Fluoropolymers for swimming pools

Application Instructions

(With appendix how to look after the coating and pool water)

1. Introduction:

We've laid out the Application Procedure in easy-to-follow sections.

It's quite comprehensive, however not all sections will apply to the pool to be repaired, so **select** (MARK) the ones that are relevant.

The general process for ALL pools is:

- Empty pool
- Wash surface with detergent
- Survey surface and mark any defects
- Remove any defective areas
- Repair areas that have been seen as defective
- Apply an Acid and / or Algaecide wash (if necessary)

- Allow pool to dry
- Apply **E2100** Primer (if necessary, for porous surfaces)
- Apply **E4115** Undercoat (if necessary, for rough, uneven surfaces)
- Apply PaintNForget V 790 Topcoats (2-3 coats) as required by the surface of the pool.

Not sure about something, then please ask, before continuing. We want you to provide a great finish. **And see INFO BANK** heading on the **paintnforget.com** web site.

Done well your client can expect a 7 - 12 PLUS years life before a recoat is considered with domestic pools. For commercial pools, a life of 5 - 7 PLUS years, before a recoat is considered.

PAINTNFORGET V 790 is a great and durable coating but requires consistent dft thickness of 5 mils to perform and this can be achieved with minimum of 2 coats. Therefore, don't be tempted to spread it out. If you do, it won't last.

We can't stress this enough!

Surface preparation is a key aspect in getting the best performance from the pool coating.

It probably represents 90% of the overall success. So, spend time and do it once and do it well. Your client will reap the rewards for doing so, for many, many years.

All data given and statements and recommendations made are based on our research and experience and are believed to be accurate. However they are for guidance only and as no control can be exercised by this company over the end usage, no guarantee or their accuracy is made or implied. It is recommended that the user makes their own tests to determine the suitability of the product for their own requirements

2. Before You Start

The main steps are:

- ✓ Check the weather conditions for the next week or so.
 - ✓ Check safety and health issues.

✓ NOTE:

Concrete swimming pools which have not had the appropriate damp course affixed during construction may be subject to hydrostatic pressure causing problems with the paint coating.

3. Leaking Pools.

To make sure it's leaking and not just evaporation, fill pool to its normal level and also fill a bucket of water and place close to pool edge. Mark water levels on both. Wait 24 or 48 hours and compare changes. If same decrease in levels, then its evaporation and if pool water has gone down more than bucket water, indicates a possible leak in the pool.

It may be best to let pool continue to lose water till it stops. Then determine cause.

- ✓ If at bottom of skimmer box, infers leaks here or in plumbing.
- ✓ If at a level where pipes leave or enter pool, then leaks there or in plumbing.

- ✓ If at some other level may mean cracks in concrete or fiberglass pool.
- ✓ If to nearly empty, then probably hydrostatic valve leaking.

In areas with clay type soils, during wet and dry season cycles, below ground pools may tend to shift or move, this causes the pipe work to fracture, causing leaks. If in doubt get pipe work pressure tested, See "Leak Detection" on the web. Have pipe work issues attended to before painting.

4. Weather

Check the weather beforehand, wait till the weather is right, as trying to beat it may mean an inferior application.

NOTE: PAINTNFORGET V 790 is a

MOISTURE SENSITIVE product and requires
completely dry substrate to adhere. E2100
primer can be applied over slightly damp
surfaces. E4115 and PAINTNFORGET V 790
require dry surfaces. Make sure they are.

Surface preparation can be undertaken in colder, wetter, or hotter weather than when actually painting. Just be aware of the weather conditions as to how they will affect your desire to work in them!!

- ✓ Application ambient temperature to be between 60 8oF, warm and sunny, with light winds.
- ✓ DO NOT apply if **surface** temperature is below 4oF or going to fall below this within 4-6 hours. (At below 4oF surface temperature, the curing hibernates, until above 4oF. again).
- ✓ Consider a cover-tent and oil heaters inside pool to warm up surfaces, if need be.
- ✓ Do not apply if ambient temperature is above 8₅F, as it will be too hot for you to work effectively, and the solvent might evaporate too fast for consistent thickness.

- ✓ If rain is expected within 12 18 hours of completing the application, DON'T start. (A waterproof cover excepted)
- ✓ Apply in early morning, and finish before midday.

A well-fixed tarpaulin / marquee can help mitigate some bad, wet, cold or hot weather and

Pool Cover: if used make sure it's anchored to prevent being blown away or rain running into the pool. It will help prevent dust blowing onto wet coating. (Windblown dust leads to rough/hard/gritty finish which is uncomfortable to touch). If in a leafy area, consider a temporary shade cloth to prevent leaves falling on wet paint.

NOTE: Painting pools IS NOT recommended in areas subject to overnight temperatures below 40F. Wait till spring or early summer.

5. Health and Safety

Working around a pool requires care. Make sure no one is allowed to enter the pool area, particularly children and/or pets while you are working in the pool.

- \checkmark Be aware of where the pool edge is at all times
- ✓ Move pots, ornaments, and furniture away from the pool.
 - ✓ Give yourself plenty of room.
- ✓ Do NOT mix electricity and water, use electric tools with a ground-fault detection system.

6. Emptying the pool:

Use submersible pump to empty the pool.

When emptying the pool note the following:

- ✓ A Hydrostatic valve should be at the bottom of below ground pools, particularly Fiberglass ones.
- ✓ This valve is there to release any water that is under the pool, into the pool, so as to relieve pressure.
- ✓ Such groundwater is pumped away as the pool is nearly or completely empty.
- ✓ Check that the pool has such a valve, especially Fiberglass ones, if not proceed carefully.
- ✓ You may choose to empty the (Fiberglass) pool in 1/3rds to see if any issues. (1/3 each day and monitor result and watch to see it does not "lift up pop out", and if it does refill it quickly.
- ✓ If pool at bottom of slope, in wet soil or near sea or lake, then ground water levels may be an issue.
- ✓ Some pools (Fiberglass) may have an inspection point (standpipe) near pool to check ground water level, before emptying. Usually, it shows as a grating near the pool in the surrounding paving. It may be connected to a porous/aggregate drain around the pool area. If water table is high, insert flexible hose and attempt to pump the excess water and lower water table, using this feature.

SAFETY IS NO ACCIDENT

- ✓ When using equipment follow manufacturers recommended safety procedures
- ✓ When using cleaning chemicals protect skin, eyes, hands, and clothes.
- ✓ If grinding or sandblasting, protect eyes, ears and breathing with suitable products.
- ✓ When using PAINTNFORGET V790 protect yourself properly. Use barrier cream on your hands to facilitate washing up.
- Hydrostatic valves may leak after pool is empty, this can be dealt with by using a 3ft x2ins standpipe screwed into a 2 ins Pressure Adaptor Valve, (see a good plumbing supply) which is screwed into your pools Hydrostatic valve fitting. Or fit a hose or build a dam and pump out as needed.
- ✓ Bracing may be needed across the pool (Fiberglass) to stop walls bending. Use screw jacks or timber as needed, (3 5 usually) across the pool with large pads to spread the load, about ¾ way up the wall from the bottom. You will need to move them to paint behind them.
- ✓ Consider replacing the Hydrostatic valve, when pool empty. (See a pool shop).

Most pools in dry areas are fine when empty though should not be left too long in this state, especially fiberglass ones. Marcite and similar pools can dry out and become frail if left empty in hot weather. Render - plaster type may be come drummy if left too long.

As a general guide leaving a pool empty for longer than 2-3 weeks is not recommended.

Use common sense and be ready for any issues which may arise

7. Equipment: (prep and application) See INFOBANK on website

Having the right equipment for the job at hand will make for a better result.

Empty Pool: Submersible Pump

Surface Preparation:

General: Brooms, rags, buckets, sponges and old towels, respirator and suitable filters.

Sandblasting: Sand/abrasive/soda blaster.

Grinding- Sanding: Angle grinder and plenty of discs, (Flex O vit, Norton Sanding Discs, Flapper) or Orbital

Sander, goggles, dust masks, overalls. NB: Use dustless / vacuum sanders.

Water blaster: 1500 psi for general cleaning, 5000+ psi for old paint removal, overalls,

gloves and full-face mask or goggles. Consider Ultra High-Pressure Water blasting at

about 40,000 psi, for very difficult paint removal.

Application: (see INFOBANK on website: paintnforget.com)

E 2100/4115, FP PAINTNFORGET V 790: Overalls, gloves (disposable), goggles and barrier cream (to

make it easier to wash your skin)

Mixing: Electric hand drill and stirrer. (450 - 600 rpm) 3 ½ or 4-inch ribbon mixer.

Application: Roller and Trays, Handles and Extensions. 9 ins wide for general areas, 3 - 4 inch for

corners etc.2+ Gal straight sided bucket(s).

Brushes: 1 1/2, 2-inch, professional quality

Roller Sleeves: Solvent tolerant Dralon, Mohair, Microfiber sleeves. Use $3/8 - \frac{1}{2}$ ins nap for smooth

surfaces and 3/4 – 1 ins for rough or uneven surfaces. Can use lamb's wool sleeves on

rough/uneven surfaces, e.g. river pebbles or glass beads.

Spray Application: Airless unit, 2500 – 3000 psi, 519 – 515 tip.

Masking tape: Painters Green Masking Tape

Line Marking: Texta Jumbo Liquid Chalk.

Surface Temperature Infra-Red Thermometer, good quality professional one.

Measuring Scales (for small amounts):2 – 3lb Digital Bench Scales, for accurate measuring of Resin and Catalyst and to prevent under or over cure, for when using part batches – packs.

NOTE: Appropriate shoes should be always worn and have some clean rags handy along with fresh water, soap and a towel. Wash hands before consuming any food or drinks.

Materials:(for surface preparation and application)

Polyester based: For fiberglass pools, for worn areas & holes: use fiberglass repair kits.

Grout: For concrete type pools, as needed for repairing drummy areas, holes etc:

- Sika's Sikadur-31, Sikatop 123
- Laticrete 254 Platinum

Cement based fillers: For concrete type pools, repairing drummy areas and (blow) holes etc: (must be suitable for water immersion).

- Sika 123
- Leslie's Patch-it, all-purpose waterproof cement
- Pool Patch Hydrobond

Sealants: For moving joints, cracks.

- Sika sil- Pool.
- Sika flex 291, 11FC or Pro
- If painting over sealants use Urethane, NOT silicone-based sealants

Leaking concrete: (Inc Hydrostatic Pressure)

- UGL Drylok Fast plug
- Sika Top Seal 107 for dealing with Hydrostatic pressure

Rusted steel work:

- Anticorrosive primers: Sika Armatec 110, Sika Armatec 1C
- Master Builders Masterflow 110AN

Cracks in concrete: (Small cracks non-moving) Good hardware shops.

- Araldite Super strength Epoxy
- Sikadur 32 High Modulus Epoxy
- Sikadur Crack Fix
- Larger non-moving see grout, above.

Friable concrete, plaster aggregate, River pebble finishes:

- Pool Patch Pebble Repair Kit
- Concrete/Plaster aggregate use Masterkure HD 300WB

Cleaning:

 Acid Etching: Hydrochloric, Muriatic acid Cleaner/Degreaser: Water based Degreaser (ZEP)

 Algaecide Treatment: Such as Clorox Pool & Spa Algae Eliminator, HTH Super Algae Guard 60, In The Swim Super Algicide, (or locally recommended type/)

Coating:

THE PRIMER: E2100 WB Primer4L (1.057 gal) packs, for porous surfaces or rough (abrasive blasted) Add up to 30% of water to each supplied E2100 x 4L(1.057 gal) pack.

THE UNDERCOAT: E4115 100% Epoxy 5Kg (11lb) packs, for uneven or rough (abrasive blasted)

PAINTNFORGET V 790 packs (Part A Base 4L (1.057 gal)) & (Part B Hardener 1L, (1.057 qrt) Total 5L (1.321 gal) in selected color(s),

THE THINNERS: For E4115, use Methylated Spirits or V122 Thinners 4L (1.057 gal) for summer application OR V111 for winter/cool climate applications.

8. Surface preparation: (clean, repair, dry and then paint)

All surfaces **must be** clean, dry, sound and stable, before application.

IMPORTANT: Fluoropolymers are moisture sensitive and require both dry surfaces and conditions to cure.

- ✓ PAINTNFORGET V790 will not bond to contaminated surfaces. (NOTE: Acid DOES NOT clean surfaces ONLY detergent will.)
- ✓ May be applied to concrete/plaster surfaces, previously painted, Marcite, Pebble Tec, Diamond Brite, Quartzon or similar as well as for Fiberglass.
- ✓ Not usually suitable for Acrylic Surfaces (Spas)

- ✓ Not suitable on Chlorinated Rubber or Acrylic painted surfaces. (Need to be removed first)
- ✓ Make sure not subject to hydrostatic water movement (seeping water from behind). Will blister.
- ✓ Some surfaces, such as plaster/render, Marcite Plaster etc, may have drummy areas. (That is, areas where the surface has become detached from the underlying concrete. When tapped sounds hollow or drummy! Use a screwdriver, hammer, or broom handle to tap your way around the pool, mark "hollow" areas as you go). Remove anything bigger than about 1–2 inches across.

8.1. New Concrete / Concrete Block / Brickwork (plaster/rendered):

- ✓ Need to be very "light" wood float or sponge finish.
 - ✓ Be structurally sound.
 - ✓ Concrete cured correctly for 28 days.
 - ✓ Cinder block rendered or well bagged.
 - ✓ Coves fillets in all corners.
 - ✓ Brickwork, to be secure and rendered.
- ✓ No major cracks should be visible. If in doubt, contact us first. (Hairline cracks ok).
- ✓ For newly applied render, should cure correctly for 7-14 days.
- ✓ Make sure there is no oil, grease, release agents on surfaces.

- ✓ Fill any blow holes, sand flush. Use sand cement or refer Section 8.
- ✓ Any general depressions etc. may be filled with Laticrete 254 Platinum, etc
- ✓ Wash down with warm water/detergent and stiff brush.
- ✓ Rinse well to ensure all detergent is removed. Water blast (mild) is better.
 - ✓ Then Acid Etch, refer Section 9.8.
 - ✓ Allow to dry. (2 3 warm / windy days)

8.2. Old Concrete/Plaster Surfaces:

- ✓ These surfaces will usually harbour many fats, algae and mould if not protected while pool has been in use. They may be stained, cracked and drummy.
- ✓ Make sure no grease, suntan or body oils on surfaces.
- ✓ Wash down all areas with warm water/detergent (Commercial Degreaser) and stiff brush. (Medium pressure water blaster with detergent feed okay).
- ✓ Thoroughly rinse well to ensure all detergent is removed. Repeat cleaning treatment if in ANY doubt, especially at water line (top 12 inches) and on steps or where people sit.
- ✓ Can use Tri Sodium Phosphate as alternative cleaner. Sugar soap is NOT recommended. Check surface conditions as you go.
- ✓ Carefully check all surfaces, tapping to find "drummy" areas and digging into soft locations, to understand the extent of the condition. Refer beginning of Section 9 above.

- ✓ Remove all such material with cold chisel to expose sound surface underneath and nearby.
- ✓ Any rust spots also need to be dug out to solid concrete and around rusty steel to fully expose including to the rear. Wire brush to remove loose flakes. Treat exposed steel with an anticorrosive primer. It is not likely you can stop rust coming back in adjacent areas as water runs along re bars and the rusting will start nearby again and break through a few years later.
- ✓ Rebuild any removed surfaces to match existing, with mortar if areas small, for large areas use a Cement based Filler (see Section 8 above). Allow to cure. Sand flush to match adjacent areas.
- ✓ Any general depressions etc may be filled with Laticrete 254 Platinum, etc
- ✓ If necessary, apply algaecide to kill algae roots. See Section 9.9 below.
 - ✓ Then Acid Etch, see Section 9.8.
 - ✓ Allow to dry. (2- 3 warm / windy day

8.3. **Previously Painted** (Concrete, Marcite or Pebble Tec and Fiberglass etc)

- ✓ Such surfaces may be chalky, whitish or flaky.
 - ✓ There may be algae present as well. Need to check paint type to see if, chlorinated rubber or acrylic.
- ✓ To ensure that the existing coating is not Chlorinated Rubber, (clean a small area with soapy water and dry off. Soak a portion of clean white rag in Xylol / Xylene solvent, supplied Thinners or Acetone based Nail Varnish remover.
- ✓ Hold the wet solvent rag on an area of about a 25-cent coin, for 20 30 seconds. Then slowly rub and remove rag.
- ✓ If the coating dissolves back to the substrate, with color saturating the rag and the moist paint forms "sticky" strings if touched repeatedly with the finger, the paint is most likely Chlorinated Rubber.
- ✓ To check for Acrylic paint, follow same process but use Methylated (Meths) Spirits. It will soften acrylic paint.
- ✓ This check can also be done with pool full of water, but you will need to be quick so as to see the result and not put too much solvent into the pool water.
- ✓ Paints that are **not dissolved** by Xylol Thinners or Acetone may be over coated.
 - ✓ Other paints, if not sure, call us.
- ✓ Carefully check all cementitious surfaces, tapping to find "drummy" areas and digging into soft locations, to understand the extent of the condition. Also check for rust stains. Follow directions in Section 9.2
- ✓ For painted Fiberglass surfaces, follow directions in Section 9.4, as well.
 - ✓ Remember, if it is Chlorinated Rubber (Or Acrylic/Oil Based – paint, all these are NOT compatible. They must be removed before applying PAINTNFORGET V 790.
- ✓ This is best done by Sand (Abrasive) or Soda Blasting, carried out by a professional. Make sure the blaster understands how to remove the paint without disturbing the underlying surface. If in doubt, contact us first. They may leave an area of up to 2 inches around tiles etc. that you will have to hand prepare. Also make sure blasting contractor removes all residues.
- ✓ Alternatively, the paints can be removed by grinding off or by high pressure water blasting (5000+ psi) may.

- ✓ Chemical cleaning using thinners such as Acetone or Paint Stripper is possible though usually for small areas only.
- ✓ Rebuild surfaces to match existing with an epoxy mortar if areas small. For larger areas use a Cement based Filler (see Section 8 above).
- ✓ Allow to cure. Sand flush to match adjacent areas.
- ✓ Any general depressions etc. may be filled with Laticrete 254 Platinum, etc. as a skim coat. (Cement surfaces). Refer to Section 8.o.

For painted areas:

- ✓ Thoroughly clean surfaces by scrubbing with detergent solution (to remove body fats etc.) or water blast with detergent feed and thoroughly rinse to remove washing residues. See Section 9.2 above for more details.
- ✓ Remove all loose, flaking, and degraded paint by machine grinding or sanding (wet and dry #60 grit paper with orbital sander) or wet/dry (sweep) sand or soda blasting. Sand blasting by a skilled operator usually provides the best solution and it should then be ready for recoating. The end result should be a profile of about 60/80 grit. Clean and remove all debris, with clean, freshwater wash (mild water blast).
- ✓ As an alternative to abrasive blasting, high pressure water blasting (5000+ psi) may be successful in removing oxidised, loose paint, however, it may not be as effective and not allow for the best adhesion with the new coatings.
- ✓ For small areas, rebuild surfaces to match existing with an epoxy mortar. For large areas, use a Cement based Filler. See Section 8 above.
- ✓ Allow to cure. Sand flush to match adjacent areas.
- ✓ Any general depressions may be filled with Laticrete 254 Platinum, etc. as a skim coat. See Section 8.o.
- ✓ If necessary, apply algaecide to kill algae roots. See Section 9.9.
- ✓ Only where concrete/plaster exposed by grinding/sanding/blasting, then these should be acid etched and rinsed thoroughly see Section 9.8.
 - ✓ Allow to dry, (2-3 warm / windy days).
- ✓ Consider Ultra High-Pressure Water blasting, 40,000 psi as an alternative approach to above

8.4. Fiberglass Pools:

NOTE: Fiberglass pools come in different levels of quality and may be structurally weak from a range of issues during their life. If the pool seems in poor condition seek advice from a fiberglass or pool professional, before proceeding to empty. See Section 6 above also.

- ✓ Most pools will have a degraded, whitish surface.
- ✓ Any small (hairline) cracks may be safely ignored as the PAINTNFORGET V 790most likely fill them. However, contact us if you see any of:
- Larger cracks, holes, or defects
- Fiberglass fibers or "brown" stains
- ✓ Safety Tread Areas: Some pools have these on steps and / or bottom. It is difficult to get good adhesion to bottom of the depressions, as one cannot clean or abrade these parts so either sand completely smooth (And apply non-slip surface within the PAINTNFORGET V 790 application, (See Section 11) or clean and prepare with rest of pool surface, knowing that long term adhesion PAINTNFORGET V 790 may be an issue on these surfaces. A wire brush will help clean out the depressions. (Soda blasting recommended – see below)
- ✓ Osmosis may be present in some older pools; unfortunately, it will be there for the life of the pool. It's a slow process which creates blisters on the inner pool surface (gel coat) and over time these break becoming holes into which algae may colonise. (Black spot). Generally, though unsightly osmosis will not be a structural issue with most pools. NO matter what you do to treat it, osmosis will slowly come back as it's fundamentally the result of the method of construction. A lot has been written about Osmosis, so check it out.
- ✓ Heavily worn areas (Fibers visible) mean the colored gel coat has been worn away and the color usually appears as a brown-whitish hue. Depending on the extent of wear, re coating with fiberglass mat and resin may be needed to rebuild the surface. In less worn areas, using just the PAINTNFORGET V 790 may be

- Osmosis, bubbles, blisters etc.
- Black spot
 - sufficient. Usually, you will need to wait till pool empty to decide best approach. NOTE: Areas above the water line, gutters, and curves etc, get a lot of wear, so make sure you coat them well.
- ✓ Holes, cracks etc, will need substantial repairs and can only be fully assessed when pool is empty.
- ✓ Make sure no grease, suntan or body oils remain on surfaces. Wash down with warm water/detergent (Commercial Degreaser) and stiff brush. Rinse well to ensure all detergent is removed. Water blast (mild) is better. Repeat treatment if in ANY doubt, especially at water line (top 12inches) and on steps or where people sit. Can use Tri Sodium Phosphate as alternative cleaner. Sugar soap is NOT recommended.
- ✓ Need to remove oxidised gel coat ONLY. Abrade by Soda Blasting (recommended) or machine disc sanding / orbital sander (#60 grit wet / dry paper or ZEC disk) the entire pool surface to be painted paying particular attention to all discolored and degraded surfaces. Finished surfaces should be an evenly roughened, matt surface all over the pool. Any missed areas will result in blistering of the PAINTNFORGET V 790. Be careful not to dig into surface beyond gel coat level. (Gel coat is usually 25 30 mils thick).
- ✓ Osmosis and Black spot maybe present and should be treated as follows:
 - To check, prick any blisters and note if water runs out. If so, then make sure all blisters are broken and allowed to dry out before repairing.
 - As part of the overall sanding process sand off the tops of these, digging into any larger ones, allowing the dirty smelly water (if any) to run out. Get back to sound edges on larger holes. Let dry for several days.
 - Osmosis, once in a pool is there for life. It's a slow process so will come back over time.

Generally dealing with the worst is what most people do, however if the client wants a nicer looking pool for longer, seek out all bubbles and sand them out.

- We have a separate document on this if you wish to be more thorough, please ask.
- Repair these plus any small surface irregularities / holes with suitable filler, (epoxy or similar) or if not available a Polyester Filler may be used.
- Follow directions of manufacturer. Sand smooth when cured, 3 – 7 days, (see comments below)
- ✓ If holes through or the fiberglass fibers (white strands) are visible before repairs start, contact us.

General approach is:

- Holes, splits, cracks, can feel white fibers: Will require a bandage of chopped strand matt (CSM) and resin to repair area. Need to remove any water from the area first. Get fiberglass repair contractor to do this work.
- ✓ Worn areas, but not feel fibers: Apply one layer of mixed A and B resin from fiberglass repair
 - ✓ If necessary, apply algaecide to kill algae /

black spot roots. Thoroughly rinse off all detergent/residues with clean fresh water and allow to dry. See Section 9.9

- In all cases follow repair kit instructions.
- Note that NEW fiberglass repairs (or rebuilt areas) can have un-reacted styrene monomer and or waxes that cause a failure with PAINTNFORGET V 790 adhesion, however this may not show for 1 – 2 years.
- ✓ Once ALL Fiberglass repaired areas cured (24 72 hrs +) sand thoroughly, (60-80 grit) & wash with Acetone, to remove un-reacted styrene monomer, (This is vital). Then scrub down with detergent and water using a stiff bristled brush or water blaster and dry off.
- ✓ Acid etching is NOT necessary. See Section 9.8
- ✓ NOTE: Apply ample PAINTNFORGET V 790 to all areas above the waterline, as these get a lot of wear and UV attack. Ensure coating applied as uniformly as possible to get maximum life. Can apply a 3rd coat if desired.
- NOTE: If you have fiberglass lined, concrete pool, ask for our INFO Sheet (Fibreglass Lined Concrete Pools) on how to deal with this.

8.5. Marcite, Diamond Brite, Pebble Tec and other Aggregate Plaster Finishes

These surfaces over time become dirty, cracked and even soft, with missing areas however with care can be upgraded successfully.

- ✓ It is necessary to carefully check all areas, tapping to find "drummy" areas and digging into soft areas, to understand the extent of the condition. Refer to beginning of Section 9 for more detail.
- ✓ Remove all such material with hammer, cold chisel to expose sound surface underneath and nearby. Abrasive Blasting is NOT recommended.
- ✓ Any weak, unsound, or friable areas should be removed by grinding as they may fail later on once coating has been in service for a period. In some pools up to 40% has been found to be faulty and replaced. Also Masterkure HD 300WB has been found to be suitable to strengthen friable surfaces, before PAINTNFORGET V 790 application and to reduce possible delaminating issues.
- ✓ Any rust spots also need to be dug out to solid non-rust-stained concrete and all-around rusty steel. Wire brush to remove flakes of rust. Treat exposed steel with an anticorrosive or rust converter primer. It is not likely you can stop rust coming back in adjacent areas as water runs along re bars and the

rusting will start nearby again and break through a few years later. See Section 9.2.

- ✓ Rebuild surfaces to match existing with epoxy if small or use a sand cement mix (see Section 8 above for materials to consider) You may be able to purchase some aggregate/pebbles to provide a profile like the original and imbed into wet filling material.
- ✓ You may want to consider reducing the profile of the pebbles and any general depressions etc may be filled with Laticrete 254 Platinum as a skim coat to. This will save on PAINTNFORGET V 790 usage on VERY rough or porous surfaces.
- ✓ Make sure no grease, suntan, or body oils on surfaces. Wash down with warm water/detergent (Commercial Degreaser) and stiff brush. Thoroughly rinse well to ensure all detergent is removed. Repeat cleaning treatment if in ANY doubt, especially at water line (top 300mm) and on steps or where people sit. Can use Tri Sodium Phosphate as alternative cleaner. NOT Sugar soap.
- ✓ If necessary, apply algaecide to kill algae roots. See Section 9.9 for details.
- ✓ Thoroughly rinse off all detergent/residues with clean fresh water and allow to dry.
- ✓ Acid etching recommended, to better prepare the surface. See Section 9.8

8.6. Vinyl Liner Pools: (Not above ground pools)

- Over time the vinyl liner usually becomes brittle, fades and tears. If the owner has decided not to replace the liner due to cost and coat the surfaces instead. You will need to check the pool carefully before proceeding as only certain pool structures may allow for coating.
- After removing liner and all fittings check that:

The floor and walls are of concrete, rendered concrete block or brick, in a stable/solid state. The best results are obtained if the structure is of reinforced concrete with no major cracks.

- Some pools have a panel-based wall system often about 1-2 inches thick. These may not be suitable for coating as ground water can pass easily through them and cause blistering of any coating applied on pool side. This could only be prevented if a damp-proof coating applied to rear of panels at installation time, which is unlikely.
- All joints between wall units, and between walls and floors need to be waterproofed and may require cutting out and filled with an epoxy grout or flexible sealant.
- Treat concrete surfaces as per Sections 9.1 and 9.2 above.
 - If not sure contact us to discuss first

8.7. Tiles: (water line or whole pool)

Water line tiles may need to be upgraded as part of the pool renovation process as some tiles maybe missing and cannot be replaced, or the existing tiles will not match up with the new PAINTNFORGET V 790 color. Generally, it is not desirable to apply PAINTNFORGET V 790 to tiles, however if there is no alternative it may be done although no warranty will be offered for this. The reason for NOT favoring this approach is the difficulty to get good adhesion of V790 to the tile and grout surfaces. Also, the fact that water can get behind the tiles and grout, pass through the grout causing the coating to blister and fail. Finally, leaching water running over tiles may cause staining to the PAINTNFORGET V 790 below.

The result is an unsightly mess and difficult to resolve. For a whole pool this is even more of an issue and should not be painted.

- Ideally existing tiles if generally okay are best cleaned and re grouted as necessary. See a tile shop for suitable cleaners.
- Any tiles to be coated need to be in sound condition and well adhered. Remove the glazed tile surface using grinding or sandblasting. All grout needs to be flush with tiles as much as possible. Repair if required.
- All surfaces to be clean and free of oils, fats, algae, and mould. Follow directions in Section 9.2 as a general guide.

8.8. Acid etching. (For ALL calcium-stained pools too)

To remove laitance, (a fine cement powder on surface) and open the pores, and neutralizing the alkaline surface, Acid etch with Hydrochloric (Muriatic) Acid, and water.

- Concentration to be 10%, no more. (1-part acid, (As bought 33% conc) mixed with 2 (or more) parts water). Mix in a plastic bucket. Always add Acid to Water, **not** the other way around.
- Wear protective clothing, goggles, and gloves.

- Broom or brush onto surfaces, (about 20 sq ft per 1 gal mixed).
- When fizzing stops (2 5 minutes), thoroughly wash all acid etched surfaces to remove all traces of the reaction. (Can neutralise surface with Bicarbonate of Soda and rinse away all residues).
 - Don't allow acid etching to dry out

8.9. Algae removal:

Acid etching does not remove oils, fats, grease. Only detergent or sand blasting etc will remove oils, grease.

Many pools will have algae growing in the surface pits and crannies. (Black stains are a good indicator). When you come to paint it, it's important to kill the roots, to stop re growing through the paint and an algaecide treatment can do this, as part of the cleaning process. After prepping the pool and having it ready to paint, an algaecide treatment is almost the last thing to do. (Unless acid etching is required after)

- Late in afternoon/early evening mix up a 5% solution of Algaecide, (as recommend by your pool shop for your area) in clean water. (That is about 6 floz per 1 gal of water).
- Broom / brush it on all previously stained areas (or anywhere you think algae may have been. Do the entire pool if necessary.
 - Leave over night to react.
- Thoroughly rinse off residues and allow pool to dry.

8.10. Expansion Joints/Stress Cracks/ Random Cracks

Cracks in concrete pools are due to some movement either expected or unexpected and their cause needs to be considered. Expansion (Control) joints are designed to allow for movement and need to be treated as such.

Any cracks in Fiberglass pools, see Section 9.4

Expansion joints: need to be filled with a flexible sealant in accord with the manufacturer's instructions, to maintain a watertight seal. Use Sika Sil -Pool or similar from Sika. A polyurethane sealant may do as an alternative, but make sure it's suitable for water immersion. We have more details available on joint design.

Stress or shrinkage cracks: should be checked and if non-moving, fill with a suitable compound in accord with manufacturer's instructions, such as Sikadur 31 If moving, treat as for expansion joints.

Drought effected pools may have these shrinkage cracks.

Random Cracks: if smaller than about 20 mils (hairline) maybe coated with E2100 as a "spot primer" before first overall coat, to fill them in. If wider than this usually means area may be drummy (see beginning of Section 9) or there may be some movement happening, in which case treat as per stress cracks.

Non-Silicone sealants may be over coated with the PAINTNFORGET V 790, however it may crack over time as it's not as flexible as the sealant underneath. This should not be an issue, apart from aesthetics. Best to just take PAINTNFORGET V 790 just to the sealant's edge with a small overlap, use tape for straight line.

We can provide additional information on how to handle such joints. Contact us.

8.11. **Leaking Concrete** (incl. HYDROSTATIC pressure)

Sometimes you will find ground water seeping into the pool and this maybe from high water table, leaking water pipes (check these and fix), underground streams and generally comes through cracks or weak /porous areas of the concrete. It will be necessary to stop this otherwise the PAINTNFORGET V 790 may not adhere to the surface. If the water comes from cracks etc, dig out, check on the cause and if need be, stop

water using something like UGL Drylok Fast Plug. Follow their instructions. Flush surface off with same or Laticrete 254 Platinum. Consider the prospect of water seepage after application too. (Poor drainage/construction) Try to prevent by sealing surface — Sika Top seal 107. If pool previously painted and has bubbles or blisters in the old paint, it's a sign that hydrostatic pressure may be an issue.

9. Prepare to APPLY

Before commencing application if there are any concerns about the condition of the surface, consult PaintNForget technical department.

Commencement of application indicates acceptance of the substrate.

Best time to apply is in the <u>morning starting soon after first light</u> so as to finish by midday. This means about 6-7 am in Summer and 8-9 am in Winter. Allow about 4 hours for one coat to 700-800 sq ft with one person. Don't be tempted to paint (late) in afternoon when evening dew will fall on still curing PAINTNFORGET V 790 and may cause white marks. (See Section 15 for more details)

Ensure surface to be coated is thoroughly clean and dry to touch. Generally, you may start a primer coat, <u>but not undercoats</u> <u>or top coats</u>, even if light dew is still on surface, providing a warm sunny day follows.

Pooled water needs to be removed. Use sponges, old towels, blowers, heaters etc.

The <u>surface</u> temperature should be above 40F for best curing, do not apply if surface temperature is below 40F or is going to fall this low within 6-8 hours of application, as curing will stop.

Use Infra-Red Surface Thermometer to check

Spray Application: PAINTNFORGET V 790 may be spray applied. Use an airless unit of 2500 - 3000 psi and tip of about 519 size. A 515 tip may give better results. Keep spray lines as short as possible to reduce clean up. Also add up to 5% thinners to aid application. PAINTNFORGET V 790 may pin hole if not sprayed correctly. Watch coverage rates. As a guide a 5-man spray team (one sprayer, 4 support) can apply one coat on about 6000 sq ft per 6 hr day). (See section 12)

Generally, even on the biggest projects, roller application provides a good, labor efficient finish.

10. NOTES before APPLICATION:

Is Surface Really Dry?

Some areas <u>can seem dry</u> on the surface, such as concrete and Marcite/Pebble Tec yet in cooler (winter)weather may be quite wet inside. So do check for Hydrostatic pressure issues. If too wet, once painted with PAINTNFORGET V 790 it will draw moisture under the coating and may cause blisters to develop. This will be more likely with darker PAINTNFORGET V 790 colors. Such blisters will break when pool full and require recoating. Best deal with it when pool empty and they show up after first coat. Cut back, allow to dry out for several days and recoat.

To check if sufficiently dry, tape a piece of clear polythene sheet (15 ins x 15 ins) and leave for at least 16 hours. Do this over several areas of the surface. If there is moisture (droplets) on the underside of the plastic sheet, then it indicates there is too much moisture for good adhesion. Allow pool to dry out before application.

Application of E4115 or PAINTNFORGET V 790 on damp – wet surfaces may result in loss of adhesion and coating failure.

Masking:

Before application check weather conditions. What is expected over the next day or so?

It's always better to use masking tape to get straight line against tiles etc., rather than relying on a good brush technique.

You can remove masking as soon as last coat applied, avoiding stepping on wet PAINTNFORGET V 790.

Painting Smaller Areas:

Sometimes you may want to paint smaller areas, (eg Spas, Swimming lines, depth markings) and a full kit is too much material. With care smaller amounts can be mixed in a clean plastic container (1/2-Gal Ice Cream Container) as described below. Measure out by volume (not by weight) in the ratio of 4 parts resin to 1-part hardener. E.g. 4 ozs Part A to 1 oz Hardener. This will cover approx. 14 - 15 sq ft per coat. Mix well and use immediately. DO NOT guess by volume, measure out amounts. Incorrect ratios will result in brown staining or uncured PAINTNFORGET V 790. In the future, we may have available a touch up kit that will cover about 15 Sq ft in ONE coat.

If you prefer to measure by Weight, See INFO BANK on Web site for full details.

Batch Numbers:

PAINTNFORGET V 790 is made in batches and to ensure you have a uniform final color make sure the batch numbers on the Resin tin (large one) are all the <u>same for the final coat</u>. Different batch numbers may be used in first coat. The batch

number is on a white printed label and will be a set of 6 -10 digits.

Non-Slip Areas:

PAINTNFORGET V 790 may be somewhat slippery for the first few months as it settles down. If this may be an issue on steps and ramps **there are 3 possible approaches** you may use. Select one.

#1: Lightly sand with wet and dry paper any affected areas, to leave a slightly roughened surface, without sanding through the coating! This would normally happen after pool has been put into service.

#2: For a more definitive non-slip finish at time of application (On therapy pools, ramps etc), apply first coat as per normal instructions, then while still wet, "Blind Out" with washed rounded river sand (about 1/16 – 1/8-inch size particles) or locally available Anti Slip Media, so you see only the

sand/media and no PAINTNFORGET V 790 grinning through. Let cure overnight. Then sweep / vacuum up loose sand/media and then apply second coating as per normal instructions. Other non-slip materials can be used such as cork chips, ground rubber and glass balloons. Follow same procedure for them. Ensure ample 2nd coat dry film thickness, to lock in the media, for a long life.

#3 Mix the supplied nonslip material (usually provided with every order) PDEX20 Anti Slip Media into the FIRST coat of PAINTNFORGET V 790 at 25 gms per Liter, (5 oz per 5 Liter (1.321 gal) pack) of mixed product. Apply to steps, ramps etc. Stir often to keep consistency uniform. Then apply a normal 2nd coat to cover and provide a uniform dry film thickness to get maximum life in high wear areas.

We do not recommend using this product on pavers and pool surroundings as it is quite slippery.

Use correct pool paver coating instead.

Murals and the like:

Your client may like to have murals on the pool walls using PAINTNFORGET V 790 in selected colors. (See Project Gallery for ideas) These can be done in the following method. Prior to painting, draw out tracing paper tacked to the surface, what you want and where. Then remove and cut to shape. Transfer shape to heavy grade clear plastic film. Once pool painted, and within 72 hours of last coat, tape up pre-cut stencils and draw or paint in outline etc. Remove stencil and complete painting. Good at free hand, or have an artist friend, then do so without the use of a stencil.

As a comment keep murals near upper 1/2 of wall to see to best effect. On floor anywhere seems fine. If too deep in water effect is often lost. To make different colors mix up sufficient PAINTNFORGET V 790 Resin and Hardener (touch up kits) in the key colors and then mix in any color mix you require much as for oil paints. You have about 60 minutes working life. (don't forget to mix resin and hardener first, before mixing different colors together to get the color you need). There are a good range of colors in touch up kits to create a wide range of colors and thus images.

11. Application

PAINTNFORGET V 790 is normally applied in 2 coats. (3 coats in high wear areas)

On porous, friable or soft surfaces a PRIMER coat is recommended, E2100WB Primer

A PRIMER coat binds and seals the surface to provide a longer lasting finish.

For rough, uneven surfaces, 1-2 coats of E4115 High Build Epoxy applied over the Primer as an undercoat to smooth uneven textured substrates.

A 3rd coat of PAINTNFORGET V790, is recommended in high wear areas, step treads, landings, ramps, swim outs, etc

- Marcite, Diamond Brite, Pebble Tec and Cement based surfaces, Sandblasted surfaces: best to apply a primer coat of Concrete WB Primer E 2100. Refer Section 12.1 or 12.4 respectively.
- Sanded, Fiberglass and Epoxy Painted surfaces do not normally need a PRIMER coat.
- Most pools are about 30 x 10ft and 3 6 ft deep and will give an area of about 700 800 Sq ft.

HOWEVER do measure your pool and work it out correctly. Contact us if not sure. Under measuring will lead to insufficient PAINTNFORGET V 790 and a shortened life.

• Porous, rough and high wear areas need more material than smooth surfaces or (low wear areas) like at the deep end.

Before starting application check Sections 10, 11 and 13.

Apply only in early mornings, from 6 am (8-9) am in winter) till noon, and no later. Dew, mist, drizzle, rain, frost, cool moist air or contaminated

run off water may cause a white film (or stains) to form on the coating, before its cured. This is more so in cool climates with low ground temperatures, and shaded areas or below leaking pipes. Dark colors will make any such films more noticeable.

Set up:

Select an area where you can mix materials (On flattened carton, old sheets) away from the pool edge and traffic areas. Often the shallow end of the pool works well.

11.1. PRIMER and UNDERCOAT (if required, porous or rough textures)

CONCRETE WB PRIMER E2100 comes in 4 (1.057 gal) packs and is **water based**. **MIXING**:

- ADD all of PRIMER Part B (Hardener) into PRIMER Part A, (Resin), there's plenty of room.
- Scrape out remnants of Part B into Part A.
- Mix for several minutes until uniform by hand or slow speed mechanical mixer.
- When FULLY mixed, ADD clean water about 1 qrt (or little more) for each 4L (1.057 gal) pack
- If using smaller amounts, then the ratio is: 1:1:0.3 of Part A to Part B to Water all by weight or add 50% water to the already mixed A and B.
 - Work well into surface, roller brush.
 - Min Surface temperature 4oF
 - Humidity best if less than 80%
 - Maybe applied to damp, not wet surfaces.
 - Working life 60 mins at 75 F
 - Touch dry 4-6hrs at 75 F, light foot traffic 24 hrs., full cure 6 days at 75 F
 - Abrade coating if more than 7 days before next coat.
 - Desirable dft is 1.5 2.5 mil per coat, 4 6.5 mil wft per coat

Concrete WB PRIMER E2100 Coat Coverage rates, 4 Litre (1.057 gal) Pack

Coverage rates	Bare Concrete	Sand blasted	Marcite	Pebble Tec	Quartzon type
Sq ft per US Gal mixed	320 - 480	280 - 400	240 - 320	200 - 280	200 - 320
Sq Ft Per 4 L pack	336 – 504	290 -420	252-336	210 -295	210 - 340

Working Life or Pot Life is 1hour at 68F. Do not use after this time or when it goes stiff in the container.

UNDER COAT - E4115 100% solids EPOXY - needed only when surface is rough or uneven including; Pebble Tec and Marcite or Diamond Brite

- Apply over Primer coat (needed on absorbent-porous surfaces only)
- Min surface temp 40 F, and at least 5F above dew point.
- Power mix container (Part A Resin) then pour into larger clean container and then add one (Part B), Hardener and power mix well for 2 -3 mins
- Working life is about 60 min @ 75 F. Do not use once it goes stringy thickens.
- It comes in mid grey or blue color.
- Wash out gear etc with Methylated Spirits, V115 or V105
- If using part packs, the ratio is: 4 parts Resin A to 1 part Hardener B: all by weight.
- Touch dry 6hrs at 75 F, light foot traffic 24 hrs, full cure 6 days at 75 F
- Allow to cure 14 20 hours if applying second coat OR overnight (Over coat within 72 hours, 24 hrs in hot weather, to prevent adhesion issues with next coat.).
- Desirable wft and dft is 6 10 mil per coat.

UNDERCOAT E 4115 100% SOLIDS EPOXY Undercoat Coverage rates 5Kg (11lb) Pack

Coverage rates	Bare Concrete	Sand blasted	Marcite	Pebble Tec	Quartzon type
Sq ft per kg mixed/ coat	53 – 62	43 - 54	43 - 54	32- 54	43 - 54
Sq ft Per 5kg pack/coat	260 - 320	210 - 270	100 -270	160 - 270	215 - 125

Note: apply 2 coats if very rough, to smooth out the surface before applying PAINTNFORGET V 790, which is a thin coating. The PaintNForget V 790 will not hide any imperfections or undulations in surface. (Inc large sand particles in render) However, a Satin PaintNForget V 790 finish will reduce the visibility of them.

APPLYING:

- Best to apply in morning in dry conditions with no rain forecast that day.
- Min surface (not air) temperature 40 F and dry, not damp.
- Use brush, or solvent resistant roller sleeve 3/8 1/2ins nap or more (on very rough surfaces.)
- Spread out and work into surface. Very absorbent surfaces may have "sucked up" the PRIMER.
- Allow to cure overnight (Over coat within 72 hours, 24 hrs in hot weather, to prevent adhesion issues with next coat.).
 - Apply second coat if still porous.
- DO NOT APPLY PAINTNFORGET V 790 until E 4115 cured.
- General safety guidelines as per PAINTNFORGET V 790

11.2. PAINTNFORGET V 790 pool coating

PAINTNFORGET V 790 comes a 5L (1.321 gal) pack. It has the following features:

Characteristics	Temperature	Value
Pot Life (max time to use after mixing)	6o F	3 hours
	75 F	2 hours
Minimum Application Temp	40 F	ambient/ground.

Cure time, 50% RH,		
Touch Dry	40F/ 60 F/ 75 F	10 / 8 / 4 hours resp.
Recoat	40 F/ 60F/ 75 F	Min; 24 / 16 /8 hours resp.
Full Cure	40F/ 60F/ 75 F	14 /10/ 7 DAYs respectively.

<u>Do not apply</u> if surface (ground) temperature is below 4oF. Will not cure.

Coverage rates, varies depending on the surface roughness.

Sq Feet	Smooth Surface	Medium Surface	Rough Surface	Very Porous Surfaces
Per 5Liter, (1.321gal) Kit or Pack	FiberglassPainted	PlasterConcrete	ConcreteMarcite	ConcreteMarcitePebble TecQuartzon
1st Coat	480 -580	450 -480	375 -450	350 -375
2 nd /3 rd Coats	480 -640	480 -530	450 -480	370 -430

Desirable wet film thickness (wft) is 4 mils per coat and dry film (dft), 2.5 mil per coat approx. 5 mil dry in two coats. About the same thickness as housepaint.

11.3. PAINTNFORGET V 790 MIXING

- Check your delivery against what you need (original quote- invoice) to make sure all is there.
- We recommend masking all tile lines etc first, rather than using your eye.
- Select an area where you can mix materials (On flattened carton, old sheets) away from the pool edge and traffic areas. Often the shallow end of the pool works well.
- Pour the content of part A (Polymer) and part B (Hardener) into a 2 3 gal pail.
- Power mix with the stirrer, max 600 rpm. Use slow steady action mixing up from the bottom and try not to get onto the upper insides of the tin.
- Do not entrain air as this will cause aeration leading to porosity of the cured coating. (See the online video for more detail)
- Mix for about 3 4 mins, scraping sides and bottom to get a completely homogenous mix.
- <u>Use immediately</u>, don't wait. No induction period.

- Pour about half into your roller tray or other vessel to apply from.
- Be careful not to add any unmixed material (upper insides of large tin) into the roller tray etc. as this will leave partly cured material on the pool surface. Will not fully cure.

(If mixing several packs at a time, write on each one the time, so as to use sequentially, and note time of pot life.

THINNERS: Supplied thinners V112 (Summer) V111 (Cooler applications) are to be added to the mixed product in the application process, as the solvent premixed with part A will evaporate fast. Add it when you feel that the polymer on the brush or roller is starting to get thick (muddy) and hard to apply. IT IS IMPORTANT TO MAINTAIN CONSISTENT THICKNESS FOR THE BEST RESULT. We suggest no more than 5% (8 fl oz) put in at one time to 5L (1.321gal) pack. Although they can be added in a process "as you go" when they start to evaporate.

11.4. APPLYING

Surfaces to be clean, dry and 40F or higher with no rain expected for 24 hours (or longer in cool conditions.)

Note: avoid spill of thinners over FP coated surface if it is cured for less than a week. This will affect adhesion and the topcoat to peel off.

Generally, start on the wall at the deep end and <u>cut</u> <u>in to the top</u> or tile line, and move around to the 2 long sides. Then coat the all-the end wall and then coat the 2 side walls, (about 3 ft along) followed by a strip across the bottom. Then complete bands across the pool. For complete details see Section 13.

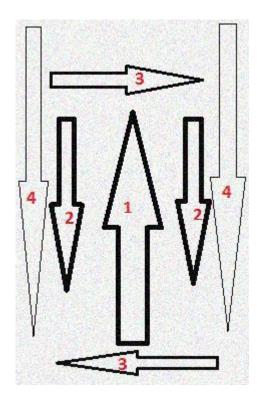
- Cutting In; after mixing pour (half) the material into a roller tray (or other vessel) and use a brush or roller to cut in. Use correct nap roller for the surface profile.
- If too sticky, (you will soon know), then add Supplied Thinners. The best way is to half fill an empty hardener tin with supplied Thinners, and then pour some of that into the tray, (about 5%) and mix in. If okay to apply, then continue. (Or add some more thinners as it starts to thicken up)
- Note: A little thinner makes a big difference to the viscosity.
- Once you have figured out how much thinners the first pack needs, add the same amount for the remaining packs as used in that coat, with the empty hardener tin as a measuring device.

APPLICATION TECHNIQUE for all coats:

• To apply by roller, load it up evenly, and apply to the middle of about a 3-6 ft area, and apply in one

direction, then roll across at 90 degrees to spread out. Like an "H" pattern.

- Then "lay off" in **one direction** so as to get a uniform finish. Lay off all walls and floors in the same direction such as downwards on walls and towards you on the floor
- To get a uniform film build, apply evenly and spread out well, **but follow coverage rates** for the type of surface you are working on. See above tables for coverage rates.
- Do not go back over any "laid off" area, though slight overlapping when applying adjacent panel



Note: If you see bubbles forming in wet coating, especially when in sun, this signifies moisture from below breaking through the curing coating. If feasible stop and check substrate is really dry. Otherwise continue but you will need sand back "craters" that form, before applying second coat. Also check to see that they don't reform in second coat. A concern as water is still in substrate and may in time cause the coating to lift off. Refill pool promptly after cured, to minimise problem.

Sometimes DRY bubbles form due to air being trapped in pockets beneath the curing coating and these cause blisters as the air heats and expands, (dark colors). When applying a second coat use a small (artist) brush loaded with PaintNForget V 790 to fill the open craters.

ADDITIONAL NOTES about application.

- Keep roller (or brushes) wet during application.
- The correct coverage rate is important for long term life. Each pack will cover 350 640sq ft in one coat (As per table above) so use markers (Stones or masking tape markers on top of coping) etc to figure out about how far one pack should cover. In an average pool, markers about 15 ft apart will mean an area of 205-350 sq ft BUT see Section 13 to be sure.
- The nominal film thickness **per coat** is 2.5mil (dry) or 4mils (wet). Use the Plastic Wet Film Comb to check as you go along. By doing so you will ensure correct film build. You will get variations but aim to get at least this amount per coat.
- Cured material will be difficult to remove from any surface (or skin) so wipe up immediately with a cloth.
- Allow to cure overnight (16 hours or longer if very cool) before applying further coats.
 - Do not walk on painted surfaces until cured.
- If more than 72 hours between coats a light sand with #60 grit paper to remove the gloss, will be required before applying the next coat.
- Wash up rollers, brushes in Thinners Supplied (Or discard correctly).
- Do not use thinners to remove paint from skin, but rags and water/ detergent. Section 15.
- Remove any spilt paint from paths, tiles, slates immediately. Once cured hard to remove.

ADDITIONAL COATS:

- PAINTNFORGET V 790 is designed to require 2 coats at the correct coverage rates.
- Apply 2nd coat in the same manner at the first full coat.
- A 3rd coat needs to be applied if you have material still left over after 2nd coat, as not enough film build, (thickness), reached so far. Apply as per the 2nd coat. Focus on shallow end, steps etc.
- Shallow areas, beaches, swim outs should a get a bit more material as high wear areas, relative to the bottom at the deep end, which has less wear and tear generally.
- Any areas above the water line should also get more material (fiberglass pools especially), as these are often subject to foot traffic etc.
- Any leaves, insects etc that have fallen onto the wet PAINTNFORGET V 790 should be carefully removed as soon as possible after the coating is cured and before succeeding coat(s) applied. Any well adhered organic matter in the last coat, will usually dissolve over time.
- Swimming lines, depth markers, etc., can be done after the last coat is cured and use masking tape to set out the areas to be painted. Apply Black or Navy Blue (White also) by brush or small roller. Apply within 72 hours of last coat being fully applied. Ideally 2 coats should be applied for maximum life.

11.5. CURING:

- Allow the PAINTNFORGET V 790 to cure for 7 days in summer and 14 days in winter before refilling with water and chemicals.
- Keep moisture, rain, drips and running water off the curing surface during this time as these may create white blooming or stains, if run off water contaminated.
- The rate of curing (and final color) will be affected by surface temperature, humidity and

overall weather conditions and may be hastened or retarded as a result.

• See the ATTACHED "Maintaining your pool water and coating for maximum life" for complete details. If you don't have, please ask for a copy.

(Provide a copy to Pool Owner

12. How much material, where to start painting and where to finish.

- Here is a general guide as to how to figure on how much material to use.
- It also sets out where to start, how to proceed and where to finish.
- Note you pool maybe a different size or shape, so adapt accordingly.

In some pools you will use say a total of 5 packs, so make it 3 packs on first coat and 2 on second coat.

To help you decide where each pack starts and stop place some markers on the side of the pool such as stones or masking tape, where you need to stop pack one and start pack 2 etc. Then in the case above with 5 packs, move markers to reflect the changes for each coat. That is just move them a bit farther apart and remove one set.

If you end up with a pack left over after 2 complete coats then apply the last pack on the next day to

the shallow areas, steps, swim outs etc as these get all the wear and need a thicker coating to last.

Please note this is an example, look at the pool and determine the correct size. It's only a guide to help you see how far each pack should go. We just want you to have more material at the shallow end and not use it all up at the deep end!!

For other sized pools use this idea to get a good understanding of the coverage rates to be used

13. Health and Safety: read PAINTNFORGET V 790 SDS.

- Keep away from heat and open flames
- Avoid breathing vapour or spray mist
- Dispose of heavily contaminated clothing
- In event of skin contact with the product, wash affected area thoroughly with plenty of cold soapy water containing a small amount of thinner. When clean liberally apply skin cream, or

moisturising cream. Seek medical attention if warranted.

- If splashed in eyes, hold open and flush with copious quantities of water for at least 15 minutes. Seek medical attention.
- If swallowed DO NOT induce vomiting. Give 1-3 cups of milk. Seek medical attention immediately. Keep the label with you.

14. Additional Application Notes:

- If in doubt about cleanliness of surface, clean them again. Paint failure is usually as a result of poor-quality surfaces. Fats and Oils prevent good adhesion. Have you used a detergent to clean the surface?
- Remove loose fluff from rollers (hand rub briskly) and loose bristles from brushes before you

start. Otherwise, they will end up in the wet coating causing a nuisance and a hard lump when cured.

- Allow about 2-3 hours to paint one coat on a pool of 700 800 sq ft., by one person.
- Cut in around top first starting at deep end using a brush and masking tape if required.

- Paint deep end wall, then move down a side wall 3 4 ft or so, (see Section 13 above) and finally onto the bottom. Then do as bands across pool, finishing at ladder or steps at shallow end. Wear soft soled shoes.
- It is important to apply PAINTNFORGET V 790 with consistent thickness, so do not try to spread out to save material. If you, do you will end up with insufficient thickness and it will not last as long as you expect. The recommended coverage rates are designed to get you a long life, (7 -12 plus years).
- Check weather, if rain is expected within 6-8 hours after completion of painting, DON'T start.
- Ensure that minimum **surface** temp will be above 40 F Use tarp and heater to keep warm overnight. Check temp with IR Thermometer.
- You may start painting if damp, (not wet) Concrete WB PRIMER only. For E4115, PAINTNFORGET V 790surfaces need to be dry.
- Finish painting before dew falls on surfaces. Ideal time frame is from 6 9 am (ish) am till 12 noon or very soon after.
- There are no known issues with dew or water affecting the curing of set PAINTNFORGET V 790 such as "blooming" that occurred with epoxies, it may show loss of gloss in some areas and require recoating. Therefore, you need to allow 4-8 PLUS hours for the product to set before it can be exposed to moisture.
- Over coat after overnight (16 hours) curing. If more than 72 hours between coats, lightly sand before applying second coat (and / or third coat).
- Allow min 7 days in summer and 14 days in winter before re filling swimming pool.
- Do not allow stained or mineralised water (from tiles, grout, garden etc) to flow over

PAINTNFORGET V 790 as it may stain it, more so during cooler curing conditions.

- Take your time to plan and carry out a quality application.
- To calculate Pool Areas: (Approx. area to paint)

•

• Rectangular: max width (ft) x max length (ft) x 1.6 = area in Sq. Ft



• Roman (rounded end plus a sq end): max width (ft) x max length (ft) x 1.55 = area in Sq. Ft



• Roman (full Oval): max width (ft) x max length (ft) x 1.65 = area in Sq Ft



• Freeform - Kidney: max width (ft) x max length (ft) x 1.6 = area in Sq Ft



• Lazy L: max width ft) x max length (ft) x 1.65 = area in Sq. Ft



- Note: For ALL pools. If deep end more than 6 ft then add about 5% to the above areas, for every foot over 6 ft at deep end. So, if 9 ft deep then add 15% to the initial results of the areas to be painted.
- E.g. 30 x 15 = 450 x 1.6 = 720 x 1.15 = 828 (correct result if the deep end is 9 ft, NOT 6ft.)

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IMPORTANT INFORMATION

MAKE SURE POOL OWNER HAS A COPY OF THIS APPENDIX

MAINTAINING YOUR POOL WATER AND COATING FOR MAXIMUM LIFE

Introduction

Now that you have a "new" pool coated with **PAINTNFORGET V 790**a few simple techniques will keep it looking great for years.

PAINTNFORGET V 790 is designed to provide a long lasting, functional and protective finish, while looking good.

As with all products, a longer life will be achieved when it is looked after correctly.

Curing

PAINTNFORGET V 790 should be allowed to cure for 7 (Summer) –14 (Winter) days before filling the pool. This is to allow a full cure to happen before subjecting it to chemicals. After the first 6 hours (at 75 F) or so of application any light rain that falls on the PAINTNFORGET V 790 will have little impact and may be left in the pool unless it's dirty water, (or rain run off over tiles/grout, pavers) in which case it may stain the new surface and should be removed.

Cold overnight conditions (dew), high humidity, rain, garden water runoff and/or frosts may cause some damage **on** the surface, within the first few days. Leaking pipes and valves may create the same effects. Also, water running over cement, tiles, pavers or grout may also cause lime staining on PAINTNFORGET V 790.

To remove residues, use a Scotch Brite Pad (or similar) and a mild abrasive like Ajax or Vim. It may slightly dull the surface. Diluted vinegar maybe used too. If hard to remove all residues and it's aesthetically not acceptable a reapplication of a coat of PAINTNFORGET V 790 will be required.

Do Not enter pool until it's sufficiently cured, usually 16 – 24 hours after any application.

Before Filling

Any leaves, animals, insects should be removed as soon as possible so they don't stick or stain the curing PAINTNFORGET V 790. Remove by careful scraping, sanding or washing. Leaf stains usually disappear once pool is in service. Be careful when accessing pool as coating will be slippery.

Filling and Chemicals

Check that the Hydrostatic valve (if fitted) is working correctly. Fill with clean water. Allow to stand 24 - 96 hours max, then add chemicals (incl Salt) making sure they are well diluted first. Then mix into the pool water completely. Any chemicals that are added directly may sit on bottom and result in concentrated chemical attack or stains and reduced life expectancy to the PAINTNFORGET V 790.

Follow professional advice to get pool into the correct chemical balance.

Pool Water Maintenance

Please Print this off & keep with your Pool Service Papers

Whether you care for your pool yourself or use a pool service professional, you should settle for nothing less than the best, for your water (and your pool), at all times.

For maximum life of the coating, the pool water quality should be maintained continuously in accord with accepted pool water management practices and the following criteria.

- pH 7.4 -7.8, Water temperature between 40 95 F
- Total Alkalinity 80-120 ppm (min) to 160 -180 ppm maximum
 - Chlorine levels 2 3 ppm (parts per million)
- Calcium Hardness should be closely monitored and kept within 270 330 ppm
 - Langelier Saturation Index (LSI) from +0.3 to 0.3
- Pool regularly cleaned in accord with generally accepted practice,
- Pool chemicals to be correctly mixed and not dumped into pool,
 - Pool remains full of water (unless winterized)
- If using a Cu/Ag system monitor & keep ion concentration low to prevent staining.
- If having your pool professionally maintained then make sure they set the testing equipment to painted surfaces, not any other. Otherwise, incorrect chemical dosage may result, shortening the life of the PAINTNFORGET V 790.

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- Also, Total Alkalinity should be carefully maintained to prevent a powdery surface developing with attendant "pick up" on hands and feet and a shorter life.
- It is very important to understand that over chlorination may bleach the product and oxidize the top layer of it. So, leaving covers on and running chlorinator is a big NO. With covers on, in winter, turn down chlorinator to lowest setting.

Surface Cleaning:

The PAINTNFORGET V 790 is resistant to surface contamination and fungal growth. However, over time the surface will tend to change with the attachment of slime and fat build up. This can be removed easily by giving the surface a "wash" with a broom or brush. The most affected areas will be at the water level, and within 12 inch's of it. Body fats, suntan lotion and other matter that floats on the water surface will tend to stick to the sides of the pool. A regular scrub (monthly and more often in times of high usage) for this area should be a part of the maintenance program.

Calcium Build-up:

One of the by-products of pool chemicals is the formation of calcium deposits on walls and floors. Calcium comes from the hardness of water, Salt, or the "Chlorine 65%", in previous section. This can usually be seen as a whitish "scum". It may be noticed if you wipe the surface with your hand and you see a white "cloud" in the water. The PAINTNFORGET V 790 will be unchanged underneath. The white calcium should be removed as can act as an abrasive when pool cleaners in use and reduce the life of PAINTNFORGET V 790.

It can be removed by using a flocculating agent. See your pool shop for specific details.

Color Change:

Although PAINTNFORGET V 790 is the most UV resistant coating available it will eventually start to show

fading especially on the dark colors. We expect this to show after 10-15 plus years though we suggest resurfacing pools every 7-12+ years.

Damaged Areas:

In the unlikely event your pool surfaces are damaged and the film integrity of the PAINTNFORGET V 790 punctured, there is the prospect of water from the pool getting behind the PAINTNFORGET V 790. This will also allow the pool water with its corrosive salts, chlorine and other chemicals to come into intimate contact with the now unprotected concrete. Chemical attack of the concrete is possible with the result that it will fail, and there by undermine the further integrity of the PAINTNFORGET V 790. Any such damaged areas should be repaired promptly. The product CANNOT be applied under water however as a temporary measure high build epoxy E4115 can be applied over FP790 with light abrading. We can supply touch up kits of those but in very limited colors.

Summary:

To get the best performance from the PAINTNFORGET V 790, look after it well, cleaning it every now and then. Keep the pool water in tip top condition throughout the year.

Also note that chlorine, pool acid, and many other pool chemicals can do great damage to you and your pools health if not used correctly.

You may need to call on other professionals to assist you in obtaining the very best in pool water maintenance.

One web site you may like to visit for more information: Missouri Dep Of Health is https://www.nitt.edu/home/students/facilitiesnservices/sportscenter/swimmingpool/Swim-pool-chemistry.pdf

Contact us if you have any questions.

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