

The Original
Color Chips

FLOOR COATING SYSTEMS



CUSTOM EPOXY FLOORS!
DO IT YOURSELF KITS

PRIMER **BASECOAT** **CHIPS** **CLEARCOAT**
1 **2** **3** **4**

THE ORIGINAL COLOR CHIPS SYSTEM 2 WATERBORNE FLOOR COATING KIT IS DESIGNED SPECIFICALLY FOR GARAGES. THIS KIT IS DESIGNED FOR SUPERIOR ADHESION AND CHEMICAL RESISTANCE FOR YOUR GARAGE.



SYSTEM 2 INCLUDES:

*Etch N' Clean Concrete Profiler
Norklad Preprime WB Primercoat
Norklad WB Colored Basecoat
Decorative Color Chip Flakes
Hpu-747 Clear Urethane Topcoat*

INSTALLATION INSTRUCTIONS & PRODUCT DATA SHEETS

ORIGINAL COLOR CHIPS • 26200 GROESBECK HWY • WARREN, MI 48089
586-771-6500 • FAX: 586-771-6501 WWW.ORIGINALCOLORCHIPS.COM



PATCHING: Patching pits and divots (*optional*) is the first step of the process. Remove loose aggregate and repair voids. Fill pits and puck marks by using a patching compound or concrete patch with sand to achieve a thick 'peanut butter' thickness to trowel into the voids. Wait 24 hours for compound to fully cure before acid-etching or grinding.

Example: Patching cracks, pits & divots



Example: Filling expansion joints



Optional: Use a self-leveling sealant to caulk into the expansion joints to make a clean line. It is recommended to only partially fill the "saw cuts" as this will allow the concrete to expand and contract as necessary. *Note: When using sealant for expansion joints, wait one week before coating.*

Example: Applying Etch N' Clean



SURFACE PREPARATION:

Concrete Surfaces: All surfaces must be sound, dry, clean and free of oil, grease, dirt, mildew, form release agents, curing compounds, loose and flaking paint and other foreign substances prior to applying your primer coat. Remove laitance and roughen unusually slick poured or precast concrete as well any oil, grease, and dirt by utilizing muriatic acid, phosphoric acid, or by grinding the concrete rough. The Original Color Chips Etch 'n Clean solution is a phosphoric acid that has the ability to provide both the cleaning and the profiling (*roughening of the surface*) in one operation, but since it is a better cleaner than an etcher it is recommended to grind the concrete or use muriatic acid on steel-trowelled (*very smooth*) concrete floors. Etching the concrete allows the base coat to adhere securely. Pour onto surface and scrub into the pores

of the concrete with a stiff bristle broom. The acid should only have contact with the concrete for a maximum of 10 minutes. Triple rinse thoroughly with water (*power washing is ideal*) and **allow to dry a minimum of 8-10 hours**. Remove loose aggregate by sweeping.

Example: Grinding concrete surface



Previously Painted Surfaces: The waterborne components of this product generally allow use over most old coatings. Old coatings should be tested for lifting. If lifting occurs, remove the lifted coating chemically or mechanically (*grinding*). If the coating is not lifting simply scuff / sand entire area to remove gloss and roughen. Clean with TSP or rub with Xylol and allow to dry (*the primer and etch n' clean is not necessary on previously painted coatings*).



PRIMERCOAT - PREPRIME WB INSTRUCTIONS

PRIMING: The reason for a primer application is so that one coat can sink deep into the substrate so the second coating can lay on top providing uniform coverage and sheen. *Note: PrePrime WB can be substituted with one coat of Norklad WB as a primercoat.*

Mixing The Primer: Slowly add converter to Pigment (Component A). Stir until thoroughly mixed. Stir again before using. **Mixed life at 60°-80°F (16°-27°C) is eight hours.** Higher or lower temperatures will vary the mixed life. Apply at around 250-275 sq. ft./gal. Actual coverage may vary depending on substrate and application method. Use clean short nap roller (3/8" - new rollers must be free of loose fibers). Brushing is best reserved for edging and areas of "cutting in".

Primercoat: Use PrePrime WB or Norklad WB



Example: Mix part A & B together in a separate pail



Applying Subsequent Coats: You must be sure that all of the water has evaporated from the previous coat before applying your next coat (usually sometime after 8 hours). However, it is best to test the coating before recoating or topcoating. This can be done by pressing on the coating with your thumb to verify that no fingerprint impression is left. If no impression is created, then the recoat or topcoat can be started.

Example: Cutting-in & rolling out PrePrime WB



Example: Applied and dry PrePrime WB Primercoat





BASECOAT - NORKLAD WB INSTRUCTIONS

BASECOAT APPLICATION: MIXING: This product comes pre-packaged by weight. Kits should be mixed in their entirety. If partial kits are to be used, refer the technical data sheet for proper weight mix ratios. After the two parts are combined, mix well with slow speed mixing equipment such as a jiffy mixer until the material is thoroughly mixed and streak free. This product is an emulsion product and should be mixed well before using.

Example: Norklad WB epoxy kit



TIP: Slowly add Basecoat Part B to Basecoat Part A (use appropriate mix ratios for product). Stir thoroughly and scrape sides of can to ensure thorough blending. Always re-stir before use. Mixed material is usable for four to six hours.

Example: Mix part A & B together in a separate pail



Example: Thoroughly mix combined parts A & B



Coverage: 220-250 sq/ft per gallon or 5.0-7.0 mils wet (2.0-3.0 mils dry) on smooth surfaces. **Dry Time:** Application temperature range is 60°-95°F. At 77°F (25°C) dries to touch in two hours and to recoat overnight (or 16 hours). (see "applying subsequent coats" guidelines) **Note:** Do not apply over wet surfaces or under very humid conditions where condensation or fog could settle on the coating during the cure process. Do not apply when surface or air temperature is below 50°F (10°C).



APPLYING THE BASECOAT/CHIPS: Once the epoxy is thoroughly mixed, it can be applied by brush, roller or spray. For roller application, use a clean medium nap (3/8") synthetic roller (new rollers must be free of loose fibers). Start painting in the corner furthest away from the exit of the room. Use a brush to cut in along the walls and edges. Pour from the bucket onto the floor in thin ribbons then roll the material out using a roller.

Example: Cutting-in Norklad WB basecoat



Example: Roller applying Norklad WB Basecoat



After painting approximately 6 feet from the starting point you should begin to apply the chips. Chips are applied by tossing them upward toward the ceiling allowing them to float down into the wet basecoat. *(We recommend dispersing the chips in a "feeding the chickens" style toss; using only three fingers to take a pinchful of chips at a time and launching them into the air at an upward angle, allowing the chips to float down into the wet coating).* **Note:** Multiple colors of chips should be mixed together in a separate container prior to beginning the application.

Example: Use a small pinch of color chips



Example: Release and let chips float down onto the epoxy



It will take at least an hour for the material to start to tack up so you have plenty of time to broadcast your chips evenly. If you broadcast too much in one area, you have to match the entire floor to that spot so take your time and do a little at a time. Continue painting approximately 6 foot wide sections and tossing chips until entire floor is complete. Since everyone's idea of medium and heavy chip coverage can be different, it's important to make sure you don't run out of chips before the end of your job. It's best to apply less chips onto the floor than what you generally want, that way you when you reach the end of your floor you can apply what chips have left and give the floor a much more dense appearance. Another tool to assist in achieving uniform chip coverage is spike shoes. Wearing spike shoes will grant you the ability to walk otop the wet epoxy. By walking across the wet epoxy as you roll it out you can paint large areas and go back, or walk over to areas not completely covered and sprinkle more chips to make a more uniform appearance. **Note:** Be careful not to drop chips in handfuls directly down onto floor, once chips are placed they cannot be moved, but they can be painted over and re-chipped if you make a mistake.



CLEARCOAT - HPU 747 INSTRUCTIONS

TOPCOAT APPLICATION: Our **HPU 747 High Performance Urethane** is a flammable liquid and very gaseous, therefore it is recommended to wear an OV respirator and make sure area is well ventilated. This product should **NEVER** be used in a basement. While applying the clearcoat leave garage bays open as well as during the curing process. It is important to keep air moving in the area so the solvents can evaporate from the coating be pushed out of the area. Place a fan in the back of the garage, moving air out of the bays (*you may partially close the bay doors at night, leaving it open a few inches from the floor and reopen in the morning just make sure open flame is not present*). You will know when you are ready to apply topcoat (*at least 10-12 hours after the basecoat is applied*) when you can no longer see your thumbprint in the coating. Our High Performance Urethane (**HPU 747**) is a two-component product. Mix Part A and Part B together (*2 to 1 mix ratio*). The entire contents of each container must be mixed together. It is important that all mixing equipment is free of moisture and that moisture does not contaminate the coating.

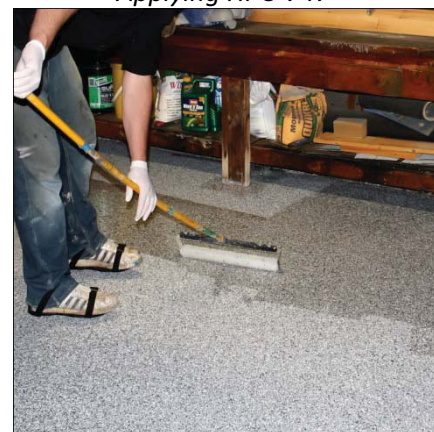
HPU 747 urethane kit



Mixing HPU 747 clearcoat

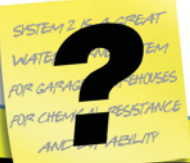


Applying HPU 747



Mix the base portion to obtain a smooth, homogeneous condition. After mixing the base portion, add the converter slowly with continued agitation. Mix thoroughly. The pot life of the mixed material is 3 hours at 77° (25°C). Higher temperatures will reduce working life of the coating; lower temperatures will increase it. Humidity does play a large role in curing times. Make sure the weather forecast permits at least 2 full days of no rain before applying the topcoat. (*It is not recommended to apply the material or allow to cure during rainfall, the moisture in the air can cause hazing*). Roll one even coat of HPU over entire surface to be coated. When applying topcoat walk on previously applied chip/basecoat with clean shoes or socks only, any dirt or debris tracked on to chip/ basecoat will be sealed in by application of clear topcoat. Use a small chip brush to complete the edging around the perimeter, continue onto the rest of the floor with a quality 3/8" nap roller. Be sure to apply coating evenly. Applying too thick may cause hazing or yellowing.

Dry Time: Dries to light foot traffic in 14-24 hours. You can move heavy items on it in 36-48 hours. Full cure in five to seven days. Low temperature, high humidity, thick films or poor ventilation will increase these times. Lack of ventilation and air movement may cause curing problems.



SYSTEM 2 - NOTES/FAQS: This system can be completed in 2 or 3 days after the prep work has been completed. We usually recommend a three day process after the preparation is complete:

Day 1: Apply the Preprime WB primer. (*Note: Preprime WB can be substituted with one coat of Norklad WB as a primercoat.*)

Day 2: Apply Norklad WB and broadcast chips.

Day 3: Roll on your clear top coat.

Day 4: You can walk on the floor.

Day 5-6: Move heavy items on the floor.

Day 7: Car traffic.

Essential Tools of the Trade: 3/8" nap rollers (1 for the primer, 1 for the clearcoat, 1 for the basecoat), 3" brush (for edging), spike shoes, buckets, etc.

Clean-Up: Clean up primer, basecoat and clearcoat with soap and water.

Helpful Hints: *Be sure to have enough chips to do entire surface (1 lb per 250 square feet for Light sprinkle, 2 lbs per 250 square feet for medium sprinkle, etc). *Using spike shoes to apply chips helps achieve uniform coverage. *When applying topcoat walk on previously applied chip/basecoat with clean shoes or socks only, any dirt or debris tracked on to chip/ basecoat will be sealed in by application of clear topcoat.

Prior to painting your floor: **PERFORM A MOISTURE TEST.** If you sometimes see tiny crystals or white powder on your floor, or the concrete feels damp, this is moisture migrating through the slab which will often cause peel up of any kind of coating you apply. To perform a moisture test, simply put a rubber mat on the floor or tape down a 3 by 3 ft (or so) sheet of plastic. Wait overnight. If water collects between it and the floor there is a potential moisture problem and any floor paint will probably not cure/dry properly or will bubble up and peel away. If the moisture is mild, you can primer the substrate before applying your basecoat to make sure you won't have adhesion issues. If the moisture is severe, it is not recommended to apply a coating.

PERFORM THE SEALER TEST If your concrete has been treated with some sort of cement sealer (waterproof) no epoxy will stick to it. To perform a sealer test you'll want to pour water on the cement. It should soak into the cement in a reasonable time. If it beads up or just sits there for a long time, the concrete has been sealed or could be grease-or-oil contaminated. The Etch N' Clean solution *not* muriatic acid will be able to cut through a sealer. The floor must be grinded or shot blasted to cut through the sealer to allow proper adhesion.

ETCHING IS A CRITICAL PART OF THE PROCESS

Concrete floors require preparation before applying an epoxy coating system. The preparation usually involves cleaning the surface to remove oil and other unwanted contaminants **and** "profiling" the concrete by etching with acid *or* by mechanical abrasion (ie; shot-blasting or etching with a diamond grinder). If the concrete is new or does not have heavy oil contamination **it still needs to be etched.** The rougher the better. Thin build systems (waterborne epoxy) are best prepped by using an acid etching or diamond grinding.

The key here is to open up the pores of the concrete so the epoxy has something to sink into. The Original Color Chips Floor Coating System **Etch 'n Clean** will provide both the cleaning and the profiling in one operation. If the concrete is profiled to resemble 100 grit sandpaper or more coarse you are ready to coat. If the concrete is trowelled to a glass-like finish you may have to etch multiple times to get the surface to the right texture. In the case where you will need to etch the concrete again, Muriatic Acid is a more aggressive acid that should be considered. Though much less user-friendly than our etch n' clean (note: it does not have a cleaning agent so we advise using the Etch 'n' Clean prior to Muriatic Acid). If you need to use the Muriatic Acid; use with caution. Follow the tutorial at our website: http://www.originalcolorchips.com/images/muriatic_acid_instructions.pdf.

REMEMBER: No matter how new OR clean the concrete is, it will need a rough textured surface in order to achieve maximum epoxy adhesion. Each gallon of Etch N Clean has to be diluted with 50% Water for proper cleaning on the concrete substrate.

ETCHING USING THE ORIGINAL COLOR CHIPS ETCH 'N CLEAN

Equipment

- Plastic sprinkling can or plastic garden sprayer
- Push broom with stiff bristles (natural or synthetic)
- Water for rinsing (hose with high pressure)

Optional Equipment

- Long-handled squeegee
- Wet-dry Vacuum

Usage Tips

- Work in 10'x10' sections. Working in larger sections may prevent rinsing before the solution begins to dry resulting in white powdery residue.
- If available, use the squeegee or wet-dry vac to remove the etching solution before rinsing.
- Do not apply the solution with a mop. Mopping smears the solution over the surface and does not apply enough solution uniformly for effective etching.
- We recommend using a stiff bristle broom and scrubbing the pores of the concrete as you pour out the solution.

Method

1. Dampen a 10'x10' section. A little water on the surface helps activate the etching solution.
2. Dilute 1 gallon of water to 1 gallon of solution. Apply the Etch 'n Clean solution so that a uniform film covers the section to be treated. (*your 2-gallon mixture should cover around 500 sq/ft*)
3. Allow 5 minutes contact time.
4. Using a stiff-bristled push broom, scrub the solution into the floor working in one direction and then scrub across the surface at 90° to the first direction.
5. Allow the solution to remain on the surface for an additional 2-5 minutes. (*Do not apply the etch 'n clean on an area larger than you can rinse off in 10 minutes, it is advisable to work in small areas at a time*)
6. Saturate the surface with water to neutralize the acid. If available, use a squeegee to remove the etching solution before rinsing. Otherwise, rinse using plenty of water. Scrub the surface while rinsing to insure complete removal of the etching solution. If you have a pressure washer use it to thoroughly rinse the surface.
7. Move to an adjacent area and repeat the process.

Troubleshooting

1. A white haze, white streaks or white, powdery dust on the surface after drying is caused by waiting too long before rinsing or by inadequate rinsing. The white powder is a combination of cement particles released from the surface and a precipitate byproduct of the etching reaction, insoluble calcium phosphate. Remove as much as possible by sweeping, scraping or vacuuming. A light dusting typically will not show through a clear coating and will not affect adhesion.
2. Look for areas on the treated surface that are darker or shinier than the rest of the treated surface. Water beading or breaking on these areas signal that the surface is not ready for the coating application and should be treated again.
3. If water soaks into the treated surface without beading or breaking and the surface has the degree of profile specified by the coating manufacturer, the surface is ready for the coating application.
4. Neutralizing the surface after etching is not required because Etch 'n Clean is self-neutralizing. Once the bubbling stops, the remaining mildly acidic solution is easily removed by thorough rinsing.



ETCH 'N CLEAN SOLUTION

The Original Color Chips Company
26200 GROESBECK HWY
WARREN, MI 48089 USA

Product Data Sheet

- Substrates**
- Concrete - Tilt up, poured, precast
 - Masonry - Stucco, cinderblock, cement board
 - Brick - Glazed, unglazed

- Removes**
- Form Release Compound
 - Oil, Grease, Dirt, Soot
 - Efflorescence & Laitance
 - Fabricating Oils, Lubricants
 - Coolants and Rust Inhibitors
 - Passivation Films

Product Description

Etch 'n Clean is a concentrated, water-reducible phosphoric acid and detergent blend formulated to both clean and prepare concrete, masonry, steel, galvanized and zinc surfaces for coating, staining and sealing. Etch 'n Clean reduces preparation time and cuts labor costs by eliminating the separate pre-cleaning and rinsing operation before etching

General Uses

Etch 'n Clean is ideal for cleaning and etching concrete floors, walls, basements, driveways, swimming pools and containmen areas before coating, staining, or sealing.

Application (Read precautions before using)

Etch 'n Clean can be applied with an acid-resistant, hand-pump sprayer, a plastic sprinkling can, or with a plastic pail and an acid-resistant broom or brush.

For best results:

- 1) Use product full strength.
- 2) If available, hot water will accelerate cleaning and etching.
- 3) Sweep lose debris and dampen the surface with water.
- 4) Apply solution and scrub with a stiff brush or broom until bubbling stops. **NOTE: if no bubbling occurs, surface is coated with curing compounds or contaminants preventing etching. Remove contamination and reapply Etch 'n Clean.**
- 5) Triple rinse with water to neutralize. On floors, squeegee off rinse water to speed drying. Adding baking soda will neutralize too.
- 6) Allow the surface to dry thoroughly.

- Features**
- Cleans & Etches in one step
 - No Acidic Vapors
 - Saves Time & Labor
 - Neutralizes Alkali Salts
 - Cleans & Phosphates
 - Improves Corrosion Resistance
 - Enhances Coating Adhesion

Trouble Shooting Guide

White Powder appearing on the surface after drying indicates that the solution is too strong and/or the contact time is too long. Remove white powder before coating by wiping with a clean, dry cloth. To correct reduce solution concentration and/or reduce spray contact time.

Safety & Health Data

Etch 'n Clean is non-flammable, non-carcinogenic, and contains no petroleum or chlorinated solvents

Research

Etch 'n Clean has been accepted with an A-3 category designation as a general cleaning agent on all surfaces or for use with steam or mechanical cleaning devices in all departments of USDA inspected facilities.

Availability

Etch 'n Clean is available where ever The Original Color Chips are sold.

Technical Services

Technical advice furnished by The Original Color Chip Company concerning any use or application of Etch 'n Clean is reliable as current technology allows and the company makes no warranty, expressed or implied of any use or application for which such advice is furnished. Technical assistance and information is available upon request by writing or calling The Original Color Chip Company at 586-771-6500.



ETCH 'N CLEAN SOLUTION

The Original Color Chips Company

26200 GROESBECK HWY
WARREN, MI 48089 USA

Material Safety Data Sheet

Section 1 - General Information

Manufactured by: Great Lakes Laboratories
Address: 26200 Groesbeck Hwy
Warren, MI 48089

24 Hour Emergency: 1-800-888-1105
Office: 1-734-525-8300

Container over 5 liters: Phosphoric Acid Solution
8, UN1805, PG III
Container under 5 liters: Consumer Commodity
ORM-D

HMIS	Rating
Health:	3
Fire:	0
Reactivity:	1
Other:	0

Section 2 - Hazardous Ingredients

Hazardous Material Description: Phosphoric Acid
Class, ID NO.: Corrosive, UN1805
Chemical Name: Phosphoric Acid
CAS #: 7664-38-2
% Weight: 40% - 60%
Carcinogen: OSHA - No
ACGIH - No

Section 3 - Physical Characteristics

Boiling Point: 212°F
Vapor Pressure (mm Hg): N/A
Vapor Density (Air = 1): N/A
Specific Gravity (H₂O=1): 1.24
pH: 1.0
Evaporation Rate:
(butyl acetate = 1) Equal to Water
Solubility in Water: Complete
Appearance: Orange Liquid
Odor: None

Section 4 - Health Hazard Data

Exposure Limits:
Threshold Limit Value: 1 mg/cu. m (ACGIH)
PEL: 1 mg/cu. m (OSHA)
STEL: 3 mg/cu. m (OSHA)
Effects of Acute: Phosphoric Acid has low
Overexposure: acute oral and moderate
dermal toxicity. Phosphoric
Acid is corrosive to eyes.
Slightly toxic if inhaled.

Section 4 - Continued

Emergency and First Aid Procedures:

Swallowing: Do not induce vomiting. Drink plenty of water. See physician immediately.

Skin: Immediately wash with soap and water. If irritation occurs and persists, see a physician.

Eyes: Flush with water for at least 15 minutes, lifting upper and lower eyelids repeatedly. See ophthalmologist.

Inhalation: Remove to fresh air. If breathing difficulty or discomfort occurs, see a physician.

Section 5 - Fire and Explosion

Flash Point: None

Extinguishing Media: N/A

Special Fire Fighting Procedures: Full protective clothing and self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: At flame temperatures, will emit toxic phosphorus oxide fumes.

Section 6 - Reactivity

Stability: Stable conditions to avoid - Contact with strong alkaline materials and reactive metals.

Incompatibility: Contact with reactive metals may produce flammable hydrogen/air mixtures. Reacts violently with strong bases.

Hazardous Decomposition/By Products: At flame temperatures, will emit toxic phosphorus oxide fumes.

Section 7 - Control Measures

Respiratory Protection: Wear mask to prevent inhalation.
Ventilation: Keep concentration below TLV level.
Protective Gloves: Impervious rubber or plastic.
Eye Protection: Chemical safety goggles.
Protective Clothing: Hat, boots and jacket may be needed in heavy mist or spill situation.

Section 8 - Spill/Leak Procedures

In Case of Spill: Stop leak. Dike and absorb with inert absorbent. Neutralize washings with soda ash or lime.
Waste Disposal Method: In accordance with regulations.

CERCLA Reportable Qty.: 5,000 lbs

RCRA Hazard Waste #: N/A

VOC: None

Section 9 - Precautions for Safety Handling

Handling/Storage: Store in a cool, dry place
Keep container closed.
Other Precautions: Keep out of reach of children.
Keep from freezing.

The information contained herein is based on the data available to us and is believed to be correct. However, we make no warranty, expressed or implied, regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for the injury from use of the product described herein.

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Etch N' Clean
GENERAL USE: Cleaning agent
PRODUCT DESCRIPTION: Orange corrosive liquid, characteristic odor

Page 1 of 4

MANUFACTURER'S NAME
 Original Color Chips Co / Great Lakes Laboratories

DATE PREPARED: April 9, 2007
SUPERSEDES: January 1, 2007

ADDRESS (NUMBER, STREET, P.O. BOX)
 26200 Groesbeck Hwy

TELEPHONE NUMBER FOR INFORMATION
 (800) 888-1105

(CITY, STATE AND ZIP CODE)
 Warren, MI 48089

COUNTRY
 USA

EMERGENCY TELEPHONE NUMBER
 (734) 718-5744

DISTRIBUTOR'S NAME
 Original Color Chips Co

ADDRESS (NUMBER, STREET, P.O. BOX)

TELEPHONE NUMBER FOR INFORMATION

(CITY, STATE AND ZIP CODE)

COUNTRY

EMERGENCY TELEPHONE NUMBER

SECTION 2 - HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENTS	CAS #	% (by weight)	OSHA PEL		ACGIH TWA		SARA TITLE III	RQ LBS
			PPM	MG/M3	PPM	MG/M3		
Phosphoric acid (a)	7664-38-2	30 - 60		1		1		5000

(a) See Section 15

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Corrosive liquid. Causes chemical burns to skin and eyes. Hazard Symbols for this product: C Risk Phrases - R22, 34

POTENTIAL HEALTH EFFECTS

INHALATION: Corrosive and irritating to upper respiratory tract. May be harmful if inhaled.

SKIN: Corrosive and irritating; chemical burns may result from contact.

EYES: Corrosive; Causes immediate severe irritation of the eye and eyelids. If not quickly removed by thorough irrigation with water, there may be prolonged or permanent visual impairment or total loss of sight.

INGESTION: Corrosive. Material is extremely destructive to all tissues. May be harmful or fatal if swallowed.

CARCINOGENICITY
NTP? No
IARC MONOGRAPHS? No
OSHA REGULATED? No

MATERIAL SAFETY DATA SHEETPRODUCT NAME: Etch n' Clean
April 9, 2007

Page 2 of 4

SECTION 4 - FIRST AID MEASURES

INHALATION: Remove affected person to fresh air; if breathing has not returned to normal within a few minutes after exposure, get medical attention.

SKIN: Remove contaminated clothing; wash affected area with soap and water; launder contaminated clothing before reuse; if irritation persists, seek medical attention.

EYES: Check for and remove contact lenses. Immediately flush eyes for 15 minutes in clear running water while holding eyelids open; seek medical attention immediately.

INGESTION: Drink two glasses of water followed by milk, milk of magnesia or other non-alcoholic liquids; DO NOT induce vomiting; seek medical attention immediately.

SECTION 5 - FIRE FIGHTING MEASURES**FLASH POINT (METHOD USED)**

Non-flammable

FLAMMABLE LIMITS

LEL: Not applicable

UEL: Not applicable

AUTOIGNITION TEMPERATURE: Not determined**NFPA CLASS:** None

GENERAL HAZARDS: Product is corrosive. Products of combustion include compounds of carbon, hydrogen and oxygen, including carbon monoxide.

EXTINGUISHING MEDIA

Carbon dioxide, water, water fog, dry chemical, chemical foam.

FIRE FIGHTING PROCEDURES

Keep containers cool with water spray to prevent container rupture due to steam buildup; floor will become slippery if material is released.

CAUTION - material is corrosive.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Contact with B:C extinguisher powder may produce large amounts of carbon dioxide.

HAZARDOUS COMBUSTION PRODUCTS

Smoke, fumes or vapors, oxides of carbon, phosphorous

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: CAUTION - CORROSIVE. Wash small spills to sanitary sewer. Large spills - confine spill, soak up with approved absorbent, shovel product into approved container for disposal. For spills in excess of allowable quantities (RQ) notify the National Response Center (800) 424 - 8802; refer to CERCLA 40 CFR 302 for detailed instructions concerning reporting requirements.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep container closed when not in use; protect containers from abuse; protect from extreme temperatures. Separate from oxidizing materials, metallic powders and other easily oxidized organic materials and reducing agents. CAUTION - material is corrosive. Keep this and other chemicals out of reach of children.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION**ENGINEERING CONTROLS**

The use of local exhaust ventilation is recommended. Use corrosion-resistant ventilation equipment.

PERSONAL PROTECTION:

RESPIRATORY PROTECTION: None required while threshold limits are kept below maximum allowable concentrations; if TWA exceeds limits, NIOSH approved respirator must be worn. Refer to 29 CFR 1910.134 or European Standard EN 149 for complete regulations.

PROTECTIVE GLOVES: Neoprene, butyl or nitrile rubber gloves with cuffs.

EYE PROTECTION: Chemical splash goggles. Refer to 29 CFR 1910.133 or European Standard EN166.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Coveralls, apron, or other equipment should be worn to prevent skin contact, safety eyewash station nearby.

WORK / HYGIENIC PRACTICES: Practice safe workplace habits. Minimize body contact with this, as well as all chemicals in general.

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: Etch N' Clean
 April 9, 2007

Page 3 of 4

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

VAPOR PRESSURE 1.0 mm Hg @ 20° C	VAPOR DENSITY (AIR = 1) > 1
SPECIFIC GRAVITY (WATER = 1) 1.25	EVAPORATION RATE (Water = 1) < 1
SOLUBILITY IN WATER Complete	FREEZING POINT Not determined
pH 1.5	APPEARANCE AND ODOR Orange liquid, characteristic odor
BOILING POINT 300° F (149° C)	PHYSICAL STATE Liquid
VISCOSITY Not specified	VOLATILE ORGANIC COMPOUNDS (Total VOC's) None

SECTION 10 - STABILITY AND REACTIVITY

STABILITY UNSTABLE: STABLE: X	CONDITIONS TO AVOID: Extreme temperatures.
INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizers, strong acids, strong alkalies.	

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Decomposition will not occur if handled and stored properly. In case of a fire, oxides of carbon, hydrocarbons, fumes or vapors, and smoke may be produced.

HAZARDOUS POLYMERIZATION MAY OCCUR: WILL NOT OCCUR: X	CONDITIONS TO AVOID: None
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SECTION 11 - TOXICOLOGICAL INFORMATION

Hazardous Ingredients	CAS #	EINECS #	LD50 of Ingredient (Specify Species and Route)	LC50 of Ingredient (Specify Species)
Phosphoric acid (a)	7664-38-2	231-633-2	1530 mg / kg Oral - rat	> 850 mg / m3 Inhalation - rat

SECTION 12 - ECOLOGICAL INFORMATION

No data are available on the adverse effects of this material on the environment. Neither COD nor BOD data are available. Based on the chemical composition of this product it is assumed that the mixture can be treated in an acclimatized biological waste treatment plant system in limited quantities. However, such treatment should be evaluated and approved for each specific biological system. None of the ingredients in this mixture are classified as a Marine Pollutant.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose of in accordance with local, state, and federal regulations. Refer to 40 CFR 260 - 299 for complete waste disposal regulations for corrosive materials. Consult your local, state, or federal agency before disposing of any chemicals.

SECTION 14 - TRANSPORT INFORMATION

PROPER SHIPPING NAME: Phosphoric acid solution

DOT HAZARD CLASS / Pack Group: 8 / III	IATA HAZARD CLASS / Pack Group: 8 / III
REFERENCE: 49 CFR 173.154, .203, .241	IMDG HAZARD CLASS: 8 / III
UN / NA IDENTIFICATION NUMBER: UN 1805	RID/ADR Dangerous Goods Code: 8
LABEL: CORROSIVE	UN TDG Class / Pack Group: 8 / III
HAZARD SYMBOLS: C	Hazard Identification Number (HIN): 80

PROPER SHIPPING NAME: Consumer Commodity (Less than 5 liters ONLY)

DOT HAZARD CLASS / Pack Group: ORM - D / None	IATA HAZARD CLASS / Pack Group: See Note below
REFERENCE: 49 CFR 173.144-.156	IMDG HAZARD CLASS: See Note below
UN / NA IDENTIFICATION NUMBER: None	RID/ADR Dangerous Goods Code: See Note below
LABEL: None Required	UN TDG Class / Pack Group: See Note below
HAZARD SYMBOLS: None	Hazard Identification Number (HIN): None

Note: CONSUMER COMMODITY ORM - D must be accompanied by orientation arrows

Transportation information provided is for reference only. Client is urged to consult CFR 49 parts 100 - 177, IMDG, IATA, EU, United Nations TDG, and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: Etch n' Clean
April 9, 2007

Page 4 of 4

SECTION 15 - REGULATORY INFORMATION

TSCA (Toxic Substance Control Act)

All components of this product are listed on the U.S. Toxic Substances Control Act Chemical Inventory (TSCA Inventory) or are exempted from listing because a Low Volume Exemption has been granted in accordance with 40 CFR 723.50.

SARA TITLE III (Superfund Amendments and Reauthorization Act)

311/312 Hazard Categories
Immediate health

313 Reportable Ingredients:

None

CERCLA (Comprehensive Response Compensation and Liability Act)

(a) The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) has notification requirements for releases or spills to the environment of the Reportable Quantity (RQ for this mixture = 10,000 lbs) or greater amounts, according to 40 CFR 302.

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986

There are no reportable chemicals present known to the state of California to cause cancer or reproductive toxicity.

CPR (Canadian Controlled Products Regulations)

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. WHMIS Classification: E

IDL (Canadian Ingredient Disclosure List)

Components of this product identified by CAS number and listed on the Canadian Ingredient Disclosure List are shown in Section 2.

DSL / NDSL (Canadian Domestic Substances List / Non-Domestic Substances List)

Components of this product identified by CAS number are listed on the DSL or NDSL, or are otherwise in compliance with the New Substances Notification (NSN) regulations. Only ingredients classified as "hazardous" are listed in Section 2 unless otherwise indicated.

EINECS (European Inventory of Existing Commercial Chemical Substances)

Components of this product identified by CAS numbers are on the European Inventory of Existing Commercial Chemical Substances.

EC Risk Phrases

R22 Harmful if swallowed.
R34 Causes burns.

SYMBOL(S) REQUIRED FOR LABEL



EC Safety Phrases

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible.)

SECTION 16 - OTHER INFORMATION

Specific toxicity tests have not been conducted on this product. Our hazard evaluation is based on Information from similar products, the ingredients, technical literature, and/or professional experience.

HMIS HAZARD RATINGS

HEALTH	2	* = Chronic Health Hazard	2 = MODERATE
FLAMMABILITY	0	0 = INSIGNIFICANT	3 = HIGH
PHYSICAL HAZARD	0	1 = SLIGHT	4 = EXTREME
PERSONAL PROTECTIVE EQUIPMENT	C	Safety Glasses, Gloves, Apron	

REVISION SUMMARY:

This MSDS has been revised in the following sections: Complete format revision

MSDS Prepared by: Comprehensive Data Base, Inc.
P.O. Box 395
Intercession City, FL 33848 USA
(863) 644 - 3298 www.compdatabase.com or www.msds.cc

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.



NORKLAD

PREPRIME WB

WATERBORNE EPOXY PRIMERCOAT

ORIGINAL COLOR CHIPS CO - 26200 GROESBECK HWY - WARREN, MI

DEEP PENETRATING
CLEAR PRIMER | SEALER

Norklad Preprime WB is a two component water based epoxy coating that provides an excellent primercoat for various flooring systems. Preprime WB is clear in color to work well with any colored topcoat. It is low in solids to provide superior substrate penetration. This product has a tack free time of about 5 to 8 hours. Therefore, if timed correctly, it is possible to apply your primer coat and color coat in the same day. Norklad Preprime WB is recommended for priming or coating concrete, wood or masonry.

SOLIDS BY WEIGHT:

43% (+/- 2%)

SOLIDS BY VOLUME:

40% (+/- 2%)

VOLATILE ORGANIC CONTENT:

1.2 pounds per gallon (mixed)

COLOR:

Amber Clear NOTE: This clear is not water clear and is not suitable for topcoating over previously color coated floors. The clear is suitable as a primer or concrete sealer only.

RECOMMENDED FILM THICKNESS:

5-7 mils per coat wet thickness (yields 2-3.5 mils dry)

COVERAGE PER GALLON

250 square feet @ 5-6 mils wet thickness

PACKAGING

1-gallon kits

MIX RATIO:

6.55# part A (.80 gallons, approximate) to 1.90# part B (.20 gallons, approximate).

SHELF LIFE:

1 year in unopened containers

FINISH CHARACTERISTICS:

Semi-Gloss

ABRASION RESISTANCE:

Taber abrasor CS-17 calibrase wheel with 1000 gram total load and 500 cycles = 45 mg loss

IMPACT RESISTANCE:

Gardner Impact, direct = 50 in. lb. (passed)

FLEXIBILITY:

No cracks on a 1/8" mandrel

ADHESION:

425 psi @ elcometer (concrete failure, no delamination)

VISCOSITY:

400-900 cps (typical)

DOT CLASSIFICATION:

Not regulated

CURE SCHEDULE: (70°F)

pot life – 1 gallon volume	1.0 – 1.5 hours
tack free (dry to touch).....	5-8 hours
recoat or topcoat.....	7-10 hours
light foot traffic.....	16-24 hours
full cure (heavy traffic).....	2-7 days

APPLICATION TEMPERATURE:

55-90 degrees F with relative humidity below 85%

CHEMICAL RESISTANCE:

REAGENT	RATING
acetic acid 5%	B
xylene	B
mek	A
gasoline	B
10% sodium hydroxide	C
10% sulfuric	B
10% hydrochloric acid	B
20% nitric acid	A

Rating key: A - not recommended, B - 2 hour term splash spill, C - 8 hour term splash spill, D - 72 hour immersion, E - long term immersion. NOTE: extensive chemical resistance information is available through your sales representative.

TOPCOAT:

Required – Many products are suitable as topcoats including Norklad WB Waterborne Epoxy, Norklad SB solventborne Epoxy, or Norklad 200 100% Solids Epoxy. For added chemical resistance, color stability, or UV stability, topcoat with a suitable aliphatic urethane such as HPU 747.

LIMITATIONS:

- * Gloss may be affected by humidity, low temperatures, chemical exposure, or sodium vapor lighting.
- * Product will yellow in the presence of UV light.
- * For best results use a 1/4 or 3/8" nap roller.
- * Slab on grade requires moisture barrier.
- * Substrate temperature must be 5°F above dew point
- * All new concrete must be cured for at least 30 days.
- * Improper mixing or too thick of an application may result in product failure.



PRIMERCOAT

APPLICATION INSTRUCTIONS

PRODUCT STORAGE: Store product in an area so as to bring the material to normal room temperature before using. Continuous storage should be between 60 and 90 degree F. Keep from freezing.

SURFACE PREPARATION: Surface preparation will vary according to the type of complete system to be applied. For a one or two coat thin build system (3-10 mils dry) we recommend either mechanical scarification or acid etching until a suitable profile is achieved. All dirt, oil, dust, foreign contaminants and laitance must be removed to assure a trouble free bond to the substrate. A test should be made to determine that the concrete has an appropriate vapor barrier. This can be done by placing a 4' X 4' plastic sheet on the substrate and taping down the edges. If after 24 hours, the substrate is still dry below the plastic sheet, then the substrate does not show signs of eventual hydrostatic pressure problems that may later cause disbonding. However, this product can be applied to a damp floor as long as there are no standing puddles.

PRODUCT MIXING: This product comes pre-packaged by weight. Kits should be mixed in their entirety. If partial kits are to be used, refer to the front of this technical data for proper weight mix ratios. After the two parts are combined, mix well with slow speed mixing equipment such as a jiffy mixer until the material is thoroughly mixed and streak free. This product is an emulsion product and should be mixed well before using. If you choose to mix by hand, it is recommended to mix thoroughly for several minutes.

PRODUCT APPLICATION: The mixed material can be applied by brush or roller. Maintain temperatures within the recommended ranges during the application and curing process. Apply material with relative humidity below 85%. When the end of the pot life has been reached, you will find that the material becomes hard to apply and will actually tend to roll back up onto the roller. Do not try to continue application when the coating has reached this step. Applications made at different times with differing environmental conditions, may show slight variations in gloss. After applying thin coat you may notice blotchiness this is normal as the coating soaks up into the substrate at varying thicknesses.

RECOAT OR TOPCOATING: When topcoating this product, you must first be sure that all of the solvents and water have evaporated from the coating during the curing process. Waiting a minimum of 5 hours is a good guideline. However, it is best to test the coating before your next coat. This can be done by pressing on the coating with your thumb to verify that no fingerprint impression is left. If no impression is created, then the recoat or topcoat can be started. Always remember that colder temperatures will require more cure time for the product before recoating or topcoating can commence. Before topcoating, check the coating to insure no epoxy blushes were developed (a whitish, greasy film or deglossing). If a blush is present, it must be removed prior to topcoating or recoating. A standard type detergent cleaner can be used to remove any blush. Many epoxy overlays and coatings as well as urethanes are compatible for use as a topcoat for this product.

CLEANUP: Use PM solvent or soap and water.

NOTICE TO BUYER: DISCLAIMER OF WARRANTIES AND LIMITATIONS ON OUR LIABILITY

We warrant that our products are manufactured to strict quality assurance specifications and that the information supplied by us is accurate to the best of our knowledge. Such information supplied about our products is not a representation or a warranty. It is supplied on the condition that you shall make your own tests to determine the suitability of our product for your particular purpose. Listed physical properties are typical and should not be construed as specifications. NO WARRANTY IS MADE, EXPRESSED OR IMPLIED, REGARDING SUCH OTHER INFORMATION, THE DATA ON WHICH IT IS BASED, OR THE RESULTS YOU WILL OBTAIN FROM ITS USE. NO WARRANTY IS MADE, EXPRESSED OR IMPLIED, THAT OUR PRODUCT SHALL BE MERCHANTABLE OR THAT OUR PRODUCT SHALL BE FIT FOR ANY PARTICULAR PURPOSE. NO WARRANTY IS MADE THAT THE USE OF SUCH INFORMATION OR OUR PRODUCT WILL NOT INFRINGE UPON ANY PATENT. We shall have no liability for incidental or consequential damages, direct or indirect. Our liability is limited to the net selling price of our product or the replacement of our product, at our option. Acceptance of delivery of our product means that you have accepted the terms of this warranty whether or not purchase orders or other documents state terms that vary from this warranty. No representative is authorized to make any representation or warranty or assume any other liability on our behalf with any sale of our products. Our products contain chemicals that may CAUSE SERIOUS PHYSICAL INJURY. BEFORE USING, READ THE MATERIAL SAFETY DATA SHEET AND FOLLOW ALL PRECAUTIONS TO PREVENT BODILY HARM.

MATERIAL SAFETY DATA SHEET

PRODUCT CODE: PPWB

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Preprime WB PART A
PRODUCT CODES: 015CLEAR A

MANUFACTURER: Norkan Inc.
STREET ADDRESS: 9 Guttman Avenue
CITY, STATE, ZIP: Charleroi, Pa. 15022

INFORMATION PHONE: 724-483-9300
EMERGENCY PHONE: Chemtrec 800-424-9300
FAX PHONE: 724-483-9306

PREPARED BY: Harry Jackson

DATE REVISED: 4/22/05

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT</u>	<u>CAS NO.</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>OSHA STEL</u>	<u>WEIGHT %</u>
1,2 ETHANE DIAMINE, N-(2-AMINO ETHYL)	111-40-0	1 ppm	1 ppm	NONE	
TETRAETHYLENE PENTAMINE	112-57-2	NONE	NONE	NONE	
ETHYLENEDIAMINE	107-15-3	10 ppm	10 ppm	10 ppm	
PENTAETHYLENE HEXAMINE	4067-16-7	NONE	NONE	NONE	
WATER	7732-18-5	NONE	NONE	NONE	
PROPYLENE GLYCOL MONOMETHYL ETHER	107-98-2	100 ppm	100 ppm	150 ppm	
GLACIAL ACITIC ACID	64-19-7	10 ppm	10 ppm	15 ppm	
STODDARD SOLVENT	8052-41-3	100ppm	100 ppm	NONE	
2-ETHYL-1-HEXANOL	104-76-7	NONE	NONE	NONE	
*GLYCOL ETHER 2-BUTOXYETHANOL	111-76-2	25 ppm	25 ppm	NONE	<0.5
PROPIETARY ADDITIVE- NJTSRN 80963-5170		NONE	NONE	NONE	
PIGMENT (NON HAZARDOUS IN LIQUID FORM)		10mg/m3	10 mg/m3	5 mg/m3	
FILLER (NON HAZARDOUS IN LIQUID FORM)		20 mppcf	3 MG/M3	NONE	

SECTION 2 NOTES: *Indicates toxic chemical(s) subject to reporting requirements of section 313 of Title III and of 40 CFR 372. PROPYLENE GLYCOL MONOMETHYL ETHER CAS #107-98-2 (ACGIH) STEL= 150 PPM. FOLLOW 311B (2) (A) 40 CRF 116, 117, GUIDELINES. FOLLOW TSCA 8 (A) 40 CFR 712, 47 FR 26992 GUIDELINES

SECTION 3: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: LOW VISCOSITY LIQUID IN VARYING COLORS
BOILING POINT OR RANGE ° F: 212
VAPOR DENSITY (AIR = 1): N/A
SPECIFIC GRAVITY (H2O = 1): 1.2
EVAPORATION RATE: N/A
SOLUBILITY IN WATER: EMULSIFIABLE

SECTION 3 NOTES:

SECTION 4: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER: N/A
(% by volume) LOWER: N/A

FLASH POINT: 200 +F

METHOD USED:

SETA FLASH

EXTINGUISHING MEDIA:

FOAM, ALCOHOL FOAM, CO2, WATER FOG

SPECIAL FIRE FIGHTING PROCEDURES:

TOXIC FUMES WILL BE EVOLVED WHEN THIS MATERIAL IS INVOLVED IN A FIRE. A SELF-CONTAINED BREATHING APPARATUS SHOULD BE AVAILABLE FOR FIRE FIGHTERS. COOL FIRE EXPOSED CONTAINERS WITH WATER.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

NONE KNOWN

SECTION 4 NOTES:

SECTION 5: STABILITY AND REACTIVITY

STABILITY:

STABLE

CONDITIONS TO AVOID (STABILITY):

AVOID CONTACT WITH OPEN FLAMES AND ALL SOURCES OF IGNITIONS AND SPARKS.

INCOMPATIBILITY (MATERIAL TO AVOID):

AVOID CONTACT WITH STRONG OXIDIZING AGENTS, MINERAL ACIDS AND EPOXY RESINS IN UNCONTROLLED AMOUNTS.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:

CO, CO₂, NOX

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR

SECTION 5 NOTES:

SECTION 6: HAZARDS IDENTIFICATION

HMIS HAZARD CLASSIFICATION

HEALTH: 2 FLAMMIBILITY: 1 REACTIVITY: 0 PERSONAL PROTECTIVE EQUIPMENT: G

POTENTIAL HEALTH EFFECTS

EYES:

THIS MATERIAL CAN CAUSE EYE IRRITATION OR REDNESS. HIGH VAPOR CONCENTRATIONS CAN CAUSE SEVERE IRRITATION TO THE EYES.

SKIN:

IRRITATION TO THE SKIN CAN OCCUR BUT DERMAL TOXICITY IS LOW.

INGESTION:

INGESTION OF MATERIAL CAN CAUSE NAUSEA OR OTHER SIMILAR RESPONSES.

INHALATION:

HIGH CONCENTRATIONS OF VAPOR CAN CAUSE IRRITATION TO THE RESPIRATORY TRACT, NAUSEA, AND DIZZINESS.

HEALTH HAZARDS (ACUTE AND CHRONIC):

PROLONGED OR REPEATED EXPOSURE MAY CAUSE ASTHMA AND SKIN SENSITIZATION OR OTHER ALLERGIC RESPONSES.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

RESPIRATORY CONDITIONS OR OTHER ALLERGIC AILMENTS

CARCINOGENICITY

OSHA: NO NTP: NO IARC: NO

NO CONSTITUENTS OF THIS PRODUCT ARE REGULATED AS CARCINOGENS UNDER OSHA, IARC, OR NTP PROGRAMS.

SECTION 7: FIRST AID MEASURES

EYES:

IMMEDIATELY FLUSH WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE LIFTING UPPER AND LOWER LIDS. GET IMMEDIATE MEDICAL ASSISTANCE.

SKIN:

FLUSH SKIN WITH WATER FOR AT LEAST 15 MINUTES AND REMOVE ALL CONTAMINATED CLOTHING IMMEDIATELY. GET MEDICAL ATTENTION IF REDDENING OR SWELLING OCCURS.

INGESTION:

DO NOT INDUCE VOMITING. DILUTE BY GIVING WATER OR MILK TO DRINK IF VICTIM IS CONSCIOUS. GET MEDICAL ATTENTION IMMEDIATELY.

INHALATION:

REMOVE TO FRESH AIR IF EFFECTS PERSIST AND ADMINISTER OXYGEN IF NECESSARY.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

SECTION 7 NOTES:

SECTION 8: RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

AVOID CONTACT WITH MATERIAL. WEAR THE APPROPRIATE SAFETY EQUIPMENT. STOP SPILL AT SOURCE, DYKE AREA TO PREVENT SPREADING. PUMP LIQUID TO SALVAGE TANK. TAKE UP REMAINDER WITH CLAY OR OTHER ABSORBANT AND PLACE IN DISPOSAL CONTAINERS.

SECTION 8 NOTES:

SECTION 9: WASTE DISPOSAL

MATERIAL SAFETY DATA SHEET

PRODUCT CODE: PPWB

WASTE DISPOSAL METHOD:

DISPOSE OF THE MATERIAL IN A WASTE DISPOSAL SITE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL LAWS.

SECTION 10: HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

AVOID ALL SKIN CONTACT. AVOID BREATHING VAPORS. RESEAL PARTIALLY USED CONTAINERS. PROPERLY LABEL ALL CONTAINERS. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES. OBSERVE CONDITIONS OF GOOD INDUSTRIAL HYGIENE AND SAFE WORKING PRACTICES.

OTHER PRECAUTIONS:

MIXED MATERIALS CONTAIN THE HAZARDS OF ALL THE COMPONENTS, THEREFORE, READ THE MSDS OF ALL COMPONENTS TO BECOME FAMILIAR WITH ALL HAZARDS PRIOR TO USING THIS PRODUCT.

SECTION 10 NOTES:

SECTION 11: EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION:

NIOSH APPROVED RESPIRATOR PROTECTION REQUIRED IN THE ABSENCE OF PROPER ENVIRONMENTAL CONTROLS.

VENTILATION :

AVOID BREATHING VAPORS, VENTILATION MUST BE SUFFICIENT TO CONTROL VAPORS.

PROTECTIVE GLOVES:

IMPERVIOUS GLOVES, NEOPRENE OR RUBBER.

EYE PROTECTION:

SPLASH PROOF GOGGLES OR SAFETY GLASSES WITH SIDE SHIELDS.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

CLEAN BODY COVERING CLOTHING AS WELL AS APRON FOOTWEAR OR OTHER EQUIPMENT SHOULD BE USED AS DEEMED NECESSARY TO AVOID CONTACT WITH THE MATERIAL.

WORK HYGIENIC PRACTICES:

OBSERVE GENERAL GOOD HYGIENIC PRACTICES.

SECTION 11 NOTES:

SECTION 12: DISCLAIMER

DISCLAIMER: THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE AND IS BELIEVED TO BE ACCURATE, HOWEVER, THE MANUFACTURER MAKES NO WARRANTY EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THIS DATA OR THE RESULTS OBTAINED FROM THE USE THEREOF. ACCORDINGLY, WE ASSUME NO RESPONSIBILITY FOR INJURY FROM THE USE OF THIS PRODUCT.

MATERIAL SAFETY DATA SHEET

PRODUCT CODE: PPWB

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Preprime WB part B
PRODUCT CODES: 015CLEAR B

MANUFACTURER: Norkan WB
STREET ADDRESS: 9 Guttman Avenue
CITY, STATE, ZIP: Charleroi, Pa. 15022

INFORMATION PHONE: 724-483-9300
EMERGENCY PHONE: Chemtrec 800-424-9300
FAX PHONE: 724-483-9306

PREPARED BY: Harry Jackson

DATE REVISED: 2/24/05

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT</u>	<u>CAS NO.</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>OSHA STEL</u>	<u>WEIGHT %</u>
MODIFIED DIGLYCIDYL ETHER OF BISPHENOL A	25068-38-6	NONE	NONE	NONE	
ALKYL GLYCIDYL ETHER	68609-97-2	NONE	NONE	NONE	

SECTION 2 NOTES:

No toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372 are present.

SECTION 3: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: LOW VISCOSITY LIQUID
BOILING POINT OR RANGE: 200 ° F:
VAPOR DENSITY (AIR = 1) ° F: N/A
SPECIFIC GRAVITY (H2O = 1): 1.1
EVAPORATION RATE: N/A
SOLUBILITY IN WATER: NEGLIGIBLE

SECTION 3 NOTES:

SECTION 4: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER: N/A
(% by volume) LOWER: N/A

FLASH POINT: 200 + F

METHOD USED:

SETA FLASH

EXTINGUISHING MEDIA:

FOAM, ALCOHOL FOAM, CO2, DRY CHEMICAL, WATER FOG

SPECIAL FIRE FIGHTING PROCEDURES:

DO NOT ENTER CONFINED FIRE AREA WITHOUT FULL BUNKER GEAR INCLUDING A POSITIVE PRESSURE NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS, COOL ALL FIRE EXPOSED CONTAINERS WITH WATER.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

NO UNUSUAL FIRE HAZARDS KNOWN.

SECTION 4 NOTES:

SECTION 5: STABILITY AND REACTIVITY

STABILITY:

STABLE

CONDITIONS TO AVOID (STABILITY):

AVOID EXCESSIVE HEAT OR OPEN FLAMES.

INCOMPATIBILITY (MATERIAL TO AVOID):

CAN REACT VIGOROUSLY WITH STRONG OXIDIZING AGENTS AND STRONG LEWIS ACIDS OR MINERAL ACIDS.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:

CO2, ALDEHYDES, ACIDS. REACTION WITH SOME CURING AGENTS CAN GENERATE LARGE AMOUNTS OF HEAT.

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR

SECTION 6: HAZARDS IDENTIFICATION

HMIS HAZARD CLASSIFICATION

HEALTH: 1 FLAMMIBILITY: 1 REACTIVITY: 0 PERSONAL PROTECTIVE EQUIPMENT: B

POTENTIAL HEALTH EFFECTS

EYES:

MAY CAUSE IRRITATION AND MAY CAUSE CORNEAL DAMAGE.

SKIN:

MAY CAUSE IRRITATION OR ALLERGIC SKIN RESPONSE. NOT LIKELY TO BE ABSORBED IN TOXIC AMOUNTS.

INGESTION:

THIS MATERIAL HAS A PROBABLE LOW ACUTE ORAL TOXICITY.

INHALATION:

NO GUIDE FOR CONTROL KNOWN, HOWEVER, EXPOSURE TO HEATED VAPORS CAN CAUSE IRRITATION TO THE NOSE, THROAT OR MUCOUS MEMBRANES.

HEALTH HAZARDS (ACUTE AND CHRONIC):

EPOXY RESINS CAN CAUSE SENSITIZATION BY EXPOSURE THROUGH CONTACT OR HIGH CONCENTRATIONS OF VAPOR.

EYES: INJURY IS UNLIKELY BUT STAIN FOR EVIDENCE OF CORNEAL INJURY.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

RESPIRATORY CONDITIONS OR OTHER ALLERGIC RESPONSE.

CARCINOGENICITY

OSHA: NO NTP: NO IARC: NO

NO CONSTITUENTS OF THIS PRODUCT ARE REGULATED AS CARCINOGENS UNDER OSHA, IARC, OR NTP PROGRAMS.

SECTION 7: FIRST AID MEASURES

EYES:

FLUSH EYES WITH WATER FOR AT LEAST FIFTEEN MINUTES AND CONSULT A PHYSICIAN.

SKIN:

SKIN CONTACT WILL NORMALLY CAUSE NO MORE THAN IRRITATION BUT WASH AFFECTED AREA WITH SOAP AND WATER AND REMOVE CONTAMINATED CLOTHING PROMPTLY.

INGESTION:

LOW IN TOXICITY, INDUCE VOMITING ONLY IF LARGE AMOUNTS OF MATERIAL ARE INGESTED, OTHERWISE DO NOT INDUCE VOMITING AND CONSULT A PHYSICIAN.

INHALATION:

REMOVE VICTIM TO FRESH AIR AREA AND ADMINISTER OXYGEN IF NECESSARY. CONSULT PHYSICIAN IF NECESSARY.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

SECTION 7 NOTES:

SECTION 8: RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

WEAR RESPIRATOR AND PROTECTIVE CLOTHING. SHUT OFF THE SOURCE AT THE LEAK. REMOVE EXCESS WITH VACUUM TRUCK AND TAKE UP THE REMAINDER WITH AN ABSORBANT SUCH AS CLAY AND PLACE IN DISPOSAL CONTAINERS. FLUSH AREA WITH WATER TO REMOVE RESIDUE.

SECTION 8 NOTES:

SECTION 9: WASTE DISPOSAL

WASTE DISPOSAL METHOD: DISPOSE OF THE MATERIAL IN A WASTE DISPOSAL SITE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL LAWS.

SECTION 10: HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

STORE IN COOL DRY PLACE. SEAL ALL PARTIALLY USED CONTAINERS. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES. MIXED MATERIALS CONTAIN THE HAZARDS OF ALL THE COMPONENTS, THEREFOR, READ THE MSDS'S OF ALL THE COMPONENTS PRIOR TO USING MATERIAL. PROPERLY LABEL ALL CONTAINERS.

OTHER PRECAUTIONS:

AVOID ALL SKIN CONTACT. AVOID BREATHING VAPORS GENERATED FROM THE MATERIAL. OBSERVE CONDITIONS OF GOOD GENERAL HYGIENE AND SAFE WORKING PRACTICES. CONTAMINATED LEATHER ARTICLES CANNOT BE CLEANED AND MUST BE DISCARDED IF CONTAMINATED WITH THIS PRODUCT. WASH ALL CONTAMINATED CLOTHING PRIOR TO THE REUSE THEREOF.

SECTION 11: EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION:

USE A NIOSH APPROVED RESPIRATOR AS REQUIRED TO PREVENT OVER-EXPOSURE TO VAPOR IN ACCORDANCE WITH 29 CFR 1910.134.

VENTILATION :

GENERAL EXHAUST IS USUALLY SUFFICIENT TO CONTROL VAPORS AND EXPOSURE HAZARDS. HOWEVER, IF VENTILATION IS NOT SUFFICIENT TO CONTROL VAPORS, A NIOSH APPROVED RESPIRATOR MUST BE USED.

PROTECTIVE GLOVES:

IMPERVIOUS GLOVES – NEOPRENE OR RUBBER

EYE PROTECTION:

SPLASH GOGGLES OR GLASSES WITH SIDE SHIELDS.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

WEAR BODY COVERING CLOTHING AND OTHER COVERING AS NECESSARY SUCH AS APRON AND APPROPRIATE FOOTWEAR TO AVOID CONTACT WITH MATERIAL.

WORK HYGIENIC PRACTICES:

OBSERVE GOOD GENERAL HYGIENIC PRACTICES.

SECTION 11 NOTES:

SECTION 12: DISCLAIMER

DISCLAIMER: THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE AND IS BELIEVED TO BE ACCURATE, HOWEVER, THE MANUFACTURER MAKES NO WARRANTY EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THIS DATA OR THE RESULTS OBTAINED FROM THE USE THEREOF. ACCORDINGLY, WE ASSUME NO RESPONSIBILITY FOR INJURY FROM THE USE OF THIS PRODUCT.



NORKLAD WB

PREMIUM WATERBORNE EPOXY

ORIGINAL COLOR CHIPS CO - 26200 GROESBECK HWY - WARREN, MI



Norklad WB is a two component water based epoxy coating. Low odor, no flammability and excellent adhesion combined with a long lasting finish is why waterborne epoxy dominates the do-it-yourself market. This high gloss epoxy color coat formulated for excellent hide as well as abrasion resistance. Norklad WB is compatible with high performance topcoats; urethanes, epoxies, or 100% solids.

This product has Low VOC and suitable for a variety of applications such as wood, masonry or previous coated surfaces. Steel and vinyl tile can also be coated when primed correctly. This product can withstand exposure to many common solvents and chemicals.

SOLIDS BY WEIGHT:

Mixed = 53% (+, - 2%)

SOLIDS BY VOLUME:

Mixed = 41% (+, - 2%)

VOLATILE ORGANIC CONTENT:

Colors = 1.01 pounds per gallon (mixed)

VOC Compliant in all 50 states.

AVAILABLE COLORS:

Off white, White, Light Gray, Slate, Tile Red, Beige, Taupe, Charcoal, Light Blue, Wheat, Royal Blue, Green, Black

RECOMMENDED FILM THICKNESS:

5 -7 mils per coat wet thickness (yields 2-3 mils dry)

COVERAGE PER GALLON:

229 to 320 square feet @ 5-7 mils wet thickness

PACKAGING INFORMATION

1 gallon, 2 gallon and 5 gallon kits (volume approx.)

MIX RATIO:

8.55# part A (.80 gallons, approximate) to 1.75# part B (.20 gallons, approximate)

SHELF LIFE:

1 year in unopened containers

FINISH CHARACTERISTICS:

Satin gloss (40-80 at 60 degrees @ Erichsen glossmeter)

ABRASION RESISTANCE:

Taber adrasor CS-17 calibre wheel with 1000 gram total load and 500 cycles = 54 mg loss

IMPACT RESISTANCE:

Gardner Impact, direct = 50 in.lb. (passed)

FLEXIBILITY:

No cracks on a 1/8" mandrel

ADHESION:

425 psi @ elcometer (concrete failure, no delamination)

VISCOSITY:

Mixed = 900-1200 cps (colors); (typical)

DOT CLASSIFICATIONS:

Not regulated

ADVANTAGES:

- Chemical, Stain, and Abrasion resistant
- Low odor and a high flash point
- Use over alkyd, latex or epoxy coatings
- Deep penetrating formula
- Easily washed and cleaned
- Low VOC

CURE SCHEDULE: (70F)

pot life – 1 gallon volume 1.0 – 1.5 hours
 tack free (dry to touch)..... 5-8 hours
 recoat or topcoat..... 7-10 hours
 light foot traffic.....16-24 hours
 full cure (heavy traffic).....2-7 days

APPLICATION TEMPERATURE:

55-90 degrees F with relative humidity below 75%

CHEMICAL RESISTANCE:

REAGENT	RATING
acetic acid 5%	B
xylene	B
mek	A
gasoline	B
10% sodium hydroxide	C
50% sodium hydroxide	B
10% sulfuric	B
10% hrdochloric acid	B
20% nitric acid	A
ethylene glycol	C

Rating key: A - not recommended, B - 2 hour term splash spill, C - 8 hour term splash spill, D - 72 hour immersion, E - long term immersion. NOTE: extensive chemical resistance information is available through your sales representative.

PRIMER:

None required, but recommended for better adhesion and uniform sheen

TOPCOAT:

Optional – Norklad WB is compatible with high performance topcoats; urethanes (HPU 747), epoxies (WBC-510), or 100% solids (Norklad 100).

LIMITATIONS:

- * Color or gloss may be affected by humidity, low temperatures, chemical exposure or sodium vapor lighting.
- * Product will yellow in the presence of UV light
- * For best results use a 1/4" or 3/8" nap roller.
- * Slab on grade requires moisture barrier
- * Substrate temperature must be 5°F above dew point.
- * All new concrete must be cured for at least 30 days
- * Improper mixing or too thick of an application may result in product failure
- * Light or bright colors (white, light gray, etc.) may require multiple coats achieve a satisfactory hide, depending on the porosity of the substrate.



NORKLAD WB

APPLICATION INSTRUCTIONS

Original Color Chips – 26200 Groesbeck Hwy Warren, MI 48089 USA – sales@originalcolorchips.com – 1-800-227-8479

SURFACES: New Surfaces: Concrete, Plaster and Masonry - Cure at least 30 days before painting. pH must be 10.0 or lower. Remove laitance and roughen unusually slick poured or precast concrete by acid etching, sandsweeping, grinding, or shot-blasting the floor. If substrate has been washed allow to dry overnight. Remove loose aggregate. Fill voids and cracks in areas of concrete with epoxy filler or patching compound. In moisture prone areas, prime with this product or substitute to achieve best penetration. **Drywall** - Prime with this product or suitable waterborne primer. **Wood** - Prime with this product or prime with suitable waterborne epoxy primer. **Steel** - Prime with waterborne epoxy primer or preprime epoxy. **Galvanized Metal and Aluminum** - Prime with waterborne epoxy primer. **Glazed Brick, Ceramic Tile and Fiberglass** - Scuff sand and prime with waterborne epoxy primer. **Previously Painted Surfaces:** The waterborne components of this product generally allow use over most old coatings. Old coatings should be tested for lifting. If they lift, remove them by chemical or mechanical means. Wash to remove contaminants. Rinse thoroughly and allow to dry. Dull glossy areas by light sanding. Remove sanding dust. Remove loose paint. Mix and begin painting.

PRODUCT STORAGE: Store product in an area so as to bring the material to normal room temperature before using. Continuous storage should be between 60 and 90 degree F. Keep from freezing.

SURFACE PREPARATION: Surface preparation will vary according to the type of complete system to be applied. For a one or two coat thin build system (3-10 mils dry) we recommend either mechanical scarification or acid etching until a suitable profile is achieved. All dirt, oil, dust, foreign contaminants and laitance must be removed to assure a trouble free bond to the substrate. A test should be made to determine that the concrete has an appropriate vapor barrier. This can be done by placing a 4'X4' plastic sheet on the substrate and taping down the edges. If after 24 hours, the substrate is still dry below the plastic sheet, then the substrate does not show signs of eventual hydrostatic pressure problems that may later cause disbanding. However, this product can be applied to a damp floor as long as there are not standing puddles.

PRODUCT MIXING: This product comes pre-packaged by weight. Kits should be mixed in their entirety. If partial kits are to be used, refer to the front of this technical data for proper weight mix ratios. After the two parts are combined, mixes well with slow speed mixing equipment such as a jiffy mixer until the material is thoroughly mixed and streak free. This product is an emulsion product and should be mixed well before using.

PRODUCT APPLICATION: The mixed material can be applied by brush or roller. Maintain temperatures within the recommended ranges during the application and curing process. Apply material with relative humidity within the parameters shown on the technical data. When the end of the pot life has been reached, you will find that the material becomes hard to apply and will actually tend to roll back up onto the roller. Do not try to continue application when the coating has reached this step. Applications made at different times with differing environmental conditions, may show slight variations in gloss.

RECOAT OR TOPCOATING: If you opt to recoat or topcoat this product, you must first be sure that all of the solvents and water have evaporated from the coating during the curing process. Within 7-10 hours it should be ready for your subsequent coat. However, it is best to test the coating before recoating or topcoating. This can be done by pressing on the coating with your thumb to verify that no fingerprint impression is left. If no impression is created, then the recoat or topcoat can be started. Always remember that colder temperatures will require more cure time for the product before recoating or topcoating can commence. Before recoating or topcoating, check the coating to insure no epoxy blushes were developed (a whitish, greasy film or deglossing). If a blush is present, it must be removed prior to topcoating or recoating. A standard type detergent cleaner can be used to remove any blush. Many epoxy overlays and coatings as well as urethanes are compatible for use as a topcoat for this product as well as multiple coats of this product.

CLEANUP: Use PM solvent or soap and water **FLOOR MAINTENANCE:** Caution! Some cleaners may affect the color of the floor installed. Test each cleaner in a small area, utilizing your cleaning technique. If no ill effects are noted, you can continue to clean with the product and process tested.

NOTICE TO BUYER: DISCLAIMER OF WARRANTIES AND LIMITATIONS ON OUR LIABILITY

We warrant that our products are manufactured to strict quality assurance specifications and that the information supplied by us is accurate to the best of our knowledge. Such information supplied about our products is not a representation or a warranty. It is supplied on the condition that you shall make your own tests to determine the suitability of our product for your particular purpose. Listed physical properties are typical and should not be construed as specifications. **NO WARRANTY IS MADE, EXPRESSED OR IMPLIED, REGARDING SUCH OTHER INFORMATION, THE DATA ON WHICH IT IS BASED, OR THE RESULTS YOU WILL OBTAIN FROM ITS USE. NO WARRANTY IS MADE, EXPRESSED OR IMPLIED, THAT OUR PRODUCT SHALL BE MERCHANTABLE OR THAT OUR PRODUCT SHALL BE FIT FOR ANY PARTICULAR PURPOSE. NO WARRANTY IS MADE THAT THE USE OF SUCH INFORMATION OR OUR PRODUCT WILL NOT INFRINGE UPON ANY PATENT.** We shall have no liability for incidental or consequential damages, direct or indirect. Our liability is limited to the net selling price of our product or the replacement of our product, at our option. Acceptance of delivery of our product means that you have accepted the terms of this warranty whether or not purchase orders or other documents state terms that vary from this warranty. No representative is authorized to make any representation or warranty or assume any other liability on our behalf with any sale of our products. Our products contain chemicals that may CAUSE SERIOUS PHYSICAL INJURY. **BEFORE USING, READ THE MATERIAL SAFETY DATA SHEET AND FOLLOW ALL PRECAUTIONS TO PREVENT BODILY HARM.**

MATERIAL SAFETY DATA SHEET

PRODUCT CODE: Norklad WB (015)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Norklad WB Part A
PRODUCT CODES: NorkWB-A

MANUFACTURER: Norkan Inc
STREET ADDRESS: 26200 Groesbeck Hwy
CITY, STATE, ZIP: Warren, MI 48089 USA

INFORMATION PHONE: 586-771-6500
EMERGENCY PHONE: Chemtrec 800-424-9300
FAX PHONE: 586-771-6501

PREPARED BY: Harry Jackson

DATE REVISED: 4/22/05

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT</u>	<u>CAS NO.</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>OSHA STEL</u>	<u>WEIGHT %</u>
1,2 ETHANE DIAMINE, N-(2-AMINO ETHYL)	111-40-0	1 ppm	1 ppm	NONE	
TETRAETHYLENE PENTAMINE	112-57-2	NONE	NONE	NONE	
ETHYLENEDIAMINE	107-15-3	10 ppm	10 ppm	10 ppm	
PENTAETHYLENE HEXAMINE	4067-16-7	NONE	NONE	NONE	
WATER	7732-18-5	NONE	NONE	NONE	
PROPYLENE GLYCOL MONOMETHYL ETHER	107-98-2	100 ppm	100 ppm	150 ppm	
GLACIAL ACITIC ACID	64-19-7	10 ppm	10 ppm	15 ppm	
STODDARD SOLVENT	8052-41-3		100ppm	100 ppm	NONE
2-ETHYL-1-HEXANOL	104-76-7	NONE	NONE	NONE	
*GLYCOL ETHER 2-BUTOXYETHANOL	111-76-2	25 ppm	25 ppm	NONE	<0.5
PROPIETARY ADDITIVE- NJTSRN 80963-5170		NONE	NONE	NONE	
PIGMENT (NON HAZARDOUS IN LIQUID FORM)		10mg/m3	10 mg/m3	5 mg/m3	
FILLER (NON HAZARDOUS IN LIQUID FORM)		20 mppcf	3 MG/M3	NONE	

SECTION 2 NOTES: *Indicates toxic chemical(s) subject to reporting requirements of section 313 of Title III and of 40 CFR 372. PROPYLENE GLYCOL MONOMETHYL ETHER CAS #107-98-2 (ACGIH) STEL= 150 PPM. FOLLOW 311B (2) (A) 40 CRF 116, 117, GUIDELINES. FOLLOW TSCA 8 (A) 40 CFR 712, 47 FR 26992 GUIDELINES

SECTION 3: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: LOW VISCOSITY LIQUID IN VARYING COLORS
BOILING POINT OR RANGE ° F: 212
VAPOR DENSITY (AIR = 1): N/A
SPECIFIC GRAVITY (H2O = 1): 1.2
EVAPORATION RATE: N/A
SOLUBILITY IN WATER: EMULSIFIABLE

SECTION 3 NOTES:

SECTION 4: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, (% by volume) UPPER: N/A
LOWER: N/A

FLASH POINT: 200 +F

METHOD USED:

SETA FLASH

EXTINGUISHING MEDIA:

FOAM, ALCOHOL FOAM, CO2, WATER FOG

SPECIAL FIRE FIGHTING PROCEDURES:

TOXIC FUMES WILL BE EVOLVED WHEN THIS MATERIAL IS INVOLVED IN A FIRE. A SELF-CONTAINED BREATHING APPARATUS SHOULD BE AVAILABLE FOR FIRE FIGHTERS. COOL FIRE EXPOSED CONTAINERS WITH WATER.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

NONE KNOWN

SECTION 4 NOTES:

MATERIAL SAFETY DATA SHEET

PRODUCT CODE: Norklad WB (015)

SECTION 5: STABILITY AND REACTIVITY

STABILITY:

STABLE

CONDITIONS TO AVOID (STABILITY):

AVOID CONTACT WITH OPEN FLAMES AND ALL SOURCES OF IGNITIONS AND SPARKS.

INCOMPATIBILITY (MATERIAL TO AVOID):

AVOID CONTACT WITH STRONG OXIDIZING AGENTS, MINERAL ACIDS AND EPOXY RESINS IN UNCONTROLLED AMOUNTS.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:

CO, CO₂, NOX

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR

SECTION 5 NOTES:

SECTION 6: HAZARDS IDENTIFICATION

HMIS HAZARD CLASSIFICATION

HEALTH: 2 FLAMMIBILITY: 1 REACTIVITY: 0 PERSONAL PROTECTIVE EQUIPMENT: G

POTENTIAL HEALTH EFFECTS

EYES:

THIS MATERIAL CAN CAUSE EYE IRRITATION OR REDNESS. HIGH VAPOR CONCENTRATIONS CAN CAUSE SEVERE IRRITATION TO THE EYES.

SKIN:

IRRITATION TO THE SKIN CAN OCCUR BUT DERMAL TOXICITY IS LOW.

INGESTION:

INGESTION OF MATERIAL CAN CAUSE NAUSEA OR OTHER SIMILAR RESPONSES.

INHALATION:

HIGH CONCENTRATIONS OF VAPOR CAN CAUSE IRRITATION TO THE RESPIRATORY TRACT, NAUSEA, AND DIZZINESS.

HEALTH HAZARDS (ACUTE AND CHRONIC):

PROLONGED OR REPEATED EXPOSURE MAY CAUSE ASTHMA AND SKIN SENSITIZATION OR OTHER ALLERGIC RESPONSES.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

RESPIRATORY CONDITIONS OR OTHER ALLERGIC AILMENTS

CARCINOGENICITY

OSHA: NO NTP: NO IARC: NO

NO CONSTITUENTS OF THIS PRODUCT ARE REGULATED AS CARCINOGENS UNDER OSHA, IARC, OR NTP PROGRAMS.

SECTION 7: FIRST AID MEASURES

EYES:

IMMEDIATELY FLUSH WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE LIFTING UPPER AND LOWER LIDS. GET IMMEDIATE MEDICAL ASSISTANCE.

SKIN:

FLUSH SKIN WITH WATER FOR AT LEAST 15 MINUTES AND REMOVE ALL CONTAMINATED CLOTHING IMMEDIATELY. GET MEDICAL ATTENTION IF REDDENING OR SWELLING OCCURS.

INGESTION:

DO NOT INDUCE VOMITING. DILUTE BY GIVING WATER OR MILK TO DRINK IF VICTIM IS CONSCIOUS. GET MEDICAL ATTENTION IMMEDIATELY.

INHALATION:

REMOVE TO FRESH AIR IF EFFECTS PERSIST AND ADMINISTER OXYGEN IF NECESSARY.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

SECTION 7 NOTES:

SECTION 8: RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

AVOID CONTACT WITH MATERIAL. WEAR THE APPROPRIATE SAFETY EQUIPMENT. STOP SPILL AT SOURCE, DYKE AREA TO PREVENT SPREADING. PUMP LIQUID TO SALVAGE TANK. TAKE UP REMAINDER WITH CLAY OR OTHER ABSORBANT AND PLACE IN DISPOSAL CONTAINERS.

SECTION 8 NOTES:

MATERIAL SAFETY DATA SHEET

PRODUCT CODE: Norklad WB (015)

SECTION 9: WASTE DISPOSAL

WASTE DISPOSAL METHOD:

DISPOSE OF THE MATERIAL IN A WASTE DISPOSAL SITE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL LAWS.

SECTION 10: HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

AVOID ALL SKIN CONTACT. AVOID BREATHING VAPORS. RESEAL PARTIALLY USED CONTAINERS. PROPERLY LABEL ALL CONTAINERS. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES. OBSERVE CONDITIONS OF GOOD INDUSTRIAL HYGIENE AND SAFE WORKING PRACTICES.

OTHER PRECAUTIONS:

MIXED MATERIALS CONTAIN THE HAZARDS OF ALL THE COMPONENTS, THEREFORE, READ THE MSDS OF ALL COMPONENTS TO BECOME FAMILIAR WITH ALL HAZARDS PRIOR TO USING THIS PRODUCT.

SECTION 10 NOTES:

SECTION 11: EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION:

NIOSH APPROVED RESPIRATOR PROTECTION REQUIRED IN THE ABSENCE OF PROPER ENVIRONMENTAL CONTROLS.

VENTILATION :

AVOID BREATHING VAPORS, VENTILATION MUST BE SUFFICIENT TO CONTROL VAPORS.

PROTECTIVE GLOVES:

IMPERVIOUS GLOVES, NEOPRENE OR RUBBER.

EYE PROTECTION:

SPLASH PROOF GOGGLES OR SAFETY GLASSES WITH SIDE SHIELDS.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

CLEAN BODY COVERING CLOTHING AS WELL AS APRON FOOTWEAR OR OTHER EQUIPMENT SHOULD BE USED AS DEEMED NECESSARY TO AVOID CONTACT WITH THE MATERIAL.

WORK HYGIENIC PRACTICES:

OBSERVE GENERAL GOOD HYGIENIC PRACTICES.

SECTION 11 NOTES:

SECTION 12: DISCLAIMER

DISCLAIMER: THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE AND IS BELIEVED TO BE ACCURATE, HOWEVER, THE MANUFACTURER MAKES NO WARRANTY EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THIS DATA OR THE RESULTS OBTAINED FROM THE USE THEREOF. ACCORDINGLY, WE ASSUME NO RESPONSIBILITY FOR INJURY FROM THE USE OF THIS PRODUCT.

MATERIAL SAFETY DATA SHEET

PRODUCT CODE: Norklad WB (015)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Norklad WB - Part B
PRODUCT CODES: NorkWB-A

MANUFACTURER: Norkan Inc.
STREET ADDRESS: 26200 Groesbeck Hwy
CITY, STATE, ZIP: Warren, MI 48089 USA

INFORMATION PHONE: 586-771-6500
EMERGENCY PHONE: Chemtrec 800-424-9300
FAX PHONE: 586-771-6501

PREPARED BY: Harry Jackson

DATE REVISED: 2/24/05

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT</u>	<u>CAS NO.</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>OSHA STEL</u>	<u>WEIGHT %</u>
MODIFIED DIGLYCIDYL ETHER OF BISPHENOL A	25068-38-6	NONE	NONE	NONE	
ALKYL GLYCIDYL ETHER	68609-97-2	NONE	NONE	NONE	

SECTION 2 NOTES:

No toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372 are present.

SECTION 3: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: LOW VISCOSITY LIQUID
BOILING POINT OR RANGE: 200 ° F:
VAPOR DENSITY (AIR = 1) ° F: N/A
SPECIFIC GRAVITY (H2O = 1): 1.1
EVAPORATION RATE: N/A
SOLUBILITY IN WATER: NEGLIGIBLE

SECTION 3 NOTES:

SECTION 4: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR,
(% by volume) **UPPER:** N/A
LOWER: N/A

FLASH POINT: 200 + F

METHOD USED:

SETA FLASH

EXTINGUISHING MEDIA:

FOAM, ALCOHOL FOAM, CO2, DRY CHEMICAL, WATER FOG

SPECIAL FIRE FIGHTING PROCEDURES:

DO NOT ENTER CONFINED FIRE AREA WITHOUT FULL BUNKER GEAR INCLUDING A POSITIVE PRESSURE NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS, COOL ALL FIRE EXPOSED CONTAINERS WITH WATER.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

NO UNUSUAL FIRE HAZARDS KNOWN.

SECTION 4 NOTES:

SECTION 5: STABILITY AND REACTIVITY

STABILITY:

STABLE

CONDITIONS TO AVOID (STABILITY):

AVOID EXCESSIVE HEAT OR OPEN FLAMES.

INCOMPATIBILITY (MATERIAL TO AVOID):

CAN REACT VIGOROUSLY WITH STRONG OXIDIZING AGENTS AND STRONG LEWIS ACIDS OR MINERAL ACIDS.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:

CO2, ALDEHYDES, ACIDS. REACTION WITH SOME CURING AGENTS CAN GENERATE LARGE AMOUNTS OF HEAT.

HAZARDOUS POLYMERIZATION:

MATERIAL SAFETY DATA SHEET

PRODUCT CODE: Norklad WB (015)

WILL NOT OCCUR

SECTION 5 NOTES:

SECTION 6: HAZARDS IDENTIFICATION

HMIS HAZARD CLASSIFICATION

HEALTH: 1 FLAMMIBILITY: 1 REACTIVITY: 0 PERSONAL PROTECTIVE EQUIPMENT: B

POTENTIAL HEALTH EFFECTS

EYES:

MAY CAUSE IRRITATION AND MAY CAUSE CORNEAL DAMAGE.

SKIN:

MAY CAUSE IRRITATION OR ALLERGIC SKIN RESPONSE. NOT LIKELY TO BE ABSORBED IN TOXIC AMOUNTS.

INGESTION:

THIS MATERIAL HAS A PROBABLE LOW ACUTE ORAL TOXICITY.

INHALATION:

NO GUIDE FOR CONTROL KNOWN, HOWEVER, EXPOSURE TO HEATED VAPORS CAN CAUSE IRRITATION TO THE NOSE, THROAT OR MUCOUS MEMBRANES.

HEALTH HAZARDS (ACUTE AND CHRONIC):

EPOXY RESINS CAN CAUSE SENSITIZATION BY EXPOSURE THROUGH CONTACT OR HIGH CONCENTRATIONS OF VAPOR.

EYES: INJURY IS UNLIKELY BUT STAIN FOR EVIDENCE OF CORNEAL INJURY.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

RESPIRATORY CONDITIONS OR OTHER ALLERGIC RESPONSE.

CARCINOGENICITY

OSHA: NO NTP: NO IARC: NO

NO CONSTITUENTS OF THIS PRODUCT ARE REGULATED AS CARCINOGENS UNDER OSHA, IARC, OR NTP PROGRAMS.

SECTION 7: FIRST AID MEASURES

EYES:

FLUSH EYES WITH WATER FOR AT LEAST FIFTEEN MINUTES AND CONSULT A PHYSICIAN.

SKIN:

SKIN CONTACT WILL NORMALLY CAUSE NO MORE THAN IRRITATION BUT WASH AFFECTED AREA WITH SOAP AND WATER AND REMOVE CONTAMINATED CLOTHING PROMPTLY.

INGESTION:

LOW IN TOXICITY, INDUCE VOMITING ONLY IF LARGE AMOUNTS OF MATERIAL ARE INGESTED, OTHERWISE DO NOT INDUCE VOMITING AND CONSULT A PHYSICIAN.

INHALATION:

REMOVE VICTIM TO FRESH AIR AREA AND ADMINISTER OXYGEN IF NECESSARY. CONSULT PHYSICIAN IF NECESSARY.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

SECTION 7 NOTES:

SECTION 8: RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

WEAR RESPIRATOR AND PROTECTIVE CLOTHING. SHUT OFF THE SOURCE AT THE LEAK. REMOVE EXCESS WITH VACUUM TRUCK AND TAKE UP THE REMAINDER WITH AN ABSORBANT SUCH AS CLAY AND PLACE IN DISPOSAL CONTAINERS. FLUSH AREA WITH WATER TO REMOVE RESIDUE.

SECTION 8 NOTES:

SECTION 9: WASTE DISPOSAL

WASTE DISPOSAL METHOD: DISPOSE OF THE MATERIAL IN A WASTE DISPOSAL SITE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL LAWS.

SECTION 10: HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

STORE IN COOL DRY PLACE. SEAL ALL PARTIALLY USED CONTAINERS. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES. MIXED MATERIALS CONTAIN THE HAZARDS OF ALL THE COMPONENTS, THEREFOR, READ THE MSDS'S OF ALL THE COMPONENTS PRIOR TO USING MATERIAL. PROPERLY LABEL ALL CONTAINERS.

MATERIAL SAFETY DATA SHEET

PRODUCT CODE: Norklad WB (015)

OTHER PRECAUTIONS:

AVOID ALL SKIN CONTACT. AVOID BREATHING VAPORS GENERATED FROM THE MATERIAL. OBSERVE CONDITIONS OF GOOD GENERAL HYGIENE AND SAFE WORKING PRACTICES. CONTAMINATED LEATHER ARTICLES CANNOT BE CLEANED AND MUST BE DISCARDED IF CONTAMINATED WITH THIS PRODUCT. WASH ALL CONTAMINATED CLOTHING PRIOR TO THE REUSE THEREOF.

SECTION 11: EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION:

USE A NIOSH APPROVED RESPIRATOR AS REQUIRED TO PREVENT OVER-EXPOSURE TO VAPOR IN ACCORDANCE WITH 29 CFR 1910.134.

VENTILATION :

GENERAL EXHAUST IS USUALLY SUFFICIENT TO CONTROL VAPORS AND EXPOSURE HAZARDS. HOWEVER, IF VENTILATION IS NOT SUFFICIENT TO CONTROL VAPORS, A NIOSH APPROVED RESPIRATOR MUST BE USED.

PROTECTIVE GLOVES:

IMPERVIOUS GLOVES – NEOPRENE OR RUBBER

EYE PROTECTION:

SPLASH GOGGLES OR GLASSES WITH SIDE SHIELDS.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

WEAR BODY COVERING CLOTHING AND OTHER COVERING AS NECESSARY SUCH AS APRON AND APPROPRIATE FOOTWEAR TO AVOID CONTACT WITH MATERIAL.

WORK HYGIENIC PRACTICES:

OBSERVE GOOD GENERAL HYGIENIC PRACTICES.

SECTION 11 NOTES:

SECTION 12: DISCLAIMER

DISCLAIMER: THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE AND IS BELIEVED TO BE ACCURATE, HOWEVER, THE MANUFACTURER MAKES NO WARRANTY EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THIS DATA OR THE RESULTS OBTAINED FROM THE USE THEREOF. ACCORDINGLY, WE ASSUME NO RESPONSIBILITY FOR INJURY FROM THE USE OF THIS PRODUCT.



HPU 747 CLEAR VOC

HIGH PERFORMANCE URETHANE TOPCOAT

ORIGINAL COLOR CHIPS CO - 26200 GROESBECK HWY - WARREN, MI



HPU 747 VOC is a two component polyester/aliphatic polyurethane coating that exhibits excellent characteristics for abrasion resistance, chemical resistance, flexibility, weathering, and UV stability. This product meets the VOC requirements for the newly enacted VOC laws of New York, Pennsylvania, New Jersey, Maryland, Connecticut, Massachusetts, California and other states as an industrial maintenance coating. It is recommended for auto service centers, warehouses, computer rooms, laboratories, aircraft hangers, cafeterias, exterior tanks, indoor or outdoor service and chemical exposures areas.

SOLIDS BY WEIGHT:
64% (clear) (+/- 2%)

SOLIDS BY VOLUME:
60% (clear) (+/- 2%)

VOLATILE ORGANIC CONTENT:
VOC content is less than 2.8 pounds per gallon (mixed)

RECOMMENDED FILM THICKNESS:
3-5 mils per coat wet thickness (yields 2-3 mils dry)

COVERAGE PER GALLON:
320 to 500 square feet @ 3-5 mils wet thickness

PACKAGING INFORMATION:
.75 gallon kit, 3 gallon and 15 gallon kits. 3 gal kit = 2 gallons part A (weight varies by color) and 1 gallon part B (8.5#) (weights and volumes approximate)

MIX RATIO:
2 parts A to 1 part B by volume (approximate)

SHELF LIFE:
1 year in unopened containers

FINISH CHARACTERISTICS:
high-gloss (>70 at 60 degrees @ Erichsen glossmeter)

IMPACT RESISTANCE:
Gardner Impact, direct & reverse=160 in lb (passed)

ABRASION RESISTANCE:
Taber abrasor CS-17 calibre wheel with 1000 gram total load and 500 cycles= 22.0 mg loss

ADHESION:
350 psi @ elcometer (concrete failure, no delamination)

VISCOSITY:
Mixed= 200-600 cps (typical)

DOT CLASSIFICATIONS:
Part A "FLAMMABLE LIQUID N.O.S., 3, UN1993, PGIII"
Part B "FLAMMABLE LIQUID N.O.S., 3, UN1993, PGIII"

HARDNESS:
Shore D= 62

FLEXIBILITY:
No cracks on a 1/8" mandrel

CURE SCHEDULE: (70°F)
pot life – (1 1/2 gallon volume).....2-4 hours
tack free (dry to touch).....3-5 hours
recoat or topcoat.....5-9 hours
light foot traffic.....14-24 hours
full cure (heavy traffic).....3-5 days

APPLICATION TEMPERATURE:
45-90 degrees F.

CHEMICAL RESISTANCE:

REAGENT	RATING
acetic acid 5%	B
xylene	D
mek	A
methyl alcohol	B
gasoline	D
10% sodium hydroxide	E
50% sodium hydroxide	D
10% sulfuric	D
10% hydrochloric acid	C
20% nitric acid	B
ethylene glycol	D

Rating key: A - not recommended, B - 2 hour term splash spill, C - 8 hour term splash spill, D - 72 hour immersion, E - long term immersion. NOTE: extensive chemical resistance information is available through your sales representative.

PRIMER:
Recommend, Urethane is designed as a topcoat but not directly to concrete. For best results primer with epoxy.

TOPCOAT:
None recommended

LIMITATIONS:
*Colors or clarity for clear may be affected by high humidity, low temperatures, or chemical exposure.
*For best results use a high quality 3/8" nap roller.
*Slab on grade requires moisture barrier.
*Substrate temperature must be 5°F above dew point.
*All new concrete must be cured for at least 30 days.
*Colored Version of HPU that are Light or bright colors (white, safety yellow, etc.) may require multiple coats or a suitable color coordinated primer to achieve a satisfactory hide.
*Colors may vary from batch to batch, therefore, use only product from the same batch for an entire job.



HPU CLEARCOAT

APPLICATION INSTRUCTIONS

PRODUCT STORAGE: Store product in an area as to bring the material to normal room temperature before using. Continuous storage should be between 60 and 90 degrees F.

SURFACE PREPARATION: Surface preparation will vary according to the type of complete system to be applied. For a one or two coat thin build system (3-10 mils dry) we recommend either mechanical scarification or acid etching until a suitable profile is achieved. For a complete system build higher than 10 mils dry, we recommend a fine brush blast (shot blast) All dirt, oil, dust, foreign contaminants and laitance must be removed to assure a trouble free bond to the substrate. A test should be made to determine that the concrete is dry; this can be done by placing a 4'X4' plastic sheet on the substrate and taping down the edges. If after 24 hours, the substrate is still dry below the plastic sheet, then the substrate is dry enough to start coating. The plastic sheet testing is also a good method to determine if any hydrostatic pressure problems exist that may later cause disbonding.

PRODUCT MIXING: This product has a two to one mix ratio by volume- merely mix two gallons of part A with 1 gallon part B. After the two parts are combined, mix well with slow speed mixing equipment such as a jiffy mixer until the material is thoroughly mixed and streak free. Avoid whipping air into the coating. Improper mixing may result in product failure.

PRODUCT APPLICATION: The mixed material can be applied by brush or roller. Maintain temperatures within the recommended ranges during the application and curing process. Properly prime the substrate. It is best to maintain a wet edge to avoid roller marks. Direct sunlight or high temperatures may cause visible roller marking during application. Too thick of an application may result in product failure. Exposure to certain types of lighting such as sodium vapor lights may cause the product to discolor.

RECOAT OR TOPCOATING: Multiple coats of this product are acceptable. If you opt to recoat this product, you must first be sure that all of the solvents have evaporated from the coating during the curing process. The information on the front side are reliable guidelines to follow. However, it is best to test the coating before recoating or topcoating. This can be done by pressing on the coating with your thumb to verify that no fingerprint impression is left. If no impression is created, then the recoat can be started. Always remember that colder temperatures will require more cure time for the product before recoating can commence. Before recoating or topcoating, check the coating to insure no contaminants exist. If a blush or contaminants are present on a previous coat, remove with a standard detergent cleaner. When recoating this product with subsequent coats of the urethane, it is advisable to apply the recoat before 24 hours passes. Also, it is advisable to degloss the previous coat to insure a trouble free bond. You can also tack-rag the floor for best possible results. Basically what you'll want to do is degloss the urethane coating by light sanding, then use a rag dipped in thinner (m.e.k., Xylol Xylene, etc) (call tack ragging) and rub over the entire surface and allow to evaporate. This will soften up the coating and allow the subsequent urethane coating to adhere properly

CLEANUP: Use ketone solvents

FLOOR CLEANING: Caution! Some cleaners may affect the color of the floor installed. Test each cleaner in a small area, utilizing your cleaning technique. If no ill effects are noted, you can continue to clean with the product and process tested.

RESTRICTIONS: Restrict the use of the floor to light traffic and non-harsh chemicals until the coating is fully cured (see technical data under full cure). It is best to let the floor remain dry for the full cure cycle.

NOTICE TO BUYER: DISCLAIMER OF WARRANTIES AND LIMITATIONS ON OUR LIABILITY

We warrant that our products are manufactured to strict quality assurance specifications and that the information supplied by us is accurate to the best of our knowledge. Such information supplied about our products is not a representation or a warranty. It is supplied on the condition that you shall make your own tests to determine the suitability of our product for your particular purpose. Listed physical properties are typical and should not be construed as specifications. NO WARRANTY IS MADE, EXPRESSED, OR IMPLIED, REGARDING SUCH OTHER INFORMATION, THE DATA ON WHICH IT IS BASED, OR THE RESULTS YOU WILL OBTAIN FROM ITS USE. NO WARRANTY IS MADE, EXPRESSED OR IMPLIED, THAT OUR PRODUCT SHALL BE MERCHANTABLE OR THAT OUR PRODUCT SHALL BE FIT FOR ANY PARTICULAR PURPOSE. NO WARRANTY IS MADE THAT THE USE OF SUCH INFORMATION OR OUR PRODUCT WILL NOT INFRINGE UPON ANY PATENT. We shall have no liability for incidental or consequential damages, direct or indirect. Our liability is limited to the net selling price of our product or the replacement of our product, at our option. Acceptance of delivery of our product means that you have accepted the terms of this warranty whether or not purchase orders or other documents state terms that vary from this warranty. No representative is authorized to make any representation or warranty or assume any other liability on our behalf with any sales of our products. Our products contain chemicals that may CAUSE SERIOUS PHYSICAL INJURY. BEFORE USING, READ THE MATERIAL SAFETY DATA SHEET AND FOLLOW THE PRECAUTIONS TO PREVENT BODILY HARM.

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**PRODUCT NAME:** Original Color Chips High Performance Urethane**PRODUCT CODES:** HPU 747 Clear**MANUFACTURER:** Original Color Chips Company**STREET ADDRESS:** 26200 Groesbeck Hwy**CITY, STATE, ZIP:** Warren, MI 48089**INFORMATION PHONE:** 724-483-9300**EMERGENCY PHONE:** Chemtrec 800-424-9300**FAX PHONE:** 724-483-9306**PREPARED BY:** Harry Jackson**DATE REVISED:** 9/15/05**SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS**

INGREDIENT	CAS NO.	OSHA PEL	ACGIH TLV	OSHA STEL	WEIGHT %
Propylene Glycol Monomethyl Ether Acetate	108-65-6	none	none	none	
Saturated Polyester Polyol (non-hazardous)	unknown	none	none	none	
Saturated Polyester Resin (non-hazardous)	unknown	none	none	none	
Proprietary Additives (non-hazardous)	unknown	none	none	none	
*Xylene	1330-20-7	100 ppm	100 ppm	150 ppm	<0.5%
2,6-Dimethyl-4-Heptanone	108-83-8	25 ppm	25 ppm	none	
*Ethyl benzene	100-41-4	100 ppm	100 ppm	125 ppm	<0.5%
Dibutyltin Dilurate	77-58-7	0.1mg / m3	0.1mg / m3	0.1mg / m3	
Methyl N-Amyl Ketone	110-43-0	100 ppm	50 ppm	none	
Cellulose Acetate Butyrate Ester	9004-36-8	none	none	none	
Ethyl 3-Ethoxypropionate	763-69-9	none	none	none	
Copper Phthalocyanate	147-14-8	none	none	none	
Carbon black	1333-86-4	3.5 ppm	3.5 ppm	none	

SECTION 2 NOTES: *Indicates toxic chemical(s) subject to reporting requirements of section 313 of Title III and of 40 CFR 372. All components are on the TSCA list Xylene Stel= 150PPM (ACGIH) Methyl N-Amyl Ketone Stel (ACGIH)= 100PPM

SECTION 3: PHYSICAL AND CHEMICAL PROPERTIES**APPEARANCE AND ODOR:** low viscosity liquid with ketone solvent odor.**BOILING POINT OR RANGE:** 279 to 329F**VAPOR DENSITY (AIR = 1):** not available

SPECIFIC GRAVITY (H₂O = 1): 1.0
EVAPORATION RATE: not available
SOLUBILITY IN WATER: negligible

SECTION 3 NOTES:

SECTION 4: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, **UPPER:** not available
(% BY VOLUME) **LOWER:** not available

FLASH POINT: 100F

METHOD USED: Seta Flash

EXTINGUISHING MEDIA: Foam, alcohol foam, CO₂, dry chemical, water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Do not enter confined fire area without full bunker gear including a positive pressure NIOSH approved self-contained breathing apparatus. Cool all fire exposed containers with water. Minimize contact with material.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers may explode when exposed to extreme heat. Solvent vapors may be heavier than air. Under conditions of stagnant air, vapors may build up and travel along the ground to an ignition source which can result in flash back to the source of the vapors. Toxic vapors could be evolved from the combustion of this material.

SECTION 4 NOTES:

SECTION 5: STABILITY AND REACTIVITY

STABILITY: stable

CONDITIONS TO AVOID (STABILITY): Avoid excessive heat or open flames. This material should not be mixed with phosphorous containing material or oxidizers.

INCOMPATIBILITY (MATERIAL TO AVOID): Can react Vigorously with strong oxidizing agents and phosphorous containing materials.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: carbon monoxide and carbon dioxide.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 5 NOTES:

SECTION 6: HAZARDS IDENTIFICATION

HMIS HAZARD CLASSIFICATION

HEALTH: 2	FLAMMABILITY: 3	REACTIVITY: 0	PERSONAL PROTECTIVE EQUIPMENT: G
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POTENTIAL HEALTH EFFECTS

EYES: May cause corneal damage if left untreated which is slow to heal but usually reversible.

SKIN: May cause irritation or allergic response. May cause defatting, dryness, cracking, rash or redness or dermatitis.

SKIN ABSORPTION: Solvents can penetrate the skin causing effects similar to those for acute inhalation symptoms.

INGESTION: Can cause irritation to the digestive tract including sore throat, abdominal pain, nausea, vomiting and diarrhea. Vomiting may Cause Aspiration of solvents resulting in chemical pneumonitis.

INHALATION health risks and symptoms of exposure: Solvent vapors are irritating to the eyes, nose and throat and respiratory tract resulting in dryness of the throat and tightness in the chest. Other symptoms include headache, nausea, narcosis, fatigue and loss of appetite.

HEALTH HAZARDS (ACUTE AND CHRONIC): Chronic Exposure to organic solvents has been associated with various neurotoxic effects including brain damage, nervous system damage or death. Prolonged vapor contact may cause conjunctivitis. Chronic inhalation may also include loss of memory, loss of intellectual ability and loss of coordination. Corneal damage is possible but usually reversible. Repeated Exposure to solvents can cause anemia, liver abnormalities, kidney damage or cardiac abnormalities.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Respiratory conditions or other allergic response.

CARCINOGENICITY

OSHA: NO	NTP: NO	IARC: NO
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ADDITIONAL CARCINOGENICITY INFORMATION: No listed ingredients of this product are regulated as carcinogens.

SECTION 7: FIRST AID MEASURES

EYES: Flush eyes with water for at least fifteen minutes and consult a physician.

SKIN: Wash affected area with soap and water and remove contaminated clothing promptly.

INGESTION: Do not induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician.

INHALATION: Remove victim to fresh air area and administer oxygen if necessary. Consult a physician if necessary.

SECTION 7 NOTES:

SECTION 8: RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition and ventilate the area. Wear appropriate protective equipment such as vapor cartridge or air supplied respirator when necessary. Dike and absorb the material with absorbent such as clay and place in disposal containers.

SECTION 8 NOTES:

SECTION 9: WASTE DISPOSAL

WASTE DISPOSAL METHOD: Dispose of the material in a waste disposal site in accordance with local, state, and federal laws. Empty containers should be handled with care due to product residue and possible vapor from organic solvents. Never use a gas or electric torch to cut the drums.

SECTION 10: HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store in cool dry area. Seal all partially used containers. Wash with soap and water before eating, drinking, smoking or using the toilet facilities. Mixed materials contain the hazards of all the components; therefore, read the MSDS's of all the components prior to using the material. Properly label all containers.

OTHER PRECAUTIONS: Avoid all skin contact. Avoid breathing vapors generated from the material. Observe conditions of good general hygiene and safe working practices. Contaminated leather articles cannot be cleaned and must be discarded if contaminated with this product. Wash all contaminated clothing prior to the reuse thereof. Supply appropriate ventilation or engineering controls prior to using this product.

SECTION 10 NOTES:

SECTION 11: EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION: Use a NIOSH approved respirator as required to prevent over-exposure to vapor in accordance with 29 CFR 1910.134. Use a positive pressure respirator when airborne concentrations are not known or if exceeding TLV's or if working in a confined space. Always consider the hazards from all components in the mixed material state.

VENTILATION: Exhaust ventilation sufficient to keep the airborne concentrations of the solvents and other hazardous materials below the toxic level concentrations.

PROTECTIVE GLOVES: Impervious gloves - neoprene or rubber.

EYE PROTECTION: Splash goggles or glasses with side shields. If the environment warrants, a full

face shield should be employed.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Wear body covering clothing and other coverings as necessary such as an apron and appropriate footwear to avoid contact.

WORK HYGIENIC PRACTICES: Observe good general hygienic practices.

SECTION 11 NOTES:

SECTION 12: DISCLAIMER

DISCLAIMER: The information Contained herein is based on the data available and is believed to be accurate, However, the manufacturer makes no warranty expressed or implied regarding the accuracy of this data or the results obtained from the use thereof. Accordingly, we assume no responsibility for injury from the use of this product.