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# POSEIDON POOL PLASTER

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MATERIAL TECHNICAL DATA SHEET

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Dear client,

Thank you for choosing Poseidon Pool Plaster, we appreciate your business!

With your purchase we are providing you with the necessary data to ensure a beautiful result.

Kindly read this document thoroughly and let us know if you have any questions before proceeding with your renovation.

Please keep in mind that this document only serves as a guideline for yourself and your contractor.

Poseidon Pool Plaster cannot guarantee the workmanship of the contractor conducting the renovation.

Should a failure arise for any reason we will conduct an extensive investigation, but would require all the data such as mixing ratios, chemical test results, maintenance routines, date of marbelite application (which includes weather conditions), number of applicators in the pool, number of bags used in ratio to overall sqm of the pool etc. It is best to note this down and to take pictures of the pool before application, during application and after to assist us with the investigation.

Enjoy your Paradise Pool!

## Surface Preparation-New Pools

- The shell of the pool needs to have been cured and be found in sound condition.
- When the pool was rounded off and plastered on areas where the pool was smoothed /rounded off use river sand to create a nice rough surface for premium adhesion, not plaster sand.
- We absolutely recommend installing a slush coat as late as possible on the day before plastering your surface. This will prevent lateral damp and rust from penetrating the shell later on. Installing a slurry surface will prevent early onset cracking by sun/concrete absorption.
- Ensure the concrete shell is sufficiently saturated the day before, as the slush coat cannot be penetrated once dried.
- Create a slurry with Marbelite (bonding liquid) mixed with Poseidon Pool plaster, 24 hours before plastering the pool.
- No debris or foreign substances should be present in the pool on the day of application.

## Surface Preparation-Existing Pool

- We recommend removing the existing pool plaster, however on rare occasion this is not required. Complete removal of the marbelite would only be required if the existing pool plaster is brittle, if there are hollow points in the existing pool surface or if the current plaster is delaminating (please inspect for damp, as this would require damp-proofing application prior to your slurry mix). In the event of black algae or signs of rust or stains, everything should be removed to inspect and treat the issue on hand accordingly. Algae would need to be eradicated completely otherwise it will return.
- When it has been established that the old marble plaster is sound, surface chipping can commence at a minimum of 50mm apart and 3-5mm deep. (Please note that on this step algae and rust can also be discovered, in this case chipping should be halted and the issue should be treated).
- Acid wash the surface with a hydrochloric acid diluted with a 1:5 ratio to remove dust and neutralize any alkaline levels remaining in the plaster.
- Rinse this properly and continuously until no debris or acid remains. Absolutely no acid should remain otherwise this will create streaking in the plaster during application.
- Create a slurry with Marbelite (bonding liquid) mixed with Poseidon Pool plaster, 24 hours before plastering the pool.
- Ensure the concrete shell is sufficiently saturated the day before, as the slurry mix cannot be penetrated once dried.

# Mixing And Application

## **ALWAYS MEASURE THE WATER QUANTITY PER BAG.**

- START the mix with 5.8 Litres of water with 1L of Marbelite (bonding liquid) per 40KG bag which gives you a total liquid quantity of 6.8 L per 40kg bag.
- **Never exceed 8L per bag**
- **NEVER USE A HOSEPIPE TO 'MEASURE' WATER**
- Do not marbelite a pool below 10 degrees in winter and over 30 degrees in summer.
- If you are using our Marbelite bonding liquid, mix the bonding liquid with your water quantity and add to your dry mix together.
- The overall consistency of the marbelite mix should look like stiff pap/oatmeal/peanut butter. The marbelite should stick to the wall as it is being application. Runny marbelite indicates excessive water.
- Do not add any accelerators such as calcium to your mix. Our marbelite consists of a 52.5 class 1 cement which contains early strength gaining properties.
- Use a clean, rounded steel trowel for application.
- Marbelite should be applied on the walls first, starting at the deep end of the pool working outwards toward the entry level of the pool.
- For swift application, we recommend using one skilled plasterer for every 10-15 sqm of pool surface.
- Execute a light mist over the entire pool once plastering is done to prevent premature curing which may lead to hairline cracks on the marbelite surface.
- Allow a 24-hour drying time before filling the pool.
- Do not walk inside the pool after it has been plastered.
- Keep dogs away from the pool area after plastering.

# After Care Maintenance

## **TEST THE SOURCE WATER FOR CALCIUM, ALKALINTY, METALS**

- It is imperative that the source water be tested prior to filling
- **DO NOT USE BOREHOLE WATER TO FILL YOUR POOL.**
- **DO NOT USE FLOATERS!** Floaters tend to migrate to one side of the pool when the pump is switched off. The chlorine inside the floater continues to dispense which creates white marks in the pool.
- A lack of calcium in the water will cause etching in the pool. White blotches may appear on the marbelite which is a clear sign that the water is calcium hungry, drawing calcium out of the marbelite
- Too much calcium will create scaling and lead to cloudy pool water
- Should your pool contain metals (borehole water) it is important to add in a metal and stain remover once the pool is filled.

- After required chemicals have been added to the pool (usually diluted and inserted through the weir on bypass for 12 hours) the next batch of chemicals can be added.
- Recommended chemicals: Granular chlorine, Alkalinity Booster, Algaecide, Alum powder.
- Chemicals should always be added to the weir and NEVER directly into the pool.
- Salt chlorinated pools will have to be disconnected or bypassed for the first 4 months. Adding salt to your newly renovated pool, will erode the marbelite and create a rough surface.
- Never use Hydrochloric Acid as part of your maintenance routine, Acid is only ever used to lower PH levels.
- Water testing should be done weekly to keep track of existing PH levels of the pool.
- Daily brushing is required on newly plastered pools to avoid dust build up from occurring while the marbelite is curing. Use a soft nylon brush to conduct brushing. Do not brush vigorously. Automatic pool cleaners can only be introduced 3 weeks post renovation. In the interim, a pool vacuum can be used to rid the pool of accumulated dust and debris particles. Do not use the 8-wheel vacuum as that will create lines on the marbelite.
- Keep water level maintained midway of the weir.
- If a sand change was not done as part of the renovation, conduct a full backwash and rinse cycle before switching over to the filter setting.

## Weekly Pool Maintenance

- **We repeat: DO NOT USE FLOATERS!** Floaters tend to migrate to one side of the pool when the pump is switched off. The chlorine inside the floater continues to dispense which creates white marks in the pool.
- Keep your pool in operation throughout the year. Do not switch the system off during winter.
- Test water on a weekly basis to maintain PH levels.
- Pools that are exposed to direct sunlight throughout the year should be protected with a solar blanket.
- **DO NOT COVER YOUR POOL WITH A SOLID COVER.**
- Keep sand change schedules in check. Dirty sand circulates dirty water which will mess up chemical levels in the pool.
- **NEVER ADD CHEMICALS DIRECTLY INTO THE POOL**
- Treatment chemicals such as algaecides and clarifiers should always be run on the bypass setting of the multiport and be administered directly into the weir, NOT IN THE POOL.
- Weekly chlorine can be accompanied with 2 cups of alkalinity, administered directly into the weir and on Filter setting of the multiport. This ensures that chemicals circulate through your filter and returns to the pool in an already diluted form. You will notice a big white cloud entering the pool from the aimflow.

# Chemical levels

Factors that commonly affect the balancing of swimming pool water, are the following:

- PH LEVELS
- TOTAL ALKALINITY
- CALCIUM HARDNESS
- CYANURIC ACID LEVELS (STABILISER LEVELS)
- CHLORINE LEVELS
- METAL CONTENT (COPPER AND IRON LEVELS)
- TOTAL DISSOLVED SOLIDS (TDS)
- WATER TEMPERATURE

1. **PH LEVELS**-The balance between acidity and alkalinity is referred to as PH
  - a. PH ranges from **1.0 to 14.0**
  - b. Recommended levels are between **7.2 and 7.6**
  - c. Increase PH using 'SODA ASH' (marbelite pools)

<b>The effects of incorrect PH levels in your swimming pool</b>	
<b>Below 7.0 (Too Low)</b>	<b>Over 7.6 (Too High)</b>
<ul style="list-style-type: none"><li>• Etched Marbelite</li></ul>	<ul style="list-style-type: none"><li>• Eye Irritation</li></ul>
<ul style="list-style-type: none"><li>• Chlorine Loss</li></ul>	<ul style="list-style-type: none"><li>• Scale Formation</li></ul>
<ul style="list-style-type: none"><li>• Stained Marbelite</li></ul>	<ul style="list-style-type: none"><li>• Cloudy Water</li></ul>
<ul style="list-style-type: none"><li>• Eye Irritation</li></ul>	<ul style="list-style-type: none"><li>• Pool Chlorine Efficiency</li></ul>
<ul style="list-style-type: none"><li>• Corroded Metal</li></ul>	<ul style="list-style-type: none"><li>• No Disinfectants</li></ul>
<ul style="list-style-type: none"><li>• Killing of Alkalinity</li></ul>	

2. **TOTAL ALKALINITY**-Alkalinity buffers the water against sudden changes in PH
  - a. **Marbelite Pools = 80 to 120mg/l**
  - b. **1kg moves 10ppm**

### 3. CALCIUM HARDNESS

Calcium Hardness indicates the calcium ion content of the water. Total hardness is the total mineral content of the pool water, which is a combination of calcium and magnesium ions.

High levels can promote scale and cloudy water if the water is incorrectly balanced. Low levels can promote corrosion and lead to grout loss.

#### Recommended Levels:

- Marbelite pools = 220 to 400 mg/l but can still create scaling.
- Hard water is usually less corrosive than soft water.

#### 4. Cyanuric acid levels (stabilizer levels)

- a. Minimum 10ppm
- b. Ideal 30-50ppm
- c. Maximum 80-100ppm

Low stabiliser levels (Below 40ppm) will cause that your chlorine is used up much quicker by the UV rays of the sun.

High Stabilizer levels (over 80ppm) will need to be lowered by draining the pool partly and refilling until ideal levels are reached.

#### 5. Metals

Signs of metals present in swimming pools will be reflected by neon-like coloured water as well as brown stains on the surface of the swimming pool (Borehole water will do that).

- **METALS (COPPER):** A Metal which, when present will cause water discolouration (blue green) and/ or coloured stains in the pool.
  - **Recommended levels:** below 0.2 ppm
- **METALS (IRON) :** A metal which, when present in high quantity in pool water, may cause coloured water (red/brown) or coloured stains on the pool surface.
  - **Recommended levels:** below 0.3 ppm

## Technical Data Sheet

<b>PRODUCT DESCRIPTION</b>	SWIMMING POOL PLASTER/MARBELITE CHEMICALLY ENGINEERED TO PROVIDE A SMOOTH FINISH
<b>TYPE OF CONCRETE USED</b>	CLASS 1 52.5 WHITE PORTLAND CEMENT
<b>SAFETY REQUIREMENTS</b>	GENERAL RESPIRATORY PPE APPLIES. DO NOT INHALE.
<b>COVERAGE OBTAINED</b>	2 SQM P/40KG BAG AT A THICKNESS OF 6-8MM
<b>PACKAGING</b>	PLASTIC. 540 X 910MM 200 MICRON BAG
<b>STORAGE</b>	KEEP OUT OF DIRECT SUNLIGHT.
<b>SHELF-LIFE EXPECTANCY</b>	6 MONTHS IF STORED AWAY FROM DIRECT SUNLIGHT
<b>COLOURS AVAILABLE</b>	46 DIFFERENT COLOURS
<b>MIXING TIME</b>	30 MINUTES
<b>SETTING TIME</b>	PRODUCT WILL START SETTING AFTER 45 MINUTES WITH FULL SETT WITHIN 90-1a20 MINUTES IN WINTER. QUICKER SETTING TIME DURING SUMMER
<b>CURING TIME</b>	28 DAYS CURING TIME TO ACHIEVE MPA PROVIDED THAT SPECIFICATIONS ARE FOLLOWED
<b>APPLICATORS/PLASTERERS</b>	1 QUALIFIED POOL PLASTERER FOR EVERY 10-15 SQM OF POOL SURFACE.
<b>SUMMER APPLICATION</b>	MIXING TO COMMENCE BEFORE 8 AM WITH EXIT TIME AT 11AM. MISTING OF POOL TO BE DONE EVERY HOUR AFTER APPLICATION
<b>WINTER APPLICATION</b>	MIXING TO COMMENCE AFTER 8 AM AND ABOVE TEMPERATURES OF 10 DEGREES
<b>SURFACE APPLICATIONS</b>	GUNITE, HAND PACKED, CONCRETE SURFACES. IT CAN NOT BE APPLIED OVER PREFABRICATED OR FIBERGLASS SURFACES
<b>WEATHER CONDITIONS</b>	BEWARE OF TEMPERATURES THAT CAN DROP TO FROST POINT DURING WINTER AND RAIN CONDITIONS DURING SUMMER. POOL REQUIRES A MINIMUM TIME FRAME OF 8-10 HOURS WITH NO RAIN.
<b>MARBELITE CARE AFTER APPLICATION</b>	APPLY A LIGHT MIST OVER THE MARBELITE SURFACE 2 HOURS AFTER APPLICATION TO PREVENT PREMATURE CURING AND SURFACE CRACKS. CONTINUE MISTING AFTER EACH HOUR. SHOULD HAIRLINE CRACKS APPEAR ON THE MARBELITE SURFACE-SEAL OFF WITH A CLEAN SPONGE.



# TROUBLESHOOTING

## Cracks, popping, delamination

- Too much water in the mix.
- Over exposure of sunlight onto marbelite surface and not misting (Premature drying).
- Filling the pool too early.
- Over floating: Continuous floating over the marbelite will damage bonding properties in the marbelite and make it more vulnerable to cracks.
- Weak areas in old marbelite not previously removed prior to new marbelite application.
- Allowing traffic across the pool whilst applying the marbelite and after application.
- Incorrect preparation: minimal surface chipping.
- Using too little marbelite required for the surface and compensating the shortage by adding excess amounts of water to the mix.
- Applying marbelite on too thick will create "sagged chipped areas".
- Extremely cold weather temperatures expand water will cause popping of the marbelite.

## Unskilled Labour

- Not using enough marbelite to cover the complete surface area of the pool.
- Not measuring water quantity per bag. If your marbelite mix does not have the overall consistency to look like stiff pap/oatmeal/peanut butter, there is too much water in the mix.
- Uneven floating (inconsistency).
- Burnt Marbelite: Black streaks will appear over the surface.

## Application Times

- Marbeliting in winter below 10 degrees.
- Marbeliting too late in summer will result in premature curing and an unworkable mix.
- During summer, plasterers should be out of the pool by 11 am.

## Not testing the source water

- Too little calcium will cause etching and corrosion. Water becomes calcium hungry and will attack marbelite by drawing out the calcium. White blotching and streaks will appear over the marbelite surface.
- Too much calcium in the pool will create scaling, cloudy water and will create a white blanket cover across the pool surface.
- Water containing high metals (borehole) water will create metal stains in the pool.
- Failing to keep PH levels in check will discolor the marbelite and etched plaster.
- Low alkalinity levels will cause corrosion.
- High alkalinity levels can result in scaling.

### **Adding accelerators to the marbelite**

- Accelerators such as calcium hydrochloride i.e., calcium flakes do not speed up the setting time of the marbelite, it speeds up the overall mpa strength of the mortar mix.
- We make use of a class 1 52.5 white portland cement which has strength gaining properties as is.
- We do not recommend adding calcium flakes to our marbelite at all, not even with white marbelite.
- Calcium flakes can be added to the pool after filling should water tests determine that it is required.