

TROJAN™ WATERPROOFING SYSTEM

<i>Product Description</i>	A solution to masonry problems. <i>Trojan™ Waterproofing System</i> permanently waterproofs and preserves concrete, brick, mortar and all masonry surfaces with only one easy application.		
<i>Typical Uses</i>	For industrial, commercial and residential use on concrete, brick, render and all masonry. For homes, warehouses, commercial buildings, factories, basements, subways, tunnels, roads and reservoirs.		
<i>Product Advantage</i>	<i>Trojan™</i> is a remarkably superior to other waterproofers because it seals and protects from within. <i>Trojan™</i> is non-toxic, non-flammable and non-caustic. Authorised by USDA for use in Federally inspected meat and poultry factories.		
<i>Colour</i>	Translucent		
<i>Physical Constant/</i>	<i>*State</i>	Liquid	
	<i>*Vapour</i>	(Air + 1) –N/A	
	<i>*Specific Gravity:</i>	(Water = 1) – 1.34@ 20 Degrees C.	
	<i>*Solubility in Water:</i>	Dilutable	
	<i>*Evaporation Rate:</i>	(BAC = 1) : Same as water.	
	<i>*Percent Volatile by Weight:</i>	N/A	
	<i>*pH:</i>	6.0	
	<i>*Boiling Point:</i>	100 degrees Celsius. Water	
	<i>*Freezing Point:</i>	0 degrees Celsius. Water	
<i>Application</i>	<i>Theoretical Coverage:</i>	5-7 sq/metres per litre	
	Method:	Hand or Mechanical Sprayer.	
<i>Quantity & Storage</i>	<i>Consists of:</i>	5 Litre Min	10-20 Litre 200 Litre drum
	<i>Shelf Life</i>	12 months minimum from date of manufacture when, maintained in protected storage @ 5 – 38 degrees Celsius (Subject to inspection thereafter).	

TROJAN™ WATERPROOFING SYSTEM.

- ✓ Is not a Surface coating.
- ✓ Penetrates into the concrete or masonry.
- ✓ Does *NOT* aerate.
- ✓ Insulates and waterproofs concrete, cement, brick, render, plaster mortar, and most natural stone.
- ✓ Causes a chemical reaction that solidifies the component parts of the masonry into one single mass.
- ✓ Stops the mortar between bricks and building blocks from deteriorating and fretting.
- ✓ Increases the tensile strength and prevents concrete floors from surface cracking, crumbling, dusting and rutting. Increasing the wearing quality.
- ✓ Forms a better bond between old and new concrete such as floor toppings. It will enable the new concrete to cure properly by preventing the rapid absorption of the moisture from the new concrete into the old.
- ✓ Neutralizes the lime and alkali in the masonry and eliminates dampness. It thus prevents saponification of paint 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)
- ✓ Permanently insulates and waterproofs walls and floors, inside or outside, damp or dry, new or old, above or below grade, painted or unpainted.
- ✓ Applies to green concrete, allow it to cure properly and insulates, resists drying unevenly and hair-line cracking. It increases the bond between the cement and the various aggregates, making a dense, hard and waterproof pore.

TROJAN™ WATERPROOFING SYSTEM

APPLICATION INSTRUCTIONS:

FOR NEW CONCRETE

Trojan™ Waterproofing System applied to new concrete slabs, walls or blocks has many benefits for the contractor or developer. Some of the major benefits as *Trojan™* penetrates into the concrete are:

- ✓ UNIFORM CURING
- ✓ INCREASING FLOOR SAFETY
- ✓ WATERPROOFING THROUGHOUT
- ✓ INSULATION
- ✓ SEALS AGAINST STAINING
- ✓ NEUTRALIZES ALKALI PROBLEMS
- ✓ INCREASES CONCRETE TENSILE STRENGTH
- ✓ PROVIDES PROBLEM FREE BOND FOR PAINT AND FLOOR COVERINGS
- ✓ PREVENTS CURING CRACKS

APPLICATION:

1. Apply *Trojan™* immediately after concrete has “gone off” or when forms have been removed.
2. Use a low-pressure sprayer(Hudson 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. Allow to dry.
4. Area may be opened to reasonable foot traffic at this time or when concrete has hardened sufficiently.
5. Allow several days for completion of curing process and penetration.
6. Allow to dry completely prior to the application of paint if that is desired. *Trojan™* will provide a long lasting, problem free bond for paints and floor coverings, prevents peeling, blistering and cracking.

NOTE:

- #1: Acid etch is NOT required or recommended**
- #2: Will not harm glass, tile or aluminium.**

FOR NEW OR OLD RENDER:

1. Rinsing down the surface is recommended for the purpose of flushing away dust and dirt for new render. Allow to dry completely.
2. Apply with low-pressure sprayer (any equipment) or any spray operated at not more than 20 Psi.
3. Apply to entire surface area of old or new render, using approximately 1 Litre per 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 until the amount specified is applied.

FOR THE PAINT TRADE

Trojan™ 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.

SAPONIFICATION

When soap is manufactured, the basic ingredients are a form of alkali and oil.

The combination of the alkali found in all masonry and oil paint cause “Saponification”, which is flaking, blistering, bleeding and burning off, of the paint on the surface. This occurs whenever oil based paint is used on masonry.

These same problems occur also when using more modern paint products, such as vinyl, rubber, epoxy or latex paints.

The prime reason for this is that the alkali and lime in the masonry are fighting any surface sealer as these elements migrate to the surface and gradually deteriorate their bond with masonry. Masonry which has been insulated and waterproofed and does not contain free alkali or lime, will remain “neutral” and provide long lasting surface bonds for paint. This is where **Trojan™** is absolutely necessary for the paint trade.

FOR THE PAINTING OF NATURAL MASONRY

Treat entire surface to be painted with **Trojan™** as directed. Allow to cure, then paint as usual.

FOR 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 **Trojan™** penetrates the existing paint. **Trojan™** will penetrate through water, oil-based, acrylic, latex and cement based paint. All other types must be removed to allow **Trojan™** to penetrate the masonry. **Trojan™** will strengthen the bond to existing paint but reject loose particles, which can then be brushed or scraped off.

SPECIFICATIONS

Trojan™ Waterproofing System

1. PRODUCT : TROJAN™ WATERPROOFING SYSTEM

2. MANUFACTURING AND DISTRIBUTOR:

***Enviropacific™ Pty Ltd, P.O. Box 107, Cloverdale, Perth, Western Australia
6985. Telephone: 08-93618015 Fax: 08-93618036***

Toll Free Info Line: 1800-041144

E-Mail: enviropacific@ozemail.com.au Web: www.enviropacific.com

3. PRODUCT DESCRIPTION:

Trojan™ Waterproofing System is a non-toxic, non-caustic, non-flammable inorganic formulation with *NO* equal. It permanently waterproofs and preserves with one easy application. One coat, at 5-7 square metres per litre.

MASONRY- A LIFETIME BOND.

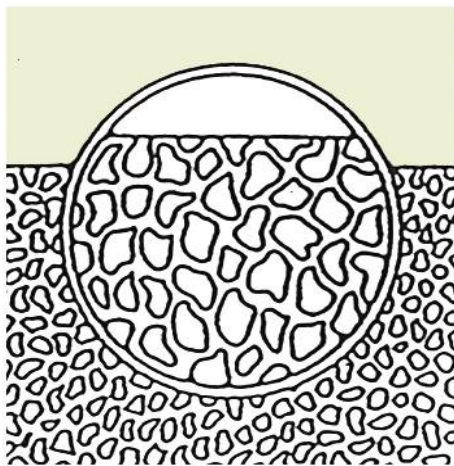
All foreign matter is cancerous to concrete and masonry. Foreign matter is any acid, alkali or oil found in the masonry or spilled on it (Such as lactic acid in milk, oil, alkali, chemicals etc.) These cancerous substances imbed themselves in the masonry.

Trojan™ applied to the masonry, concrete, plaster and render 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 and grease. ***Trojan™*** stops dusting, rutting, brick fretting, spalding, prevents static. This process will stop cracking, crumbling, seepage and pitting while increasing the density of the masonry.

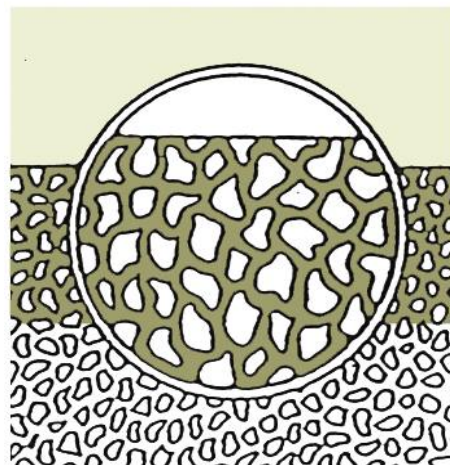
Trojan™ also increase the tensile strength of the concrete as it fills all Voids preventing any penetration of water or contaminants from the surface either horizontally or vertically. In regards to the slab, ***Trojan™ Waterproofing System*** will not allow any vapour emission or water to come up from 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, ***Trojan™***, which uses the existing alkali to effect 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. ***Trojan™***, 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 *Trojan™ 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 *Trojan™ Waterproofing System* will stop disintegrating. You will no longer be able to remove a portion of the concrete, brick, render etc, surface by running your finger across the surface based on the fact that component parts of the masonry are solidified into one mass, rather a billion independent particles.



UNTREATED



TREATED

4. PRODUCT USES:

For industrial, commercial, and residential use, on concrete, brick, render and ALL masonry. For homes, warehouses, commercial buildings, factories, roads, tunnels, bridge decks, parking lot structures, hydroelectric dams, concrete roofs, subways, basements and reservoirs. Use inside or outside on new or old masonry. Authorized for use in federally inspected meat and packing plants and poultry houses (U.S.D.A)

5. JOB LIMITATIONS:

Apply in good weather when air and surface temperature are above 7 Degrees Celsius. Temperature must remain above 4.5 Degrees Celsius for 24 hours after application. For optimum application properties, materials should be between 21 to 28 Degrees Celsius prior to application. Maintain unmixed material in closed containers in protected storage at 4 to 38 Degrees Celsius.

DO NOT STORE IN DIRECT SUNLIGHT.

6. SURFACE APPLICATION:

Good surface preparation is essential to a satisfactory coating. Surfaces to be coated should be clean and dry. Remove all dirt, dust, oil, grease, rust, mildew and loose or cracked paint or other contamination by first cleaning with *Trojan™ Rust-Stain Remover*. Rinse thoroughly and allow to dry.

TROJAN™ WATERPROOFING SYSTEM

Consult your **Enviropacific™ Pty Ltd** representative for the protective coating system best suited for your requirements.

LIMITATIONS: – Apply in good weather when air and surface temperature are above 7 degrees Celsius. Temperature must remain above 4.5 Degrees Celsius for 24 hours after application. For optimum application properties, materials should be between 21 to 38 Degrees Celsius prior to mixing and application. Maintain unused materials in closed containers in protected storage at 7 to 38 Degrees Celsius.

SURFACE PREPARATION: – Good surface preparation is essential to a satisfactory coating system. Surfaces to be coated should be clean and dry. Remove all dirt, oil, grease, mildew, rust and loose or cracked paint or other contamination by spraying with **Trojan™ Concrete Cleaner**. Rinse thoroughly and allow to dry.

MIXING: – This is a one-component coating. Always stir thoroughly before application.

THINNING: – This product is supplied at normal viscosity. Thinning could affect the product quality and should *NOT* be done.

*Application – Apply by brush, roller or spray.
See Trojan™ Waterproofing System application instructions.*

CLEAN-UP: – Clean all equipment immediately with warm soapy water. Completely flush all spray equipment with this solution.

SAFETY: – Safe storage, handling and use dictate that adequate health and safety be observed with this product. User is specifically directed to consult the current Material Safety Data Sheet for this product as well as precautions contained on the product labelling.

NOTICE: - The technical data contained herein are true and accurate to the best of our knowledge. All products are offered and sold subject to **Enviropacific™ Pty Ltd** standard conditions of sale. Published technical data and instructions are subject to change without prior notice.

CAPILLARY

Capillary, the transmission of moisture and water in the masonry, by definition, is the action by which the surface of a liquid, where it is in contact with a solid, is elevated or depressed (rises or falls). The attraction or repulsion caused by capillarity. By capillarity, moisture may travel from a lower to higher elevation or can travel in any direction. The amount of moisture that can be transmitted from the ground by capillary action is often underestimated. Tests* have indicated that as much as 54 litres of water per 92 square metres per day can be transmitted through a concrete slab and, if permitted, evaporate into the air. When the slab is covered by floor coverings, this moisture will collect and attack the bond of the adhesive: or if during the transmission it carries alkalis, salts or adhesive, resulting in failure. The same applies to vertical masonry where fog, dew and dampness can collect, also carrying alkalis that will harm various paints. This distance which water will rise from the ground by capillary is also underestimated. Tests* indicate that moisture can climb from a water table that may be 6 metres below the ground. Obviously, general ground dampness sheds the transmission of moisture. It is suspected that this transmission may result from a combination of capillarity, absorption and various pressures, rather than capillarity alone. Nevertheless, moisture can migrate from this depth.

Capillary action usually takes place 24 hours a day, every day, over the entire area of a slab or masonry, so that a tremendous amount of water can migrate and be absorbed into the masonry via capillarity alone.

*By Housing and Home Finance Agency – U S Government, Forest Product

TROJAN™ WATERPROOFING SYSTEM

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. The cancerous substances ineb themselves in the masonry.

Trojan™ applied to the masonry, concrete, plaster, render, 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 for all time. As the masonry increases in density it becomes waterproofed, resistant to acid, oil and grease, stops dusting, fretting mortar, spalling and prevents static. This process will stop cracking, crumbling, seepage and pitting while increasing the density of the masonry, thus increasing the waterproofing effect of the concrete and increasing tensile strength. All voids are filled preventing any penetration of water or contaminants from the surface either horizontally or vertically. In regard to a slab, the **Trojan™** will not allow 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 of 361 times the amount of alkali as compared to the surface. Therefore, **Trojan™**, which uses the existing alkali to effect the cure, is 361 times more 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. **Trojan™**, which uses the alkali within the masonry itself, cannot deteriorate or aerate; instead it cures, waterproofs and seals the masonry permanently.

After treating the masonry with **Trojan™ Waterproofing System**, no foreign substance can penetrate into the masonry and will stay on the surface where it can be washed off easily. There will be no further cracking, fretting crumbling or seepage. All masonry treated with **Trojan™** will stop disintegrating. You will no longer be able to run your finger over the concrete, brick, plaster etc, and remove a portion with the mere touch of the hand.

Any paint, asphalt, tile, linoleum, coating etc, will adhere to the masonry after a treatment of **Trojan™ Waterproofing System**. Due to the alkali being neutralized and the masonry waterproofed, there will be no more leaching of alkali and limes into adhesives. It will only remove the portion or portions of paint that have not properly bonded, and would have flaked off in time. All the rest of the paint will have a far greater life span.

WHAT IS CONCRETE?

The following is a quotation from Chemistry and Technology of Paints by Maximilian Toch. New York.

“Portland cement is a rock-like alkaline substance composed of sand and/or gravel, mixed with cement and water. In attempting to apply paints, adhesives or floor coverings, it is recommended to clean the surface first. Masonry surfaces are cleaned with muriatic, sulfuric or acetic acids. The application of these acids to Portland cement destroys the cement because it dissolves the lime and leaves the sand and aggregate loosely bound.

Portland cement floors “Dust-up” merely under the abrasion of shoes. Factories that have machinery, calculators, electronic or delicate instruments have found it impossible to operate under these conditions, when paint or floor coverings are used.”

This quotation used to illustrate that concrete, left untreated, creates a multitude of problems. Coatings, such as paint and floor coverings are used in an attempt to alleviate or enhance the use of masonry. These coatings have proven completely ineffective where there is excessive moisture and alkali content.

CONCRETE DUST RUINS MERCHANDISE, MACHINERY AND MEN.

Every time a truck moves over your floors, every time a man walks on them, every time your sweeper sweeps them, small particles on the concrete surface ground away and form concrete dust.

This is not ordinary dust; it is sharp silicate that cuts into your machinery, into your merchandise, into the lungs of your employees, causing damage in every instance.

Concrete dust is a sure sign that your floors are disintegrating and will soon demand expensive repairs.

Trojan™ Waterproofing System chemical reaction with alkali and lime causes the billions of independent particles (concrete dust) of masonry to be solidified into one entity, eliminating costly machinery repair, lung infection and annoying dust.

Trojan™ Waterproofing System is guaranteed to alleviate problems of concrete dust.

THE “ALKALI PROBLEM” IN CONCRETE - AAR

The increased use of concrete sub-floors in direct contact with the ground makes it even more imperative to have a complete understanding of the effect on paints and floor coverings.

Well known as the “alkali problem”, this condition is primarily a problem of moisture. Alkali is present in every concrete slab and is more detrimental with moisture. On adequately ventilated, suspended concrete sub-floors, moisture is not present in troublesome quantities.

Where the slab is in direct contact with the ground or a poorly ventilated airspace, moisture is brought up through the slab by capillary action the alkali salts in the concrete appears at the surface as a destructive alkali solution.

The most serious difficulty caused by alkali solution is the chemical reaction, saponification. This is essentially the same reaction that takes place when certain oils of fatty acids mixed with alkali, as in the manufacture of soap.

Although moisture and alkali conditions may vary greatly, there is always sufficient moisture in the ground and alkali in concrete to present an “Alkali problem” on sub-floors affected by ground moisture. It is never safe to assume that a concrete slab will always be dry because it has been dry, because the moisture content is very small and evaporates into the air as soon as it reaches the surface. When paint or floor coverings are applied, evaporation is prevented or retarded and the alkali solution collects under the paint or floor covering.

Trojan™ Waterproofing System and its associated products are formulated and dedicated to correcting and alleviating these problems for the benefit of the industry and the general public.

Floor coverings such as vinyl, linoleum, tiles, etc, when installed over concrete prevent the slab from breathing and allow moisture accumulation just below the surface.

The most common covering failures are caused by moisture, alkali accumulation or hydrostatic pressure. The cured concrete from which water has evaporated out will act like a sponge, drawing available moisture from the ground, which accumulated below the surface. Floor coverings speed this action.

WHAT OCCURS WHEN ALKALI MOISTURE CONTACTS ADHESIVES?

The adhesive, such as mastic, emulsifies or commences to deteriorate. Eventually the floor covering will show alkali bubbles and blisters, usually followed by warping, cracking and peeling. This necessitates costly repairs or replacement of the covering, which otherwise has a long service life.

NEW INSTALLATION: Apply *Trojan™ Waterproofing System* as directed for existing concrete floors. Then install the floor covering in the usual manner

REPLACEMENT INSTALLATION: *Trojan™* does not penetrate existing floor coverings. To repair failures permanently, all existing coverings must be removed, including coatings of mastic or adhesive. Strip the surface clean and treat with *Trojan™ Waterproofing System* as directed

WALL SWEATING

It should be remembered that surfaces of most common masonry building materials have an affinity for water molecules; the water molecules film is proportional to the relative humidity. At saturation point all voids, pores and capillaries can become completely filled. Then, with the excess molecular moisture, moisture in liquid form is produced.

This condition then provides an excellent opportunity for vapour travel within the wall. In its travels, the vapour may strike a cold area or dew point, and condense in sufficient quantities to reach the interior wall surface and appear as wall sweat or bleeding. Temperatures, humidity, wind velocity, soil moisture condensations, etc can readily affect both sweating and condensation.

Each of the above, if allowed to go unchecked, can be responsible for heavy maintenance costs by causing peeling paint, spalling, formation of mildew and efflorescence. All porous masonry wall materials do the same thing, unless proper steps are taken to avoid it. These problems are eliminated with *Trojan™ Waterproofing System*.

EXTREME MOISTURE OR HYDROSTATIC PRESSURE

Under such extreme conditions, the waterproofing of the first application of *Trojan™* should be tested to determine the necessity of a second application.

TEST: Tape several pieces of ordinary sponge or foam rubber to the concrete slab, generally distributed over the area of concern. These pieces should remain securely taped for approximately 24 hours; remove to determine whether the material or slab shows traces of moisture. Also, a calcium chloride test can be done.

TROJAN™ WATERPROOFING SYSTEM

CHEMICAL RESISTANCE GUIDE

ALCOHOLS

NE – Benzyl Alcohol
NE – Ethyl Alcohol
NE – Isopropyl Alcohol
NE – Methyl Alcohol
NE – Ethylene Glycol
NE – Methyl Ethyl Ketone
NE – Glycerol
NE – I-Hexanol

ALDEHYDES

NE – Benzaldehyde
NE – Butyraldehyde
NE – Furfural

SUBSTITUTED HYDROCARBONS

NE – Carbon Disulphide
NE – Nitrobenzene

AMINES

NE – Amine
NE – Triethanolamine

DETERGENTS & CLEANING PRODUCTS

NE – Non-Butyl Cleaners
NE – Chlorox (1%)
NE – Chlorox Concentrate
NE – Any Butyl based cleaners
NE – Powder Cleaning soaps
NE – Standard laundry products

ESTERS

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

HYDRAULIC FLUIDS

NE – Oronite 8200
NE – Pydruval F9
NE – Pydruval 60
NE – Skydrol
NE – Skydrol 500

KETONES

NE – Acetone

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

ETHERS

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

INORGANIC ACIDS

NE – Chromic Acid (10%)
NE – Hydrochloric Acid(10%)

HALOGENATED HYDROCARBONS

NE – Benzyl Chloride
NE – Bromobenzene
NE – Carbon Tetrachloride
NE – Chloroform
NE – Ethylene Dichloride

OILS & FUELS

NE – ASTM No1 Oil
NE – ASTM No2 Oil
NE – ASTM No3 Oil
NE – ASTM Fuel A
NE – ASTM Fuel B
NE – ASTM Fuel C
NE – Heating Fuel
NE – Jet Aircraft Fuel

INORGANIC BASES

NE – Barium Hydroxide
Conc.
NE – Calcium Hydroxide
Conc.
NE – Potassium Hydroxide
10%

NE – No Effect

M – Moderate Effect

S – Severe Effect

NOTICE

TROJAN™ Waterproofing System should not be applied to any surface that has had a previous coating of silicone, siloxene or solvent-based material.

TROJAN™ IS A PENETRATING SEALER.

If the applicator sees that TROJAN™ is not being Absorbed. It should not be applied.

DISCLAIMER

On certain H- block walls, the holes and pores in the block surface may be too large to successfully fill with TROJAN™. In this instance, a thicker surface coating may be required.

ASTM TESTING PERFORMED ON TROJAN™ WATERPROOFING SYSTEM
(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 *Trojan™ 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 *Trojan™ Waterproofing System*. Results – concrete completely waterproofed, Trojan™ 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 *Trojan™ 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 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 *Trojan™ 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. *Trojan™ 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.

NOTE: When Australian Standards do not have a testing method for concrete/masonry, ASTM is used, as a standard worldwide testing method

TROJAN™ WATERPROOFING SYSTEM

BENEFITS

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

Trojan™ 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, spalling, prevents static.

Trojan™ 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.

Trojan™ applied to newly poured concrete or stucco causes it to cure uniformly, resisting hairline cracking and cracks caused by uneven shrinkage.

Trojan™ prevents hot spots and stops the saponification of paints applied to masonry surfaces.

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

Trojan™ 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.

Trojan™ is inorganic, odourless, non-flammable and non-injurious to the hands and lungs.

Trojan™ does not contain any material foreign to masonry, nor does it contain any oils or solvents.

Trojan™ will NOT plug holes or sizeable cracks.

Trojan™ 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.

Trojan™ 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.**

MATERIAL SAFETY DATA SHEET

Trojan™ Waterproofing System

SECTION I – IDENTIFICATION:

Trade Name: Trojan™ Waterproofing System

SECTION II – COMPONENT INFORMATION:

Polymerised Polyester Polymer

SECTION III – PHYSICAL DATA:

Appearance -	Translucent
State -	liquid
Vapour Pressure -	(Air +1) – N/A
Solubility in Water –	Dilutable
Boiling Point –	110 C +/- 1%
Freezing Point –	0 C / 32 f
Specific Gravity –	(Water =1)
Evaporation Rate –	Same as water

SECTION IV – REACTIVITY:

STABILITY: – This material is considered stable.

HAZARDOUS: – Carbon dioxide, Carbon monoxide

INCOMPATIBILITY: – Can react with strong oxidizing agents, acids, bases

HAZARDOUS POLYMERISATION: – Will not occur

SECTION V – SPILL OR LEAK HANDLING:

Wash with large quantity of water if outdoors. Mop up and rinse well with water.

SECTION VI – STORAGE AND HANDLING INFORMATION:

STORAGE CONDITIONS: keep from freezing, keep container closed.

KEEP FROM THE REACH OF CHILDREN

HANDLING PROCEDURES: No special precautionary measures should be needed under Anticipated conditions of use.

PREVENTION OF FIRE AND EXPLOSION: Keep from contact with oxidizing materials.

SECTION VII – HAZARD INFORMATION:

Low hazard for usual industrial handling or commercial handling by trained personel.

MATERIAL SAFETY DATA SHEET

Trojan™ Waterproofing System

CONTINUED

SECTION VIII – EMERGENCY FIRST AID INFORMATION:

INHALATION: Move subject to fresh air.

EYE CONTACT: Flush eyes with a large amount of water for at least 15 minutes.

SKIN CONTACT: Wash affected skin areas thoroughly with soap and water.

CONSULT A PHYSICIAN IF DEEMED NECESSARY

SECTION IX – ACCIDENT PREVENTION INFORMATION:

EXPOSURE INFORMATION- PERSONAL PROTECTION MEASURES

RESPIRATORY PROTECTION: None should be needed. If engineering controls do not maintain airborne concentrations to an acceptable level, an approved respirator must be worn. If respirators are used, a program should be instituted to assure compliance with OSHA standard.

EYE PROTECTION- Use splash goggles as it is a good industrial hygiene practice to minimise eye contact.

SKIN PROTECTION – It is good practice to minimize skin contact.

VENTILATION – Good general ventilation (typically 10 air changes per hour) should be sufficient to control airborne levels. Supplementary local exhaust, ventilation, closed system or respiratory protection may be needed in special circumstances such as poorly ventilated spaces
mechanical generation of dusts, heating, drying etc.

OTHER PROTECTIVE EQUIPMENT: It is good hygiene practice for facilities storing or utilizing this material to be equipped with an eyewash facility.

SECTION X – ECOLOGICAL INFORMATION:

This environmental effects summary is written to assist in addressing emergencies created by an accidental spill which might occur during the shipment of this material, and in general, it is not meant to address discharges to sanitary sewers or publicly owned treatment works

SUMMARY – Data for this material has been used to estimate its environmental impact. It has the following properties:

A low biochemical oxygen demand and little potential to cause oxygen depletion in aqueous systems, a low potential to affect aquatic organisms, a low potential to affect germination and orderly growth of some plants.

When diluted with a large amount of water, this material released directly or indirectly into the environment is not expected to have a significant impact.

MATERIAL SAFETY DATA SHEET

Trojan™ Waterproofing System

CONTINUED

OXYGEN DEMAND DATA:

Cod: 1.7 G OXYGEN/C

BOD -5 AND BOD-20 . Were not determined because, the aqueous solubility of the test

Article was below that which is required for these tests.

ACUTE AQUATIC EFFECTS DATA:

96-h lc -50 (fathead minnow, Daphid, Ramshorn Snail and flatworm): 100MG/L

7 DAY PLANT GERMINATION EFFECTS:

No adverse effect concentration: Lettuce, Radishes, Ryegrass: Saturated solution

SECTION XI – TRANSPORTATION INFORMATION:

DOT (USA) STATUS: Not regulated

TDG (CANADA) STATUS: Not regulated

AIR – INTERNATIONAL CIVIL AVIATION ORGANIZATION ICAO-ICAO
STATUS: Not regulated

SEA – INTERNATIONAL MARITIME DANGEROUS GOODS (IMDG) –
IMDG

STATUS: Not regulated

SECTION XII – REGULATORY INFORMATION:

This document has been prepared in accordance with MSDS requirements of the
OSHA HAZARD COMMUNICATION STANDARD 29 CF4 1910. 1200

OSHA HAZARD CHEMICAL(S) : None

CALIFORNIA PROPOSITION 65 (SAFE DRINKING WATER TOXIC
ENFORCEMENT ACT OF 1986. MATERIAL(S) KNOWN TO THE STATE TO
CAUSE CANCER: None

MATERIAL(S) KNOWN TO THE STATE TO CAUSE ADVERSE REPRODUCTIVE
EFFECT: None

MASSACHUSETTS SUBSTANCE LIST: None

NEW JERSEY WORKPLACE HAZARDOUS SUBSTANCE LIST: None

PENNSYLVANIA HAZARDOUS SUBSTANCE LIST: None

THIS PRODUCT HAS BEEN PREPARED IN ACCORDANCE WITH THE MSDS
REQUIREMENTS OF THE WHMIS CONTROLLED PRODUCTS REGULATION:

WHIMS (CANADA) INGREDIENT DISCLOSURE LIST: None

CARCINOGENICITY CLASSIFICATION (COMPONENTS PRESENT AT 0.1% OR
MORE): None

INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC): Not listed
AMERICAN CONFERENCE OF GOVERNMENT INDUSTRIAL HYGIENISTS:

Not listed.

NATIONAL TOXICOLOGY PROGRAM (NTP): Not listed

CHEMICAL(S) SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION
313 OR TITLE III OF THE SUPERFUND AMENDMENTS AND RE-

AUTHORIZATION ACT (SARA) OF 1986 AND 40 CF4 PART 372 : None

SARA(USA) SECTIONS 311 AND 312 HAZARD CLASSIFICATIONS: N/A

MATERIAL SAFETY DATA SHEET

Trojan™ Waterproofing System

CONTINUED

U.S TOXIC SUBSTANCES CONTROL ACT (TSCA):

This product is listed on the TSCA inventory or otherwise complies with TSCA Premanufacture Notification Requirements.

CANADA ENVIRONMENTAL PROTECTION ACT (CEPA) AND DOMESTIC SUBSTANCES LIST (DSL)

This product is listed on the DSL or otherwise complies with CEPA New Substances Notification Requirements

EUROPEAN INVENTORY OF EXISTING CHEMICAL SUBSTANCES

(*EINECS): Any polymer intentionally present in this product has regulatory clearance under directives of the European Union.

AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES (AICS) AND NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS):

This product is listed on AICS or otherwise complies with NICNAS.

JAPANESE HANDBOOK OF EXISTING AND NEW CHEMICALS

SUBSTANCES: This product is listed in the handbook or has been approved in Japan by New Substances Notification.

ABBREVIATIONS:

N/A – Not applicable

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR RESULTS TO BE OBTAINED FROM THE USE THEREOF. VENDOR ASSUMES NO RESPONSIBILITY FOR INJURY TO VENDEE OR THIRD PERSON PROXIMATELY CAUSED BY MATERIAL IF RESPONSIBLE SAFETY PROCEDURES ARE NOT ADHERED TO AS STIPULATED IN THE DATA SHEETS. ADDITIONALLY, VENDOR ASSUMES NO RESPONSIBILITY FOR INJURY TO VENDEE OR THIRD PERSON PROXIMATELY CAUSED BY ABNORMAL USE OF THE MATERIAL EVEN IF RESPONSIBLE SAFETY PROCEDURES ARE FOLLOWED. FUTHERMORE, VENDEE ASSUMES THE RISK IN THE USE OF THIS MATERIAL.

TROJAN™ WATERPROOFING SYSTEM

LIMITED MATERIAL WARRANTY AGREEMENT

ENVIROPACIFIC™ PTY LTD warrants that concrete treated with TROJAN™ WATERPROOFING SYSTEM will retain the waterproofing effect for a period of ten (10) years from the date of application, provided that the concrete has not been abraded away and that the owner gives ENVIROPACIFIC™ PTY LTD written notice by certified mail at P.O.Box 107, Cloverdale, Perth, Western Australia, 6985, of any claim within thirty (30) days of the discovery of any leaking. In the event the treated concrete loses the waterproofing effect during the limited Warranty period, ENVIROPACIFIC™ PTY LTD will provide sufficient materials to restore the waterproofing effect to the areas on which it was lost. This Agreement does not cover any loss of waterproofing effect due to improper surface preparation, improper application, the improper use of TROJAN™ WATERPROOFING SYSTEM, structural defects or movement, water penetration caused by cracks or joint areas requiring caulking, sealants or repointing, failure of the building, any damage to the building or contents thereof or any leakage due to mechanical damage or abuse.

This Agreement is solely intended to cover any conditions caused by defective TROJAN™ WATERPROOFING SYSTEM material supplied by ENVIROPACIFIC™ PTY LTD. It shall not include any condition caused by damage to the concrete to which TROJAN™ WATERPROOFING SYSTEM has been applied or by any deliberate act or negligence. Any measurement of the waterproofing effect shall be made according to ENVIROPACIFIC™ PTY LTD standard procedures.

This Agreement will not cover damage due to repair or subsequent work on or through the surface to which TROJAN™ WATERPROOFING SYSTEM was applied.

During the term of this Agreement, ENVIROPACIFIC™ PTY LTD, its agents or employees shall have free access to the project site during normal business hours.

This Limited Material Warranty Agreement is solely for the benefit of the owner of the project at the time the treatment is applied and it does not extend to any successors or assignees of said owner. ENVIROPACIFIC™ PTY LTD will re-issue the warranty for a new owner for the remaining terms of the original Agreement upon written request to ENVIROPACIFIC™ PTY LTD from the new owner, provided such request is made within one hundred twenty days following the transfer of ownership, will permit ENVIROPACIFIC™ PTY LTD agent or employee inspect the project and providing the new owner pay the then current registration fee.

This Agreement becomes effective and remains valid only when ENVIROPACIFIC™ PTY LTD has confirmed receipt of the Warranty Agreement from the owner and when all outstanding invoices for application, supplies and services have been paid in full to ENVIROPACIFIC™ PTY LTD and to the contractor and material suppliers.

THIS LIMITED MATERIAL WARRANTY AGREEMENT AND THE REMEDIES PROVIDED HEREUNDER ARE EXCLUSIVE AND GIVEN IN LIEU OF ALL WARRANTIES (WHETHER WRITTEN, ORAL, IMPLIED OR STATUTORY). THE PARTIES AGREE THAT ANY IMPLIED WARRANTY OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE IS HEREBY EXCLUDED AND SHALL NOT APPLY TO GOODS SOLD.

This Agreement will immediately terminate and become null and void if there is any material change in the use or type of occupancy of the building.

THE PARTIES AGREE THAT ENVIROPACIFIC™ PTY LTD'S LIABILITY HEREUNDER TO RESTORE THE WATERPROOFING EFFECT OF TROJAN™ WATERPROOFING SYSTEM TO THE AREA ON WHICH IT HAS BEEN LOST, BY AN AUTHORIZED ENVIROPACIFIC™ PTY LTD APPLICATOR, WHICH LIABILITY SHALL NOT EXCEED THE MATERIAL VALUE OF THE TROJAN™ WATERPROOFING SYSTEM INVOICED BY ENVIROPACIFIC FOR THE PROJECT.

ENVIROPACIFIC™ shall have no liability for any damage to other components of the building, nor for any consequential or incidental damages including, but not limited to, lost profits, sales or revenues, loss of use of the building, cost of capital, cost of a substitute building, facilities or services, downtime cost or claims of tenants of the building for such damages or personal injury.

In the event the owner requests ENVIROPACIFIC™ PTY LTD to investigate leakage or other related problems on this project, owner will pay to ENVIROPACIFIC™ PTY LTD the then current registration fee plus expenses for the investigation.

This Agreement shall become void if the owner fails to pay ENVIROPACIFIC™ PTY LTD for said investigation within thirty(30) days of ENVIROPACIFIC™ PTY LTD invoice date.

Any controversy or claim arising out of or relating to this agreement or breach thereof, shall be settled, governed by and construed in accordance with the State laws of Western Australia.

Notwithstanding the foregoing, owner agrees that it will participate in and be bound by any judicial, administrative or arbitration proceeding wherein the owner's participation and presence are requested by ENVIROPACIFIC™ PTY LTD, provided that said proceedings involve a common question of law or fact, or indemnification, and further provide that said proceedings involve a third party and ENVIROPACIFIC™ PTY LTD, even though said third party might not be specifically bound by this limited Warranty Agreement,

The terms and conditions of this Limited Warranty Agreement are hereby accepted.

BY : _____ FOR : _____

DATE OF SIGNATURE : _____

BY : _____ FOR ENVIROPACIFIC™ PTY LTD

EFFECTIVE DATE OF LIMITED MATERIAL WARRANTY: _____

