BG Pool New
Epoxy Pool Paint
Maintenance manual - **IMORTANT INFORMATION**

Introduction

The following information is to ensure that you achieve maximum life from your swimming pool coating which you can enjoy for many years to come.
Some frequently asked questions will be answered in this manual.

In order for your BG POOL Epoxy Coating to deliver excellent performance in your swimming pool, there are a number of conditions that have to be met for this high-performance product to be properly maintained.

Please use the following index to help you faster to navigate through this Maintenance Manual:

1. Surface Blooming

From a technical perspective, if the surface of the pool comes into contact with rain or moisture within the first 48 hours after completion of the application, the epoxy coating will not be damaged. If there is any milky discolouration (known as a **surface bloom**) caused by rain or heavy dew, it will be on and not in the coating and as such it will not affect the coating in the long term. This surface **bloom** will generally disappear within the first few weeks after filling the pool with water.

Rain water that has been collected within the pool, should be carefully removed out of the pool. Although it may leave a blooming mark as outlined.

2. Foreign Matter or Bitty Finish

If foreign matter such as insects or leaves has been trapped in the final coat during cure, it may be removed by sweeping with a stiff broom after full cure of 7 days. Do not attempt scraping as it will damage the integrity of the coating.
Leaf stains on the surface will generally disappear within the first week or so of the pool being filled and chlorinated.

- Take care when walking in the empty pool as the smooth surface is very slippery...

3. Yellow Stains

Stains may occasionally appear on the pool coating.
These are normally yellow in colour and result from excess hardener leaching to the surface.

- This will most often occur within one month of filling the pool, and will gradually disappear as the pool surface chalks.

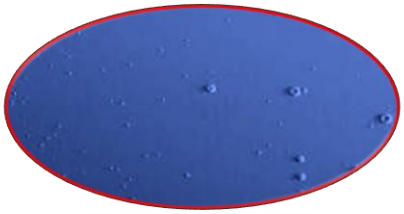
It should disappear by itself within:

· 6 - 8 weeks during summer.
· 8 - 12 weeks during winter.

- This phenomenon however is rare.

4. Surface Defects

Bubbles



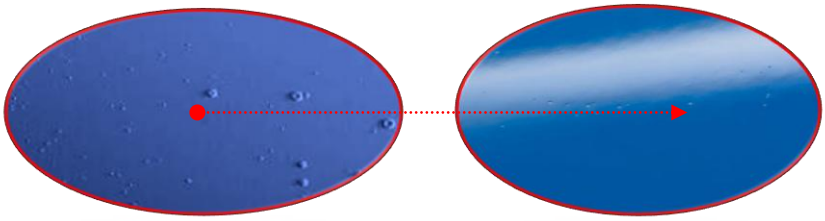
Bubbling or solvent boil occurs when volatile solvents in Epoxy, or air in the application surface expand with heat, and then become trapped in the curing paint.

- This may result if the paint is applied to a hot surface, if the product itself is too hot when applied, or if the applied paint experiences any heating (e.g. from sunlight) during the early stages of the curing process.

Prevention:

- To prevent bubbling, avoid painting under high temperature conditions (over 30°C), begin application earlier in the day (around 6:30 - 9am during summer), (around 8:30 - 11am during winter) while the surface is still cool, and ensure that all Epoxy products are stored out of direct sunlight and kept in a cool place throughout application.
- If bubbling is experienced in a fully cured film, (especially important in initial coats) sand the affected area smooth with 150 grit sand paper, and then remove all residue before applying successive coats.

Prevention:



· If such should occur after 10 - 15 minutes during application, correct:

- By lightly draping a wet roller (not loaded) over the surface.
- Do not attempt the process after 30 minutes of drying.

If bubbling is experienced in a cured film, (especially important with initial coats):

- Sand the affected areas smooth with 150 grit sand paper.
- Then remove all residues before applying successive coats.

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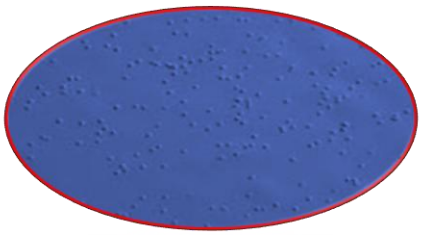
Blisters



Blistering is the result of **poor application techniques**, and occurs because of either volatile solvents entrapped, and **in particular air induced during poor application practice**.
- This may result that voids formed within the film will ultimately result in cracking and peeling of the epoxy coating.

Prevention:
In the event that blisters are identified:
- The entire coat of paint must be mechanically abraded back to a stable and sound surface.
- After all residue has been removed; any additional surface preparation should be performed before reapplication of finish coats.

5. When to fill the pool with water

In summer, do not fill the pool for **7 days** after completion of painting; in **winter** wait for **14 days**.
For indoor pools allow **14 days** before filling.

6 - 8. Start up – Water Chemistry

6: In summer, new water that has been used to fill the pool must be **super chlorinated** for the first night. Sediment that falls to the floor should be vacuumed. For 24 hours there should be continuous filtration until the water is crystal clear. Thereafter salt in saltwater pools can be added. In winter, these procedures can be delayed by up to one week after filling the pool.

7: PLEASE NOTE: The **Total Alkalinity (TA)** of the pool water must be adjusted to **180ppm**; it should be maintained in the range of 160 – 180ppm. The addition of approximately 1kg bicarbonate of soda per 8000 litres is usually adequate for new or fresh pool water (9kg/72kl or 10kg/80kl).
Low Total Alkalinity (TA) is usually indicated by white powdery deposits on the coating's surface. If these powdery deposits remain unchecked; this may affect the longevity of the coating because of the abrasive cleaning action of automatic pool cleaners (such as Kreepy Kraulys) on the paint surface. The "pick-up" of colour on hands and feet may be an early indication of Low Total Alkalinity (Smurf effect).

It is important to note that chalking is a natural process during the lifespan of the pool epoxy coating. Chalking indicates a problem with the pool chemistry and not the epoxy paint. As such, it does not occur as a result of any defect in the epoxy paint or in the materials used to manufacture the epoxy paint. It is vital to maintain the balance of chemistry of the pool water in order to minimise chalking. As such, Total Alkalinity (TA) must be checked regularly in order to maximise the lifespan of the painted surface. TA must be maintained within the range 160 – 180ppm ALL YEAR ROUND !!!
8: PH should be maintained between 7.5 and 7.8;
8a: Calcium Harness: 280 – 340ppm;
8b: Total Alkalinity: 160 – 180 ppm;
8c: Free chlorine: <3ppm.

9. Cleaning Maintenance

It is highly recommended that you routinely brush the walls and floor areas of your pool vigorously, followed by 8 hours of filtering.
In summer this should be done monthly and every 6 - 8 weeks in cooler periods.
Following and maintaining this regime will help your swimming pool to present a smooth, glossy and hygienic Surface, (that does not encourage the growth of algae), to the pool water. In addition, it will greatly enhance the lifespan of the epoxy coating, especially when using chlorine. Using modern, automatic pool cleaners can diminish the need for hand brushing.

10. Useful Hints

Chlorine Levels are best kept at a minimum that is consistent with healthy water. (<3ppm)

If a stabiliser (cyanuric acid) is used, do not exceed 55ppm as this will result in a false Total Alkalinity (TA) reading.

Note: Do not confuse TA (Total Alkalinity) with pH.

If a dusty, white powdery surface becomes apparent, it can be removed by brushing or rubbing the entire surface of the pool (refer to paragraph 8). This must be followed by 8 hours of filtration, and then back washing the filter.
Thereafter, dose the pool with bicarbonate of soda in order to return the TA level back up to 180ppm.

11. Total Alkalinity vs. Surface Powdering vs. Smurf Effect

Because of the harsh UV in Australia, it is not recommended to empty the pool in the winter. Keeping a pool empty for an extended period of time can cause structural damage; it is therefore important to manage the chemistry of the pool water even during the winter months.

If a professional service is managing the chemistry of your pool water, please specify that the pool's surface is "paint" as opposed to pebble, marblesheen or fibreglass. Paint requires higher TA (**Total Alkalinity**) than other of surface coatings and incorrect specifications can result in TA being maintained at lower levels than those recommended above. This can reduce the lifespan of the surface coating as well as result in faster rates of **surface powdering** (**Smurf effect**) and more "pick-up" on hands and feet.

12. Filling the pool

Place your hose in the skimmer after 7 days during the summer and after 14 days in the winter. If necessary, place a heavy object on the hose to keep it in the pool after the water is turned on. The hose must not be on the bottom of the pool because this can cause a concentration of pressure on one spot of the new surface. It takes approximately 2 days to fill an average size pool with a depth of 9 x 4.5 metres and a width of 1 - 1.8 metres. The average pool holds 30 - 60 000 litres of water.

13. Start up – Nearly ready for swimming

Start – up for Pools 50 000 - 80 000 Litres:
Disconnect the salt water chlorinator if your pool has one and remove all power plugs from the socket. Then plug back the pump plug back into the wall socket. Then do the following:
1: Fill the pool to the top of your water line tiles;
2: Add 30 litres of liquid chlorine;
3: Add 8kg of buffer;
4: Add 4kg of stabiliser;

5: Run the filter for 24 hours.
6: Vacuum the floor and walls ……

Salt Water Pools

Add 13 x 20kg bags to the shallow end; as the salt dissolves it will wind up in the deep end and the salt will be cloudy once it has dissolved. Place a suction hose (from an automatic cleaner or a hand vacuum cleaner) in the deep end with the filter on, and run for 24 hours until the water is crystal clear.
Then re connect the chlorinator and test the water (remember if you do not at first disconnect chlorinator, high concentration of salt over cell may short circuit between the electrodes and damage the chlorinator).

The first couple of weeks after starting up your pool are the time to make sure everything is running right.
You will need to check your water readings more often in the beginning.
Test the pool water and balance it to the recommended levels as soon as the pool is filled.

14. Slippery entrance stairs

Take care when entering the pool for the first time. It is slippery as a result of silt which forms from the dust which settles on the steps when the pool is empty. Steps must be brushed each time before entry until it is no longer slippery because most pool cleaners do not clean the top of the steps.

15. Support - Controlling Factors

The four most important chemical levels that should be balanced and maintained are Total Alkalinity (TA), Calcium Hardness, pH and Chlorine.

1. Total alkalinity is an important measure that, while having an effect on pH, is separate from pH.
The total alkalinity of your pool is a measure of the amount of alkaline substances in water.
Alkaline substances can cause the pH of your pool's water to change in an uncontrolled manner.
When your total alkalinity is low, it makes the water aggressive and causes rapid fluctuations in the pH. When it is high, it causes cloudiness, lime precipitation, and makes the pH difficult to adjust.

2. Calcium hardness of your water is a measure of the amount of Calcium carbonate dissolved in the water.
The guideline for total hardness of the water is 280-340 ppm (mg/l).
High levels can cause lime to be precipitated. Lime precipitation can lead to lime scale forming on the pipes and walls of the pool, and within the mechanical equipment of the pool.

3. Managing **pH** is **a critical component** of maintaining healthy and balanced water chemistry.
It is so important because pH is a driving factor in the Langelier Saturation Index (LSI)
The Langelier Saturation Index (LSI) is an index that measures mineral saturation in pool water, and more specifically, the measure of **calcium carbonate**.
In swimming pools, it should be maintained between a minimum of -0.3 and a maximum of 0.5, and ideally between **0.0 and 0.5.**
LSI is a measure of a solution's ability to dissolve or deposit calcium carbonate...

If too low:

The water becomes unstable and attempts to balance itself.
The aggressive condition will cause etching of pool paint and concrete. Metals such as from pool ladders, light housings, handrails, screws, and other hardware can corrode.
A white powdery deposit (chalking) will develop on the surface.

If too high:

Water becomes scale forming.
Calcium Carbonate will precipitate and collect on pool walls and salt cells.

4. Free Chlorine is the amount of chlorine that's available ("free") to sanitize contaminants in your swimming pool. It breaks down into such chemicals as hypochlorite ion and hypochlorous acid, both of which are effective at killing bacteria and various microorganisms.
Chlorine levels are best kept at a minimum consistent with healthy water. <3ppm, (ideal 1-2 ppm).

5. Cyanuric acid (CYA), sometimes referred to as a pool conditioner or pool stabilizer, is crucial for maintaining your water's chemical balance. But while CYA helps protect your chlorine from the sun's ultraviolet rays, too much isn't good for your water chemistry.
Too much cyanuric acid can prevent chlorine from effectively doing its job.
Take care not to exceed 55ppm, as this will give a false Total Alkalinity (**TA**) reading.

6. Superchlorination:
Over time and with extended use, organic wastes build up in pool water. These include body oils/sweat, other body fluids and suntan lotions.

It is a process in which the chlorine level in water is raised to abnormally high levels over a very short period of
- Superchlorination, also known as shocking or chlorine shocking is the process of adding several times more Chlorine to the pool that is normally needed in order to eliminate resistant compounds, chemicals, oils and strong types of algae.

With enough chlorine, even the tough compounds that have bonded to the original chlorine particles will be dissolved.

Different methods of Superchlorination may be necessary, depending on the type of pool and how dirty it is.
- Increase the free chlorine to 10 - 20 ppm.
- Continuous filtration should be carried out until the water becomes crystal clear (typically 24 hours).

Once complete:
The Pool water must be checked for free chlorine, and if necessary readjusted:
- To obtain the safe and recommended levels of chlorine: <3ppm, (ideal 1 - 2 ppm).

This procedure will assist in maintaining a smooth, glossy and hygienic (non-algae supporting) surface to the pool water, and will greatly enhance the life of the coating.
Please note all epoxy coating will chalk under UV and what we can do is slow down/reduce the chalking by balancing the water chemistry, cleaning and maintaining the pool as above.

The recommendations contained herein are given in all good faith and are meant to guide the specifier or the user. It is based on the present state of our knowledge and believed to be reliable. Intended users should read the TDS carefully and then conduct their own assessment to confirm the suitability of the product and its application.

MANUFACTURED BY BG COATINGS
U4/34 Truganina Rd
6090 Malaga
Australia

Should you have any queries or require any further information please contact the BG COATING advisory service:
Phone: 1300-894-994 **E-mail**: info@bgcoatings.com.au