

Megapoxy HELLAS[®]

Technical Bulletin

MEGAPOXY MC POOL COATING

Issue 2, 10/2005



Pool coating

Summary

The following application guide is designed to assist in the successful painting of your swimming pool with Megapoxy MC Pool Coating. Please carefully read this guide prior to commencing preparing the pool surface ready for painting and prior to applying the Megapoxy MC Pool Coating.

Your attention is also drawn to the storage and handling information attached to the back of the Part A can of paint. Read the safety direction before opening the product or using.

MEGAPOXY MC POOL COATING is manufactured exclusively for MEGAPOXY HELLAS by VIVACITY ENGINEERING PTY LTD, under Quality Management System certified to ISO 9001:2000, by Lloyds Register and NCS International.

Product information

MEGAPOXY MC POOL COATING is a product development from a proven chemical resistant, heavy duty, epoxy maintenance coating which exhibits excellent chemical and water immersion resistance. As a result of this, MEGAPOXY MC POOL COATING inherits all these highly desirable characteristics.

MEGAPOXY MC POOL COATING may be applied as a two (2) coat system, however to achieve the full potential of the applied coating we recommended that three (3) coats be applied to achieve optimum dry thickness.

ADVANTAGES

- 100% solids coatings
- Good abrasion resistance
- Long working time
- Positive thin film characteristics
- Exhibits excellent chemical resistance
- Excellent resistance to water immersion
- Product has an easy to mix ratio
- Exhibits good surface gloss
- The coating is easy to apply
- **Shelf-life:** 2 years

PHYSICAL PROPERTIES

Mixing ratio by volume

- Part A: 3 parts
- Part B: 1 part (i.e. all of part A to all of part B)

Working time: 2 hours at 25°C

Tack-free time: 4 hours at 25°C

Re-coat time: 4-12 hours

Coverage: 20 m² per 4 litres

APPLICATION	MEGAPOXY MC POOL COATING exhibits a long working time and it is suitable for application with either Brush or a Medium-nap roller. To promote easy working, up to 10% epoxy thinners can be added to the product. Care must be taken to ensure all the thinner has evaporated before applying the second coat. Thinners must not be in the second or the subsequent coat.
CLEAN-UP	Tools and equipment may be cleaned up using quality paint thinners.
AVAILABILITY	MEGAPOXY MC POOL COATING is available in 4 litre and 16 litre kits. MEGAPOXY MC POOL COATING is available in a range of colours.

Surface preparation guide

NEW CEMENT RENDERED POOLS The cement surface render should not contain any water tightening agents or other additives as these materials can affect the adhesion properties of the applied coating. The surface render should be at least 14 days, preferable 21 days old, before the commencement of painting.

Prior to acid washing, rub the surface down using a hand held abrasive stone to remove any loose material and smooth of the surface etc. Follow by washing down the abraded surface with fresh water to remove any loose material. Pressure washing the abrader surface is ideal.

Dampen down the rendered surface with fresh water and acid wash using a mixture of 1 part Muriatic Acid to 3 parts fresh water by volume. A plastic watering can is ideal equipment to apply the acid solution onto the surface.

Do not apply the acid solution to dry surfaces.

Important note: When carrying out the acid washing activity, always add acid to water, never water to acid, and always wear eye protection and other appropriate protective safety equipment.

The acid solution application rate should be approx. 0.50 litres per sq. metre over the area with a stiff bristle broom. Work over 2 – 3 sq. metre sections at a time and allow approx. 10 minutes for the reaction to cease.

Wash off the acid residues with fresh water, again brooming down with a stiff bristle broom.

Do not allow any spent acid residue to dry on the pool surface.

On completion of the acid wash, neutralize the cleaned surfaces with a 10% Bicarbonate of Soda solution (1.0 kg Bicarbonate of Soda solution dissolved in 10 litres of fresh water).

Pump out the spent washings. Allow the cleaned surfaces to dry thoroughly which usually takes 4 – 5 days in warm weather. Before painting, sweep up any dry loose material that may have accumulated in the bottom of the pool.

OLD CEMENT RENDERED POOLS

Wash down the pool with an alkaline detergent solution and treat as for new cement rendered swimming pools. A second acid wash will be required for the complete removal of ingrained material in the pool surface. In extreme cases, sanding the surface before the first wash may be required.

MARBLESHEEN RENDERED POOLS

The surfaces of Marblesheen rendered swimming pools are prone to variations in surface integrity.

If the surface is soft, crumbly, or is delaminating from the underlying shell, it should not be coating until repairs are made.

Soft, crumbly, or small drummy areas must be removed and replaced using a quick set sand cement render mixture, however in extreme cases, professional assistance should always be sought. Small areas may be repaired by using MEGAPOXY P1 Epoxy Putty.

Important note: Painting over unsound Marblesheen will always result in a coating failure.

Using a stiff bristle broom, wash down the pool with an alkaline detergent solution to remove any surface contaminants. Wash down the pool with fresh water. Pump out the spent detergent solution. Acid wash the Marblesheen surface using 1 part Muriatic Acid to 1 part water solution. Proceed as for new cement rendered swimming pools above.

FIBREGLASS POOLS

Empty the pool and thoroughly wash down the pool with an alkaline detergent to remove any surface contaminants. Rinse down with fresh water and allow the pool surfaces to dry.

Thoroughly sand the entire pool surface using 40 – 60 grit sanding disks. Should the fiberglass surface be covered with calcium built up, this must be removed by acid washing prior to sanding.

Wash down the pool with fresh water to remove all traces of sanding dust. Allow to dry.

PREVIOUSLY PAINTED POOLS – EPOXY COATED

Once the pool is empty, thoroughly wash down the pool with an alkaline detergent to remove any surface contaminants. Rinse down with fresh water and allow the pool surfaces to dry.

Thoroughly sand the entire pool surface using 36 – 40 grit sanding disks to provide a good mechanical key for the new coating. Wet or dry sandblasting of the epoxy painted surface is a preferred method of surface preparation.

If areas of the underlying render are exposed, treat as for unpainted cement render.

Wash down the pool with fresh water to remove all traces of sanding dust. Allow the cleaned surface to dry.

PREVIOUSLY PAINTED POOLS – CHLORINATED RUBBER COATED

MEGAPOXY MC POOL COATING Epoxy based swimming pools should not be applied over Chlorinated Rubber base coatings.

To determine if the existing coating is chlorinated rubber, apply a cloth soaked with a solvent such as Acetone or Mineral Turps to the painted surface for approx. 5 minutes. If the existing coating softens and

PREVIOUSLY PAINTED POOLS – CHLORINATED RUBBER COATED (continued)

become sticky to the touch it is most likely Chlorinated Rubber. In all cases where the swimming pool is to be recoated with a Epoxy based paint, the existing coating must be removed by sanding out using 24 – 36 grit sanding discs however the sandblasting is the preferred method for the removal of the old Chlorinated Rubber Coating. Following the coating removal, surface preparation is to proceed as for cement rendered pools.

Application guide – Painting the pool

WEATHER CONDITIONS

Plan to paint the swimming pool during periods of fine stable weather conditions. Avoid very hot, cold, windy weather or forecasted periods of rain. As a good guide, consult the projected 4 day weather forecast provided by www.meteo.gr.

Painting the swimming pool at temperatures below 15°C or above 35°C is not recommended as the applied coating will not cure correctly and will lead to early failure.

Do not apply the coating at high humidity levels in excess of 80% RH as surface defects such as blooming may result.

Painting the swimming pool at very low temperatures during winter can result in premature chalking of the coating. It is best to paint during spring, early summer and autumn.

TIME OF DAY

Painting the swimming pool in early morning or late afternoon it is definitely not recommended.

The ideal time of day to begin painting between 8.00 – 9.00 a.m. Have the job completed no later than 1.00 pm. This allows the coating to take on a sufficient level of cure to be resistant to the evening dew that will settle on the surface.

Do not apply the coating during late afternoon as it will be show to cure and the evening dew will cause the surface to White Water Spot or to discolor due to surface bloom.

Important note: Any surface whitening or other discoloration must be removed by lightly sanding the area with 40–60 grit abrasive prior to recoating.

TIME DELAY BETWEEN COATS

Under normal temperature conditions (20 – 25°C) allow a minimum of 4 hours curing time before applying the next coat of paint. Do not apply the next coat until the preceding coat can be safely walked on without damage.

If more than 24 hours has elapsed between coats, it is necessary to thoroughly sand the coating surface using 40 – 60 grit abrasive back to a uniform dull finish prior to recoating. Failing to do this will result in intercoat delamination.

PAINTING THE SWIMMING POOL

To ensure colour uniformity, check the quality control numbers on all the Part a component cans are identical. Record the batch numbers of both Part A and Part B for future references. Do not use both winter and summer hardeners when painting the swimming pool.

It is recommended that all new cement rendered and Marblesheen

PAINTING THE SWIMMING POOL (continued)

rendered pools be first coated with a Megapoxy Low Viscosity Sealer prior to coating with Megapoxy MC Pool Coating. Megapoxy Low Viscosity Sealer seals and binds porous, friable surfaces. In addition to providing good adhesion, the sealer eliminates surface pinholes and seals in water-soluble salts that could lead to blistering and peeling of the paint. Refer to Megapoxy Low Viscosity Sealer product information guide for mixing and application recommendations.

Megapoxy Low Viscosity Sealer must be applied to thoroughly dry substrates. Do not apply at temperatures below 15°C. Do not leave longer than 24 hours before recoating.

Mixing the Megapoxy MC Pool Coating correctly is important. Add Part B hardener to Part A colour base and mix thoroughly using a flat stirring stick. Take care to mix in all material from around the sides and off the bottom of the can. Mix for at least three (3) minutes.

Always use and mix whole packs of paint. Never use part packs. Poor combination of Part A and B components will result in the applied paint not curing properly. Paint that it is still wet and tracky after 4 - 6 hours has not been mixed correctly and will not fully cure. Mix one (1) complete pack at a time apply within an hour. Expected coverage is approx. 20m² per 4.00 litre pack. Normal working time is approx. 1 – 2 hours depending upon temperature (high temperatures will reduce working time).

Apply the coating with a medium-nap roller. Bring the roller up to just below the tile line then cut in the tile line with a brush. Do not apply Megapoxy MC Pool Coating in thin coats as it will wear faster and appear patchy. The pool will require a minimum of two (2) coats of paint, however three (3) coats is recommended to achieve the optimum dry film thickness and the long term service life of the coating. After the application of the first coat, apply the second and third coat within 24 hours of the preceding coat. The most idea painting procedure is with two (2) people spread over 3 – 4 consecutive days each day commencing around 9.00 am.

PROBLEM

Small air bubbles appear on the coated surface and if left form a small crater in the coating.

REASON

These bubbles are the result of entrapped air escaping from the surface of the substrate and they are typically found in areas of direct sun on the still wet coating.

SOLUTION

Erect a protective shelter made of shade-cloth over the pool to protect the painted surface.

Any white surface discolouration caused by unpredicted rain, evening dew etc. must be thoroughly removed by abrading the area with 40 – 60 grit abrasive prior to the application of subsequent coats of paint.

If more than 24 hours elapses between coats, it is necessary to thoroughly abrade the entire coated surface of a pool to a uniform dull finish using 40 – 60 grit abrasive.

PAINTING THE SWIMMING POOL (continued)

The average size swimming pool will require approx. 5 – 6 x 4.00 litre kits of paint for a two (2) coat finish.

Allow the painted pool to stand for a minimum of 7 days in summer and 14 days during periods of cooling weather prior to refilling the pool. Premature refilling the swimming pool will cause damage to the coating. Do not add chemicals to the pool for at least 3 – 5 days.

Once the swimming pool has been refilled it is important to maintain the coating surface regular brushing down the underwater surfaces of the pool will maintain its integrity.

Stable pool water chemistry is important to the longevity of the coating. Regular checks to maintain the correct water balance is essential.

Trouble shooting guide

Megapoxy[®] Swimming Pool Paint while being a proven chemical and immersion resistant coating, it is still subject to the same phenomena as with all other epoxy based coatings. The following is provided to give some understanding.

SURFACE CHALKING

Surface chalking is a natural weathering process of all epoxy coatings. The degree of surface chalking of an immersed epoxy swimming pool coating is influenced by a number of factors. eg. Pool water management; Water type; Light intensity (UV attack), General Maintenance. Regular monitoring of the swimming pool water chemistry is essential to eliminate instability. Regular brushing of the coated surfaces helps in maintaining the surface of the pool coating in good condition. Refer to your local swimming pool shop for expert advice re correct swimming pool water management.

Premature chalking is normally the result of application, particularly at low temperatures or incorrect mixing. Extreme care should be taken when applying the coating during winter. It is recommended that swimming pools should always be painted during the warmer months of the year. ie. Spring, Early Summer, and Autumn.

WATER SPOTTING/ SURFACE WHITENING

White Water Spotting or Surface Blooming occurs when water or free moisture comes in contact with the surface of the epoxy coating during the critical phase of its cure. White Water Spotting or Surface Blooming normally exhibits as a white surface discolouration, however in extreme cases it can take the form of a white powdery deposit on the surface.

White Water Spotting or Surface Blooming must be thoroughly removed by sanding with 40 – 60 grit abrasive paper before recoating. Failure to do this will result in intercoat delamination with the second coat peeling off the underlying coating. Refer to the Application Guide – Painting the Swimming Pool.

BLISTERING / DELAMINATION

Blistering and coating delamination is always the result of incorrect application methods having been employed at the time of painting the swimming pool. Blistering / Delamination can be caused by a number of factors such as Painting over a damp surface; Painting during excessively high temperature conditions; Painting over a preceding

**BLISTERING /
DELAMINATION**
(continued)

coat that has been curing for more than 24 hours; Painting over a surface that has not been correctly prepared. Refer to the Surface Preparation & Application Guide for further information.

**SURFACE STAINING
- AMINE BLOOM**

On occasions a pale yellow stain may appear on the surface of the coating which comes from residual amine used in the hardener leaching out onto the coating surface. This staining is not uncommon and can occur within 4 – 6 weeks after painting and refilling the swimming pool. The discolouration is cosmetic and is not detrimental to the integrity of the pool coating. Normally the stain will gradually disappear with time.

Technical service

All purchasers of MEGAPOXY products are invited to avail themselves of our technical service on epoxy base materials. The methods and systems outlined in this bulletin are the best available at the present time, however continual research and development is being carried out and could result in change without prior notice.

Please do not hesitate to contact us for any additional information.