[TECHNICAL BULLETIN]

ASTEC DECORATIVE AQUATIC COATINGS

THERMOPLASTIC CHLORINATED RUBBER

Chlor-tec PP 676

PRODUCT TYPE

Pool Paint Chlorinated Rubber.

PRODUCT DESCRIPTION

Chlor-tec PP676 is a single component chlorinated rubber coating designed specifically for use on new or existing concrete swimming pool surfaces. The product is supplied ready for use straight from the drum and can be applied to most correctly prepared concrete surfaces.

Chlor-tec PP676 has excellent resistant to pool chemicals, abrasion and attack from algae. The product provides a film that is smooth and most importantly easy to clean.

NOTE: This product is not designed for use on fibreglass pools. The use of this product on a fibre glass pool is done so entirely at the owners risk.

Chlor-tec PP676 is designed for full water submersion in concrete swimming pools. The product is a decorative finish that has the benefit of excellent re-coatability over existing rubber surfaces. Future maintenance re-paints with Chlor-tec PP676 have very low labour requirements. The aged surface generally only requires a solvent or chemical wipe prior to a fresh top-coat application.

Chlor Rubber applied over Chlor Rubber adheres through a process called "solvent weld", the newly applied top-coat, slightly softens and bites to the existing rubber paint film. The two layers joint together as one integral finish, ready for service.

COLOUR RANGE

The product can be supplied in a range of decorator colours available from Astec Living Colour fan deck. Although the most frequent colours are standard pool blue, aqua, green, or white.

Light tone colours are best used to increase the products service life. Light colours will not highlight chalking that will ultimately occur on the surface as readily as a dark tone contrast.

Astec Paints is a 100% Australian owned company committed to the research and development of technologically advanced coatings that provide premium durability against our harsh Australian conditions. Our coatings are manufactured with high regard for worker safety and environmental care and will provide you with absolute confidence in long term performance.

PROPERTIES OF CHLORINATED RUBBER

Drying Mechanism	Solvent Evaporation
Intercoat Adhesion (coat on coat)-aged	Excellent (Solvent Weld)
Temp, Resistance Dry Continuous (cured film)	70º C
Chemical Residence	Excellent
Solvent Resistance (aged)	Poor
Resistance to Vapour Permeation	Very High
Min application Temperature	5º C
Colour Range	Full range
Resistance to U.V. Light	Chalks
Accelerated Weathering (2000 hrs U.V.A.)	Excellent (slight chalking)
Resistance to Water Immersion	Excellent
Resistance to Mechanical Damage	Good (Human induced)
Resistance to Oils, Cutting Oils	Low (Softens film)

PHYSICAL PROPERTIES

Gloss level	Gloss
Drying Time	
(Touch Dry)	30 mins / 1 hr
(Dry)	12 hrs
Recoat window	12 minimum-24 maximum
Dry ready for submersion	5 to 7 days (Weather Dependent)
Recommended Thinners	Astec All Purpose Thinners
UN Number	1263
Hazchem Code	3YE
Poisons Schedule	5
D.G. Class	3.1
Solids by Volume	35%
Solids by Weight	55%
SG	1.25
V.O.C.	Does not exceed 600 gms/ltr

COVERAGE

1 st coat	5 m^2/ltr
2 nd coat or re-coats	8 m^2/ltr

Rates given are applicator and substrate dependent.

NOTE: It is better to apply multiple thin coats rather than one thick coat, especially if applying in cooler conditions.
Remember **thicker is not better**.

CHEMICAL RESISTANCE

CHEMICAL NAME	EFFECT / 28 DAYS IMMERSION
Hydrochloric acid (PH adjustment for water) 10%	No Deterioration
Sodium Hypochlorite, (Sanitation, algae control) 25%	No Deterioration
Sea Salt Solution 5%	No Deterioration
Soap Solution	No Deterioration
Chlorine Gas	No Deterioration
Xylol	Deterioration
Toluene	Deterioration
Mek	Deterioration
Acetone	Deterioration
Ethanol	Deterioration

PREPARATION

(COMPATIBILITY TEST, POOL WITH EXISTING COATINGS APPLIED)

Before preparation or product application takes place you must determine the chemical type of the existing coating.

1. Rub the existing paint surface with solvent and a cloth for 1 minute.
2. If the surface becomes sticky the existing finish is most likely rubber and can be directly re-coated with Chlor-tec PP676, if in sound well adhered condition.
3. If the surface does not change and is not sticky, the existing finish is most likely epoxy.

PREPARATION
(Rubber coatings, existing)

1. High pressure water clean to remove any chalking, blisters or loose paint.
2. Scrub the entire surface with a stiff brush or broom and soap or (Tri-sodium Phosphate) to remove any grease or oils.
3. Make good any repairs to exposed concrete surface, using Astec Waterproof Render.
4. Wipe surface with 15-20% solution of Sulfamic or Hydrochloric Acid to remove any build up of hard mineral deposits.
   Note: Always add acid to water, never water to acid.
5. Neutralise/Rinse surface with (Tri-sodium Phosphate) or soap.
6. Remove any remaining gloss with sand paper or with the assistance of electrical sanders.
7. Wipe entire surface with a lint free rag and Thinners. Immediately apply coating.
8. In the event the coating exhibits complete lack of adhesion, remove coating entirely by abrasive blasting.

PREPARATION
(Epoxy coatings, existing)

Existing epoxy pool paints can be based on a number of different chemical compositions, for example, Epoxy ester, Amine Epoxy or Polyamide Epoxy. As a result, in most cases it will be difficult to determine exactly which Epoxy has been previously applied to a pool unless, maintenance records provide the relevant information.

- In the event the existing Epoxy is an **Amine or Polyamide Epoxy** the following procedure can be used to create a surface that will provide fair adhesion properties for Chlor-tec PP676.

- In the event the existing Epoxy in an **Epoxy Ester** ***the entire coating should be removed prior to the use of Chlor-tec PP676*** as correct intercoat adhesion will not be possible.

1. Scrub the entire surface with a stiff brush or broom and soap or (Tri-sodium Phosphate) to remove any grease or oils.
2. Rinse thoroughly with fresh water or high pressure rinse.
3. Lightly abrasive blast, (wet or dry), the epoxy surface to achieve a surface profile that looks similar to 120 grit sand paper. All gloss should be removed.
4. Remove all blast media from the pool, thoroughly vacuum free of all contaminants.
5. Make good any repairs to exposed concrete surface, using Astec Waterproof Render.

PREPARATION
(EPOXY COATINGS, EXISTING)

6. Apply two coats Chlor-tec PP676.
7. If unsure of the type of existing epoxy conduct a test patch of the system and once cured a cross hatch adhesion test.
8. If the test patch fails, remove all existing coating back to clean concrete.

PREPARATION
(NEW CONCRETE)

1. New concrete must be allowed to cure for at lease 4 to 6 weeks prior to any coating application.
2. Remove any pinnacles of sand or shutter marks in the surface with a wooden or stone block.
3. Make good any repairs to concrete surface, using Astec Waterproof Render.
4. Smooth polished concrete must be acid etched or abrasive blasted to provide a suitable surface profile similar to 120 grit sand paper after etching is complete.

Option 1 / Acid Etching.

5. Apply a 15-20% solution of Sulfamic or Hydrochloric Acid and water to 1 m² at a time while scrubbing with a stiff brush, do not allow the solution to dry. Rinse with fresh water and stiff brush ensuring all etching laitance are removed.
   Note: Always add acid to water never water to acid.
6. Repeat etching if surface profile is not achieved.
7. Neutralise/Rinse surface with (Tri-sodium Phosphate) or alkaline soap.

Option 2 / Abrasive Blasting.

8. Abrasive blast to a surface profile similar to 120 grit sand paper.
9. Vacuum pool free of all contaminates.
10. Allow pool to dry for at least 2 to 3 days.
11. Apply 1 coat Chlor-tec PP676 thinned 10 % with Astec All purpose Thinners.
12. Apply 2 coats Chlor-tec PP676 straight from the drum.

PREPARATION
(MARBLESHEEN)

1. MarbleSheen pools must be allowed to cure for at lease 4 to 6 weeks prior to any coating application.
2. MarbleSheen must be acid etched to provide a suitable surface profile similar to 120 grit sand paper after etching is complete.
3. Apply a 15-20% solution of Sulfamic or Hydrochloric Acid and water to 1 m² at a time while scrubbing with a stiff brush, do not allow the solution to dry. Rinse with fresh water and stiff brush ensuring all etching laitance are removed.
   Note: Always add acid to water never water to acid.

PREPARATION
(MARBLESHEEN)

4. Repeat etching if surface profile is not achieved.
5. Neutralise/Rinse surface with (Tri-sodium Phosphate) or alkaline soap.
6. Vacuum pool free of all contaminates.
7. Allow pool to dry for at least 2 to 3 days.
8. Apply 1 coat Chlor-tec PP676 thinned 10 % with Astec All purpose Thinners.
9. Apply 2 coats Chlor-tec PP676 straight from the drum.

APPLICATION CHECKLIST

1. The surface to be coated must be completely dry before application, to test for surface moisture, tape a 100mm X 100mm piece of plastic to the pool surface with duct tape ensuring all edges are sealed to the pool surface. Place one test at the deep end and one at the shallow end. After three hrs remove the plastic and look at the underside of the plastic for moisture. If moisture is present allow a further 24 hrs to dry and re-conduct test.
2. Before application, Box all materials together in one drum to ensure a uniform colour across the entire pool.
3. Application is best done in the summer months where temperatures are between 18º to 30º C and rain damage is not a threat.
4. To minimise the possibility of blistering, application is best done out of direct sunlight to allow the coating time to cure slowly therefore limiting solvent entrapment due to rapid surface drying.
5. If rain occurs during any part of the paint process allow an extra day of dry time for each day of rain. Rain or moisture will affect the top layer of paint only, with slight surface “Blushing”. If all other surface preparation and drying times have been adhered to and “Blush” has occurred on the final coat you can either. Apply one further coat, wipe the surface with All Purpose Thinners or leave the “Blush” and fill the pool once cured.

APPLICATION

1. Application is best done by brush or roller.
2. Use a roller with no more than a 5 or 6 mm pile to avoid excessive film builds.
3. Application is best done in thin multiple coats rather than heavy single coats, especially in cooler months.
4. Apply 2 to 3 coats Chlor-tec PP676 or number of coats as described at the end of each individual preparation section.

SPECIAL SITUATIONS
(BLUSHING-FADING-CHALKING)

The cause:

1. The pool is filled to soon, (before 5 days), before the paint is completely dry, causing a blush over the surface that looks like fading or chalking.
2. Super-Chlorinated water may cause a bleached out look.
3. The "Shock of Sodium Hypochlorite can cause a white, bleached look to the paint film, leaving a whitish deposit.
4. Iron in the water from rust in the filter system may leave deposits and stain the paint surface.

The Solution:

1. Scrub the surface with soap and water, this will remove surface dirt and deposits.
2. Wipe with a weak solution (2-3%) of Hydrochloric Acid and water. Acid will remove iron stains without damaging the paint film.
3. Solvent wipe affected areas with Astec All Purpose Thinners.
4. Check the pool water chemistry daily or weekly for;
   A- Calcium hardness B- Total alkalinity C- PH
5. Extremely corrosive water can ultimately cause deterioration or breakdown of a paint film over a period of years.
6. Ensure that the newly painted pool has at least 5 sunny days to cure prior to filling with water.

SPECIAL SITUATIONS
(BLISTERING)

The cause:

1. Applying the paint to heavily.
2. Painting a damp surface.
3. Filling the pool to soon.
4. Incompatible paints, (Computability test not done for existing paint on pool surface.
5. Surface preparation not carried out correctly, (eg; gloss not removed from existing finish).

The solution:

1. Apply at recommended coverage rates. Thicker is not better in the case of Chlorinated Rubber Paint.
2. All surfaces must be dry prior to application.
3. Wait 5 sunny days before filling the pool with water.
4. Conduct computability test as described or if not sure send a sample of the existing paint to Astec for analysis.
5. Ensure preparation guidelines are ***STRICTLY FOLLOWED***.

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Revised Edition April, 2015

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