Nelsonite
POOL AND DECK COATING

HOW TO NELSONITE YOUR POOL

This pamphlet explains how to protect swimming pools with a Nelsonite Pool Coating.

Nelsonite has manufactured pool and deck coatings offering the utmost in beauty and protection since 1945.

Pool coatings are specialty coatings. They have to be resistant to a range of chemical sanitizers and other pool chemicals that make pool water clear, safe and attractive. Properly formulated pool coatings are nontoxic, colorfast, nonchalking and chemically resistant.

You can be assured when using a Nelsonite Pool Coating that you are using the best. Nelsonite Pool Coatings have proven themselves over time in commercial, municipal and residential pools across the country.

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QUESTIONS and ANSWERS

Q: Why does my pool interior have to be refinished?

A: No finish lasts forever under water. The underwater environment and the use of pool chemicals require all pool interiors—whether plaster, fiberglass or pool coatings—to be replaced or refinished on a periodic basis.

Q: What alternatives do I have for refinishing my pool?

A: Two common alternatives are re-plastering and coating.

One common procedure for plaster-finished pools is to replace the old plaster with a fresh coat of plaster. (In many parts of the country, plaster is called marcite. Both are the same thing—white pool cement and aggregate). However, because plaster is a porous surface, the longevity of the surface depends in large part upon how carefully the water chemistry in the pool is maintained. Improper water balance can drastically shorten the life of a plaster-finished pool. Over time, all plaster-finished pools develop stains and tiny cracks, and can become rough to the touch. The deterioration of the surface is accelerated by the practice of acid washing the pool to remove stains.

A pool coating is the most cost-effective way to refinish your pool. Pool coatings offer a variety of technologically advanced finishes. While some pool coatings last 2–3 years, others can last up to 8 years.

Q: Why coat my pool?

A: The main reasons are:

- **Economy.** Coating eliminates the need for costly re-plastering. Coating the pool periodically protects the plaster and eliminates the need for replacing it.
- **Beauty.** A coated pool looks clean and inviting.
- **Ease of Maintenance.** The smooth finish of a coated pool allows it to be kept clean easily.

The pores and cracks are sealed. Stains and dirt clean off easily. Also, because the surface is sealed, less chemicals are used.

Q: Which is the "best" pool coating?

A: There is no ready answer for this question. Nelsonite makes five different pool coatings. Some pool coatings are formulated to be especially easy to use while others require experienced pool coaters. Generally speaking, though, the epoxy pool coatings provide the longer lasting and most durable finish.

The most commonly used pool coatings, however, are the rubber base type. They are relatively inexpensive and easy to apply. They provide a serviceable and easily maintained finish. However, they have certain disadvantages:

(a) They require a bone-dry surface at time of application.

(b) They need 5–7 days of curing time before water can be added to the pool.

(c) They can blister if applied during the hot weather—particularly if the job is a "re-do."

(d) They contain strong and volatile solvents. These solvents can induce headaches and nausea at time of application.

Q: Which is the "best" pool coating for the do-it-yourselfer?

A: We recommend either Speedcote 2000 or Propoxy. These waterborne coatings are environmentally safe and user-friendly. They go on damp surfaces without blistering and do not contain strong solvents.

Speedcote 2000 requires no primer, is the easiest pool coating to apply and allows the pool to be filled in a matter of days.

Propoxy is a two-component epoxy which requires a primer on uncoated surfaces. Propoxy provides a tougher and more stain-resistant finish. Because it is an epoxy, Propoxy has the best adhesion when recoating a previously coated pool.

Both these coatings are suitable for uncoated plaster (marcite) and uncoated concrete. See Chart on Page 8 for which coating to select for previously coated surfaces. Note that Speedcote 2000 cannot be applied to epoxy coated pools. Propoxy, however, can be applied to pools previously coated with rubber base, epoxy or acrylic pool coatings.

Q: How long will a pool coating last?

A: The service life of the pool coating depends upon:

(a) Which pool coating is selected.

(b) The care with which the pool water chemistry is maintained.

(c) Geographical area. Pool coatings applied to pools in a moderate climate have a longer service life than those applied to pools which experience a severe winter.

Q: Does the coating chalk?

A: Some pool dealers and service technicians believe that the coating "breaks down" after a few years and begins to chalk, turning the pool water cloudy. Study after study finds that these so-called "chalking" problems are a result of improper pool water chemistry. Typically, the "chalking" is scaling, a result of minerals in the water. The scale is like a fine dust, most often white, and has a greasy or oily feel. All pool water chemical informational booklets talk about scaling and how to prevent it.

Q: Can I coat my spa with a Nelsonite coating?

A: Spas require the durability and toughness of a solventbase epoxy coating. Only Poolpoxy II or Poolpoxy Hi-Bild are recommended for spas. Also, only plaster or fiberglass spas can be coated—acrylic spas cannot be coated with a Nelsonite coating.

COATING TYPES and COMPATIBILITY

Nelsonite makes five different types of pool coatings.

CR POOL COATING

- Resin type: Solventbase chlorinated rubber
- For use on: Swimming pools, reflecting pools, zoo moats, fountains, fish ponds, and plaster (marcite) and concrete surfaces and surfaces previously painted with a chlorinated rubber or waterborne acrylic coating
- Not for use on: Spas, regardless of surface, aluminum, fiberglass, steel surfaces, surfaces already painted with a synthetic rubber, epoxy or vinyl coatings or any waterproofing clear sealers
- Coverage: 300 sq. ft./gallon
- Cures in 5–7 days @ 77°F
- Provides 3–6 years of service life

SPEEDCOTE 2000

- Resin type: Waterborne acrylic
- For use on: Indoor and outdoor pools, concrete, plaster (marcite), as well as pools previously coated with either rubber base or waterborne acrylic coatings, reflecting ponds, fountains, masonry, and architectural areas subjected to frequent contact with water or moisiture
- Not for use on: Spas, regardless of surface, aluminum, fiberglass or steel surfaces and surfaces previously painted with an epoxy or vinyl coating or any waterproofing clear sealers
- Coverage: 300 sq. ft./gallon
- Cures in 2 days @ 77°F
- Provides 3–6 years of service life

POOLPOXY II

- Resin type: Solventbase epoxy
- For use on: Aluminum, concrete, fiberglass, plaster (marcite), steel, pools previously coated with an epoxy coating and spas that are fiberglass and plaster (marcite)
- Not for use on: Surfaces previously painted with vinyl or waterborne acrylic pool coatings
- NOTE: When coating over chlorinated rubber coating you must first prime with Nelsonite Hi-Bild Primer
- Requires use of epoxy primer on uncoated surfaces
- Coverage: 275 sq. ft./gallon
- Cures in 3–6 days @ 77°F
- Provides 5–7 years of service life

POOLPOXY HI-BILD

- Resin type: Solventborne Epoxy (Two-component)
- High Solids, High Build
- For use on: Diving boards, pools, residential and commercial water park slides. Surfaces such as aluminum, concrete, fiberglass, plaster (marcite), and steel, as well as pools previously coated with an epoxy coating and spas that are fiberglass and plaster (marcite)
- Requires use of epoxy primer on uncoated surfaces
- When coating over chlorinated rubber coating, you must first prime with Nelsonite Hi-Bild Primer
- Coverage: 150 sq. ft./gallon
- Cures in 3–6 days @ 77°F
- Provides up to 8 years of service life
- Designed for the professional pool coater

PROPOXY

- Resin type: Waterborne Epoxy (Two-component)
- For use on: Indoor and outdoor pools, food service areas, locker rooms, washing areas, animal housing and surfaces such as concrete, plaster (marcite) and surfaces previously painted with either an acrylic, epoxy or rubber based pool coating.
- Not for use on: Spas, regardless of surface. Vinyl pool coatings and surfaces such as aluminum, fiberglass or steel.
- Coverage: 300+ sq.ft./gallon
- Cures in 3–6 days @ 77°F
- Provides up to 5–7 years of service life

— PRIMERS —

POOLPOXY PRIMER

- Resin type: Solventbase Epoxy (Two-component)
- For use on: Pools, spas, diving boards, residential and commercial water park slides and surfaces such as concrete, plaster (marcite) and fiberglass that will be painted with an epoxy topcoat.
- Not for use on: Surfaces previously painted with rubber based, vinyl, or waterborne acrylic pool coating.
- Must be overcoated with an epoxy topcoat within a 24–72-hour period
- Coverage: 250 sq.ft./gallon

HI-BILD PRIMER

- Resin type: Waterborne Epoxy (Two-component)
- For use on: Concrete, plaster (marcite) as well as surfaces previously painted with epoxy coating with thin or bald spots or over chlorinated rubber pool coatings before topcoating with epoxy
- Not for use on: Aluminum, fiberglass, steel surfaces, vinyl or waterborne acrylic pool coatings
- Must be overcoated with an epoxy topcoat within a 24–72-hour period
- Coverage: 175–200 sq.ft./gallon

COATING COMPATIBILITY

Each pool coating has its own chemical composition, and some are not compatible with others. Once a pool is coated with a particular kind of pool coating, it must be re-coated with a pool coating compatible with what is already on the surface. Otherwise, the newly applied coating may blister and peel.

The following guidelines are helpful:

(1) Only an epoxy coating can be applied over an epoxy coating. Chlorinated rubber, synthetic rubber and acrylic coatings cannot be applied over epoxy coatings; they will blister and peel.

(2) Solventbase epoxy coatings cannot be applied over chlorinated rubber, synthetic rubber or acrylic coatings.

The following chart is helpful in selecting the correct Nelsonite coating for a previously coated pool:

Type of Coating Now on Pool	*Compatible Nelsonite Coating*			
	Speedcote 2000	CR Pool	Poolpoxy II and Poolpoxy Hi-Bild	Propoxy
Waterborne Acrylic	Yes	Yes	No	Yes
Chlorinated Rubber	Yes	Yes	No	Yes
Synthetic Rubber	Yes	No	No	Yes
Solventbase Epoxy	No	No	Yes	Yes
Waterborne Epoxy	No	No	Yes	Yes
Vinyl	No	No	No	No

A frequent question is, "How can I tell what type of coating is on my pool?" A simple test can determine if it is a rubber base coating or an epoxy coating (the most-used pool coatings). Pour a small amount of Nelsonite's Solvent 150 (or a solvent such as xylene) on a flat portion of the coated pool surface. Let the solvent sit for 30 seconds, then rub the area with a rag. If the coating comes off, it is a rubber base coating. The solvent will not affect epoxy coatings in any way.

Just as certain pool coatings are incompatible with one another, some uncoated surfaces require a certain type of pool coating. While plaster and concrete pools can be coated with several types of pool coatings, aluminum, steel and fiberglass pools require specific coatings. See the chart below for recommended Nelsonite coatings on uncoated surfaces:

Type of Surface	*Compatible Nelsonite Coating*			
	Speedcote 2000	CR Pool	Poolpoxy II and Poolpoxy Hi-Bild	Propoxy
Plaster	Yes	Yes	Yes	Yes
Concrete	Yes	Yes	Yes	Yes
Fiberglass	No	No	Yes	No
Steel	No	No	Yes	No
Aluminum	No	No	Yes	No

COATING INDOOR POOLS

Indoor pools require an extra 2–4 days drying time after the pool has been drained and cleaned before coating.

Indoor pools should be coated with the waterborne coatings since they contain no noxious solvents. Occasionally, however, indoor pools are coated with epoxy coatings for a longer service life.

After coating, another 2–4 extra days drying time is required before filling the pool. During the coating and drying period, forced air circulation is required. The use of fans is required to provide air movement within the pool itself.

SURFACE PREPARATION

All Nelsonite Pool Coatings require the "CLEANING THE SURFACE" procedure described below, even if the pool has been sandblasted.

The surface to be coated must be structurally sound. For example, plaster that is popping off and/or soft cannot be successfully coated. The plaster will continue to come off, taking the coating with it.

If the surface has been coated, all loose and flaking coating must be removed before the cleaning procedure is started.

CLEANING THE SURFACE

Cleaning the surface before coating is essential.

Do the cleaning procedure before patching and surface repairs.

The cleaning procedure described below removes both organic and inorganic matter:

(1) Organic matter consists of suntan lotions, hair oils, perspiration, scum and similar residue. While this material typically "floats" to the top of the pool water, the draining process of the pool deposits this material on the entire pool surface. Organic matter can be removed with Nelsonite Prep A, an acid washing additive.

(2) Inorganic matter consists of the precipitation of the minerals in the water onto the pool surface. While perhaps not visible to the eye, this material can interfere with the adhesion of the coating. Inorganic material can only be removed by muriatic acid.

NEEDED MATERIALS:

(1) A 5-gallon plastic pail

(2) Water

(3) Muriatic acid (pool acid) @ 20° Baumé strength

(4) Nelsonite Prep A

(5) An acid etch brush with polypropylene fibers

(6) A garden hose with a jet nozzle

MIXING THE CLEANING SOLUTION

Make up a solution of 1 part water and 1 part muriatic acid (1:1). For each gallon of solution, add 5 ounces of Prep A.

Prepare the cleaning solution in a 5-gallon plastic container.

(1) Add 2 gallons of water

(2) Add 2 gallons of muriatic acid, *always add acid to the water, and not vice versa.*

(3) Add 20 fluid ounces of Prep A, mix well

Each gallon of cleaning solution will clean about 100–150 square feet.

CAUTION! Do the cleaning operation safely! Wear a long-sleeved shirt, long pants, slip-resistant footwear, safety goggles, rubber gloves and an acid/gas cartridge respirator.

Cleaning the surface is a two-step process:

Step One—Scrub and Clean

The surface should be slightly damp—but not wet—when doing the cleaning operation. If necessary, spray mist the surface with water 1 hour prior to doing the cleaning procedure.

Divide the pool walls and floor into sections, with each section no more than 10 linear feet. Scrub each section vigorously with the acid etch brush and the cleaning solution. Begin at the deep end of the pool. Be sure to scrub the floor around the main drain before it becomes submerged under rinse water.

Step Two—Rinse

Rinse each section with water carefully and thoroughly immediately after it has been scrubbed. Hold the hose with the jet nozzle about 6 inches from the surface and rinse each section by going back and forth in parallel rows.

IMPORTANT! After cleaning the entire pool, carefully check the surface with your fingers. Uncoated surfaces should feel rough to the touch, like fine sandpaper. If some areas remain hard and smooth to the touch, repeat the cleaning procedure in these places. All surfaces should be free of chalk and calcium residue. If white residue remains on the surface, re-clean these areas.

If the surface has been sanded to smooth out rough areas or to remove built-up calcium deposits, these areas need to be acid washed again with a solution of 1 part water and 1 part muriatic acid (1:1).

Allow surface to dry before coating.

SURFACE PREPARATION OF PREVIOUSLY COATED EPOXY POOLS

All previously coated epoxy coatings must "wear" before being recoated. Unless the previously coated epoxy coating is very thin, intercoat adhesion may be a problem. After cleaning the surface, ALL pools previously coated with an epoxy coating must be sanded before recoating. Sand in straight lines using either #80 or #100 grit sandpaper. When recoating a thick existing epoxy coating, a deeper sanding of the surface is required. After sanding, clean the surface with a rag and solvent.

PATCHING THE SURFACE

Many pools may require the patching of cracks, holes and other surface irregularities before coating. Patching should be done after the surface cleaning has been completed. (All cement-based patches must be acid washed with a solution of 1 part water and 1 part muriatic acid (1:1) after installation and before coating).

Use an epoxy patching compound ONLY when coating with an epoxy coating. Sand lightly with #100 grit sandpaper before coating.

APPLICATION

After the pool has been cleaned, let the surface dry before coating. It is best to wait 2–3 days. The exact time, however, will vary according to the type of pool coating used, the daytime temperatures and humidity levels.

After choosing your pool coating, read the label for specific instructions. Coating a pool is a straight-forward procedure. Typically, two people can coat a residential pool in less than two hours per coat.

All Nelsonite Pool Coatings can be applied by brush, roller or spray.

When rolling, use a 3/8- or 1/2-inch roller cover. Solventbase coatings require a roller cover with a solvent-resistant core.

Use Nelsonite 150 for thinning and cleanup when using rubber base pool coatings or solventbase epoxy coatings. *Check your local air quality regulations for VOC limits for solvent usage and cleaning requirements.*

Use only water for thinning and cleanup with Speedcote 2000, Propoxy or Hi-Bild Primer.

Sweep or vacuum the pool carefully before coating.

All epoxy coatings require an epoxy primer on uncoated surfaces. When recoating an existing epoxy coating in good condition, a new coat of primer is not necessary.

Do not use the darker colors when the weather is hot (daytime temperatures above 72°F). The coating film would absorb too much heat and would blister. In hot weather, apply the dark colors in the evening.

Speedcote 2000 and all epoxy coatings require air temperatures of at least 55°F to cure properly.

The most common problem encountered in coating a pool is blistering or bubbling of the coating, particularly if it is a rubber base pool coating. Blistering may occur for the following reasons:

(1) The coating is applied with either too long a roller nap or the wrong type of nap.

(2) The surface is too wet at time of application.

(3) The product is applied in the early morning of a hot day, and the top of the coating film dries first, sealing in the solvents.

(4) There was an inadequate acid wash of the surface before coating. The cleaning solution must contain the proper ratio of water to muriatic acid—at least 1:1. Many surfaces may require a stronger water-to-acid solution. Often, certain areas of the pool have to be cleaned more than once.

(5) The coating is applied too thickly. Most pool coatings must be applied in thin coats.

(6) The water is put in the pool too soon.

These factors are controllable and preventable. Proper preparation of the surface and a careful application of the coating will result in a trouble-free job.

WARNING! Coating the steps and shallow areas will make them smoother and more slippery when under water. To help avoid slip and fall accidents, the steps and shallow walking areas in the pool MUST be made slip-resistant. Use either Nelsonite Add-A-Grip or clean white silica sand. Sprinkle on the surface when the first coat is still wet. Once the coating is dry, sweep off the excess and then overcoat with one thin coat.

Never walk in an empty coated pool, especially under humid or wet conditions. Coated surfaces can be very slippery when wet and can cause slip and fall accidents.

CURING OR DRY TIME

When the water can be added to the pool depends upon the type of pool coating selected, daytime temperatures and humidity levels. Read label instructions. If possible, always add a day or two to ensure that the coating dries thoroughly.

HELPFUL HINTS

- Read and follow label instructions at time of application.
- Stir the coating thoroughly and intermittently, especially when coating with a color.
- For ease of mixing the coating, turn the cans upside down the night before applying.
- Never coat in the direct sun in hot weather.
- Most pool coatings must be applied in THIN coats. Bubbling and blistering may occur if applied too thickly.
- If minor blistering does occur, either scrape the blistered area with a paint scraper or lightly sand the blisters with #100 grit sandpaper. Then simply apply another thin coat of the pool coating.
- When coating with a color, always coat from the same batch number (stamped on lid) or intermix coating from different batches.
- Always record the batch number (stamped on lid) and the type of coating you use on the pool and keep this information in a permanent file.
- Use Nelsonite Deckgard on your decks and coping.
- Water quality and chemistry varies considerably from one geographical location to another. Before filling the pool, seek expert advice from a pool professional in your area to avoid improper start-up procedures that may cause stains on the newly coated surface.
- All spas require the toughness and durability of a solventbase epoxy coating—use only Poolpoxy II or Poolpoxy Hi-Bild on spas.
- If you are coating a steel, aluminum or fiberglass pool, ask your dealer or distributor for a copy of the appropriate Nelsonite Informational Bulletin.

PRODUCTS, PERFORMANCE and OVER 65 YEARS EXPERIENCE, ALL ROLLED INTO ONE.

Nelsonite has been developing and manufacturing pool and deck coatings since 1945.

Success in pool coating depends upon a good coating and *proper surface preparation.*

Nelsonite offers a variety of informative materials, including detailed Product Profiles for each coating, Color Charts, and Informational Bulletins, all available from your dealer.

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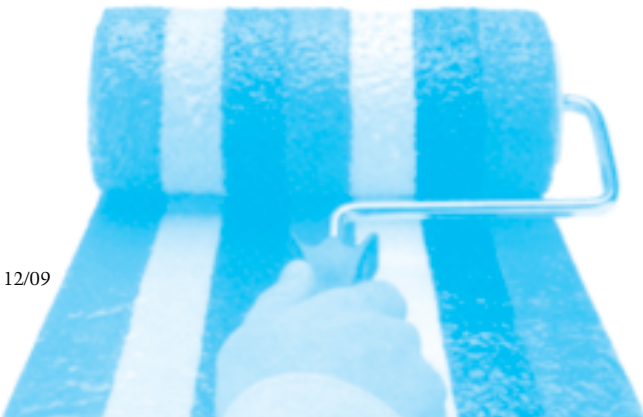

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