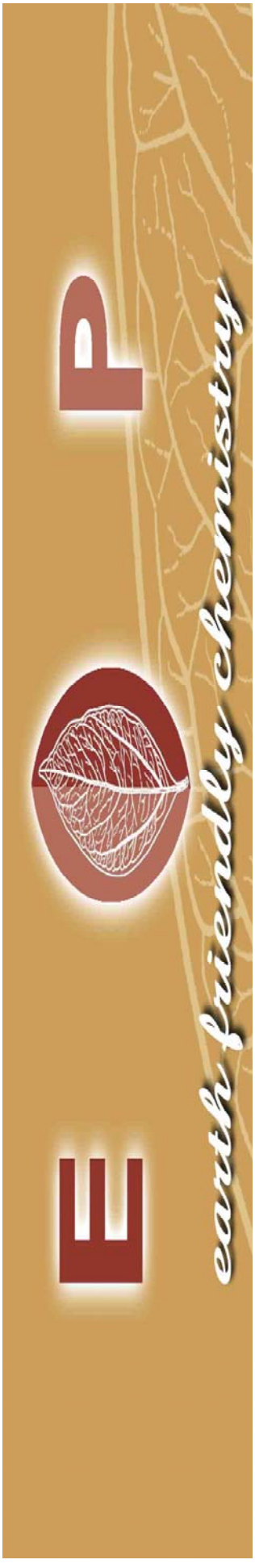
E P™ Waterproofing System will not harm glass, tile or aluminium.

For New or Old Plastering

1. Rinsing down the surface is recommended for the purpose of flushing away dust and dirt for new plastering. Allow to-dry completely.

2. Apply with low-pressure sprayer (hand-spray, back pack) or any spray operated at not more than 20 Psi.

3. Apply to entire surface area of old or new plastering, using approximately 1 Litre per 4 - 5 square metres. Start across top, gradually working downward. Let penetrate and cure for 12 to 24 hours, until surface feels dry.
4. Complete curing requires 2 weeks or longer. Repeat procedure from top to bottom.



For the Paint Trade

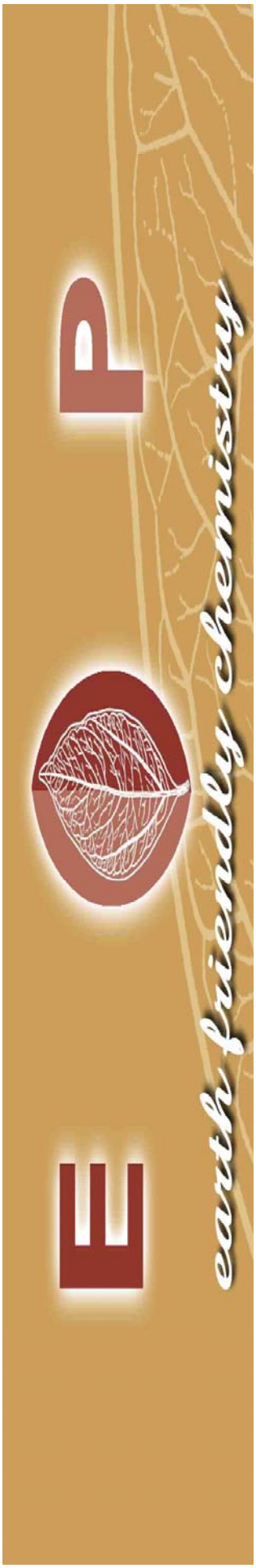
EP Waterproofing System™ will prevent and solve the age-old problem, which normally occurs whenever masonry is painted. Due to porosity of all masonry such as render, concrete, brick and terrazzo and its chemical composition, a long lasting surface bond with any surface coating is questionable and sometimes impossible.

Existing Painted Surfaces

To cover an existing deteriorated surface, which shows the signs of saponification, first determine the type of the existing paint or test whether EP Waterproofing System™ penetrates the existing paint. EP Waterproofing System ™will penetrate through water, oil-based, acrylic and cement based paint. All other types must be removed to allow EP Waterproofing System™ to penetrate the masonry. EP Waterproofing System™ will strengthen the bond of existing paint but reject loose particles, which can then be brushed or scraped off.

For Treating Natural Stone

Treat entire surface to be painted with EP Waterproofing System™ as directed. Allow to cure, then paint as usual.



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Masonry- A Lifetime Bond

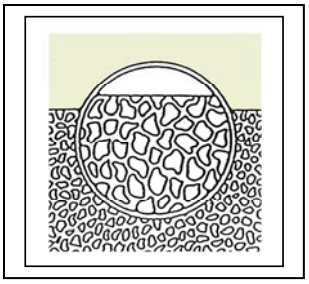
All foreign matter is cancerous to concrete and masonry. Foreign matter is any acid, alkali or oil found in the masonry or spilled on it (Such as lactic acid in milk, oil, alkali, chemicals etc.) These cancerous substances imbed themselves in the masonry.

EP- W/S applied to the masonry, concrete, plaster and natural stone will penetrate and by a progressive chemical reaction, which is started at the surface, binds all component parts of the masonry into a more dense or solid mass. As this reaction takes place, all free lime and alkali are neutralized. As the masonry increases in density it becomes waterproofed, resistant to acid, oil, fuels, fats, and grease.
EP- W/S stops dusting, rutting, brick fretting, spalding and prevents static. This process will stop cracking, crumbling, seepage and pitting while increasing the density of the masonry.

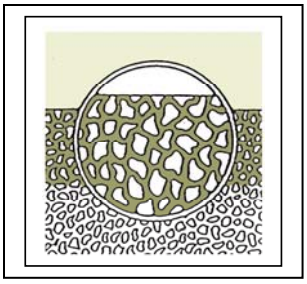
EP-W/S also increase the tensile strength of the concrete as it fills all voids preventing any penetration of water or contaminants from the surface either horizontally or vertically. In regards to the slab
EP - Waterproofing System™ will not allow any vapour emission or water to come up from the ground.

According to U.S Testing laboratories, the interior of a piece of concrete contains a minimum or 361 times the amount of alkali as compared to the surface area. Therefore, EP-W/S, which uses the existing alkali to affect the cure, is 361 more times effective than any surface sealer and is also permanent. Anything applied only to the surface of the masonry must eventually come off due to aeration and deterioration. *EP-W/S*, which is locked into the interior can not deteriorate or wear off. Instead it cures, waterproofs and seals the masonry permanently.

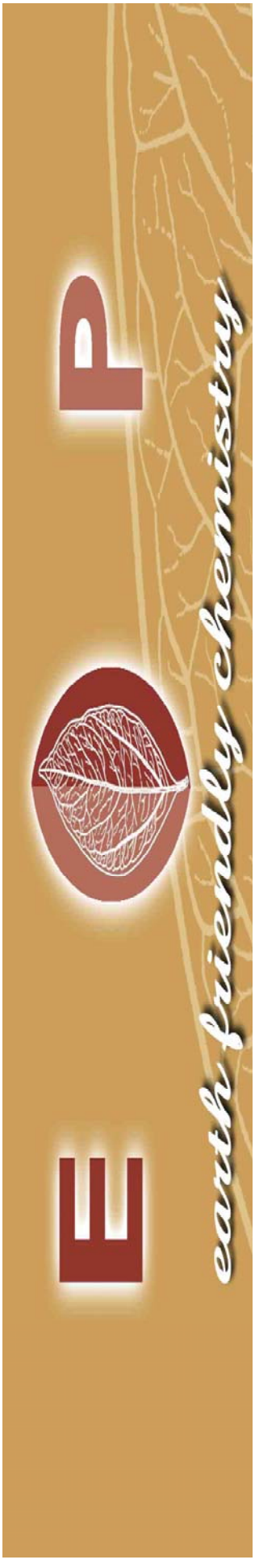
After treating the masonry with EP Waterproofing System™**,** no foreign substance can penetrate into the masonry and will stay on the surface where it can be washed off easily. All masonry treated with EP Waterproofing System™ will stop disintegrating. You will no longer be able to remove a portion of the concrete, brick, plaster surface by running your hand across the surface based on the fact that component parts of the masonry are solidified into one mass, rather a billion independent particles.



Un-Treated



Treated



EP Waterproofing System™

BENEFITS TO THE DEVELOPER & CONTRACTOR

Use EP Waterproofing System™ inside and out, on old or new concrete.

EP-W/S applied to the surface, penetrates and by a progressive chemical reaction, which is started at the surface, binds all component parts of the masonry into a more dense or solid mass. As this reaction takes place, all free lime and alkali are neutralized for all time. As the masonry increases in density it becomes waterproof, resistant to acids, oil, grease and stops fretting mortar, rutting, spalding, prevents static and rusting of reinforcing bars.

EP-W/S in its natural form is a colourless, inorganic, transparent liquid, which is used on all types of masonry for the purpose of preserving it against deterioration and curing it properly.

EP-W/S applied to newly poured concrete causes it to cure uniformly, resisting hairline cracking and cracks caused by uneven shrinkage.

EP-W/S prevents hot spots and stops the saponification of paints applied to masonry surfaces.

EP-W/S generally takes, under ordinary conditions, 12 to 14 hours for the chemical reaction to take place, and 6-7 days for a complete cure.

EP-W/S should be applied to all concrete floors and walls, terrazzo floors, concrete blocks and bricks, brick and block mortar, most natural stone, and all newly poured concrete and plaster.

EP-W/S is odourless, non-flammable and non-injurious to the hands and lungs. No special equipment needed.

EP-W/S does not contain any material foreign to masonry, nor does it contain any oils or solvents.

EP-W/S is ready to use. No mixing required. It penetrates and surface dries quickly and can be applied without interfering in any way with your general routine.

EP-W/S must be used as it comes from the container or drum and may be brushed, rolled, sprayed, mopped or flushed on. What ever is best suited for the job at hand.

The main point is to SATURATE THE SURFACE.

EP-W/S will NOT plug holes or sizeable cracks.

International Testing for E P™ Waterproofing System

ASTM
(American Society for the Testing of Materials)

ASTM C-67: Section 10: Efflorescence

ASTM C-666: Freeze-Thaw Resistance

AASHTO – T259-89: Chloride Ion Penetration

(American Association of State Highway and Transportation Officials)

AASHTO – 260-89: Chloride Ion Content

ASTM D – 3359: Adhesion and Early Blister Resistance of EP Waterproofing System™.

ASTM D –714: Blister Rating, (water) Resistance = 10 (No Blisters)

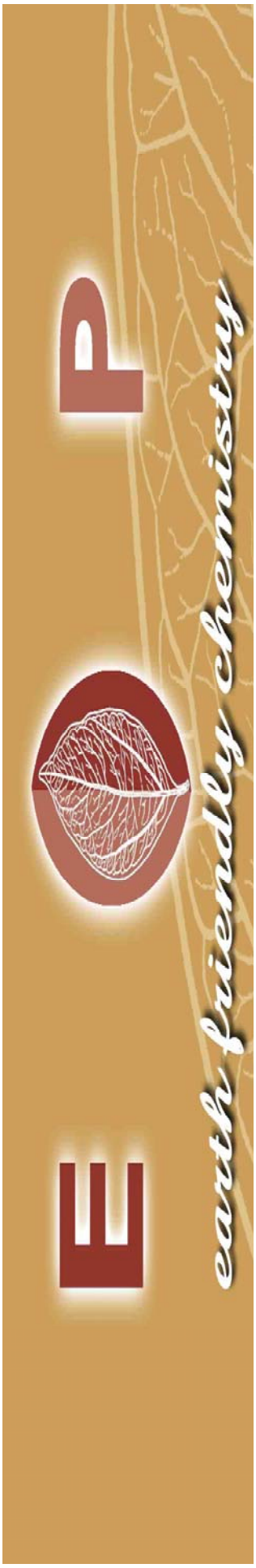
ASTM – 413: Water Absorption of Chemical Resistant Concrete/Mortar Surfaces (Done for Coca-Cola Co. at Louisville, KY Plant by H.C Nutting Co, Test Results show concrete positively waterproofed, inhibiting corrosion.

ASTM - C140: Mass Absorption Test – Results – 0.56% after two days, 0.92% after 50 days. ASTM requires that absorption cannot exceed 15 after 2 days or 2% after 50 days. (Test performed by H.C Nutting.Co)

ASTM - 123D: Testing done on Alabama Nuclear Cooling Tower. 2” Inch core samples were cut in half and examined for water penetration and depth of penetration of EP Waterproofing System™. Results – concrete completely waterproofed, E P Waterproofing System™ penetrated 4 to 6 Inches. Concrete was 55.1 Mpa (Test performed by Keeler and Long)

ASTM Blue Dye Test: Test involved eight well-known products of equivalent chemical consistency and ASTM designations. Only product selected as “Most Excellent” was EP Waterproofing System™. (Test performed for Ohio Department of Public Works by H.C Nutting.Co)

ASTM NCHRP 244: Cube Test – Passed – absorbed Chloride not to exceed 25% of untreated concrete tube.



ASTM - Tests Continued

ASTM NCHRP 244: Southern Exposure – Passed – Absorbed Chloride not to exceed 10% of untreated concrete.

NCHRP – National Co-Operative Highway Research Program. Was created in 1962 as a means to conduct research in acute problem areas that affect highway planning, design, construction, operation and maintenance nationwide (USA)

ASTM C-31: Increase of Compressive Strength in concrete tested with EP Waterproofing System™.

ASTM C-672: Sealing Resistance – Passed – Scaling Resistance with a rating of "No Scaling" after 100 cycles.

ASTM C-672: Chloride Penetration Resistance – No Chloride Penetration at any depth.

ASTM D – 5084-91: Porosity – No Change in water column height after 28 days. EP Waterproofing System™ completely waterproofs.

AUSTRALIAN STANDARDS

AS 1012.21 – "Standard test method for Density, Absorption and Voids in Hardened Concrete" – Passed, the absorption treated concrete under total emersion shall not exceed 1.0% after 48 hours or 2.0% after 50 Days.

SIRIM QAS MALAYSIA

BS 1881: Part 208 – "One concrete cube treated with waterproofing material has been tested for rate of surface absorption by SIRIM QAS International Sdn Bhd. For details please refer Test Report No. 2006CB0454 dated 14th April 2006"

Chemical Resistance Guide

Alcohols

NE-Benzyl Alcohol
NE-Ethyl
NE-Isopropyl Alcohol
NE-Methyl Alcohol
NE-Ethylene Glycol
NE-Methyl Ethyl Ketone

Hydroraulic Fluids

NE-Oronite
NE-Pydural F9
NE-Pydural 60
NE-Skydrol
NE-Skydrol 500

Oils & Fuels

NE-ASTM No.1 Oil
NE-ASTM No.2 Oil
NE-ASTM No.3 Oil
NE-ASTM Fuel A
NE-ASTM Fuel B
NE-ASTM Fuel C
NE-Heating Fuel
NE-Jet Aircarft Fuel

Aldehydes

NE-Bezaldhyde
NE-Butraldhyde
NE-Furfural

Ketones

NE-Acetone

Inorganic Bases

NE-Barium Hydroxide Conc
NE-Calcium Hydroxide Conc

Substituted Hydrocarbons

NE-Carbon Disulphide
NE-Nitrobenzene

Miscellaneous

NE-Antifreeze
NE-Brake Fluid
NE-Transmission Fluid

Natural Fats & Oils

NE-Butter
NE-Castor Oil
NE-Cottonseed Oil
NE-Lard/Grease
NE-Olive Oil

Detergents & Cleaning Products

NE-Non-Butyl Cleaners
NE-Chlorox 1%
NE-Chlorox Concentrate
NE-Any Butyl Based Cleaners
NE-Powder Cleaners
NE-Standard Laundry Products

Ethers

NE-Dibenzyl Ether
NE-Diethylene Glycol Mon
NE-Ether
NE-Ethyl Ether
NE-Ethyl Gly Mono Ether

Inorganic Acids

NE-Chromic Acid10%
NE-Hydrochloric Acid 10%

NE- No Effect

M –Moderate Effect

S- Severe Effect

Esters

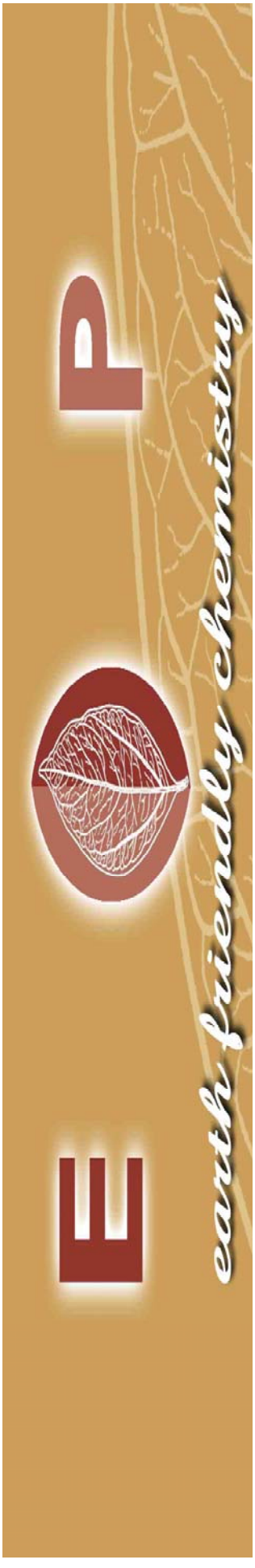
NE-Amyl Acetate
NE-Dibutyl Sebacate
NE-Dioctyl Phthalate
NE-Ethyl Acetate
NE-Tricresyl Phosphate

Halogenated Hydrocarbons

NE-Benzly Chloride
NE-Bromobenzene
NE-Carbon Tetrachloride
NE-Chloroform
NE-Ethylene Diochloride

Amines

NE-Amline
NE-Triethanolamine



NOTICE

EP Waterproofing System™ should not be applied

to any surface that has had a previous coating of

silicone, siloxene or solvent-based material.

EP-Waterproofing System™ IS A PENETRATING PRODUCT.

If the applicator sees that EP Waterproofing System™

is not being *Absorbed*. It should *not be applied*.

DISCLAIMER

On certain quick stage block walls, the holes and pores in the block surface may be too large to successfully fill with EP-W/S. In this instance, E P™ Ultra Seal should be used.