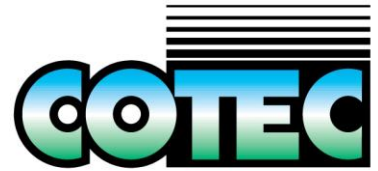




# High Performance Paint Specification



## PS-E006

### EPOTEC NT FREQUENTLY ASKED QUESTIONS

#### 1 HOW LONG WILL IT LAST?

Experience to date indicates that a well coated EPOTEC NT epoxy pool will give 5 – 10 years. The actual re-coat time is dependent on the volume of use (e.g. Municipal – High use, Domestic – Low use), and the owners expectation of quality. If a pristine glossy surface is required 3 - 5 years is appropriate, whereas 8 years is acceptable for the average owner.

#### 2 WHAT MAINTENANCE IS NEEDED? Epoxy coating systems are called 'Functional Coatings'. This means that they are designed for maximum chemical resistance to the environment and total emersion in the various waters used in swimming pools.

\* ABOVE WATER Chalking of the surface will occur and depending on the content of dissolved solids in the water, a build-up of a white hard scale can also occur.  
REMEDY Using a Scotch Brite pad, scrub the surface to remove the build-up back to the original EPOTEC colour. Take care not to abrade the coating once the original colour has returned.

\* BELOW THE WATER Again a build-up of dissolved solids can precipitate onto the surface, making the surface look white. This lime deposit is usually hard and cannot be removed by brushing. Sometimes however, the deposit forms as a white powder including other mineral deposits (Silicates) that precipitate on the surface (particularly from ground water supplies) and this can be brushed off, flocculated and then vacuumed to waste. Do not try and filter out these fine powders, even after flocking, as the filter action breaks the agglomerated lumps up and they go through the filter and back into the pool.  
If the pool is emptied and the deposit is obvious an acid wash with Hydrochloric acid can remove most of this.

#### 3 DOES EPOTEC LOOSE ITS COLOUR?

EPOTEC (Epoxy) is a functional coatings and as such ARE affected by UV light/weathering on the SURFACE. This effect culminates in the loss of gloss and the surface CHALKS. The appearance therefore is whiter than the original colour. The darker the original colour the greater the change. This UV action is typical of ALL Epoxy paint types. Epoxy coatings may also have a tendency to yellow. These two effects are AESTHETIC and do NOT alter the suitability for its use in swimming pools.

#### 4 CAN EPOTEC BE PAINTED OVER CHLORINATED RUBBER?

No, the Chlorinated Rubber is a thermoplastic material and will lose adhesion to the surface causing the EPOTEC to fail.

#### 5 DO DARK COLOURS FADE AND ARE THEY WARMER?

Dark colours show the greater difference of chalking or dissolved solids build up present on the surface. The pigments do not fade, the change in colour is due to the whiter chalked epoxy binder and deposits on the surface. Dark colours (e.g. Black) absorb heat from the sun, therefore theoretically a darker pool is warmer. There is little actual evidence that dark colours heat the water to any significant degree. If a warmer water temperature is important, consult your pool man and look at installing either a heat pump or solar heating system.

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## 6 IS EPOTEC A HEALTH HAZARD?

UNMIXED EPOTEC: As with all chemicals it is advisable to avoid contact with eyes and skin. The curing agent is the most dangerous. Use gloves and appropriate safety clothing to avoid contact. If contact is made, wash the affected area with warm soapy water. The curing agent has an odour, that some people may find nauseous, therefore mix the EPOTEC in an area where there is adequate fresh air.

MIXED EPOTEC – When cured the surface after washing is suitable for contact with food stuffs and potable water.

## 7 CAN EPOTEC FILL GAPS?

EPOTEC is a surface curing product and not suitable as a gap filler.

## 8 COATING EXPANSION JOINTS?

Usually in a large pool constructed of concrete slabs the joints have a flexible sealant. In cases where this is required to be coated our recommendation is to select a sealant that EPOTEC adheres to. Check with the sealant manufacturer for their recommendation for pools. If movement in the joint occurs, EPOTEC will accept some movement, at worst the EPOTEC will crack, but not lose adhesion. It is inevitable that with most flexible jointing systems as they age under water and move or become weak, the paint layer will crack. Almost always this is only over the area of sealant and does not compromise the surrounding painted area.

## 9 SALT WATER POOLS?

EPOTEC is suitable for salt water pools, and pools that use salt chlorinators. It must be noted that pools using salt additions can add significant amounts of additional salts (harmless but are introduced from the salt that is not 100% pure). These salts can cause precipitation of white deposits on floors and walls.

## 10 SPA POOLS?

EPOTEC is suitable for spa pools which operate usually less than 40°C. Once again, heated water is evaporating much more quickly and so the likelihood of white lime deposits is increased as the concentration of these dissolved salts increases in the water

## 11 GEOTHERMAL POOLS?

EPOTEC is used in Rotorua and Taupo for both swimming pools and higher temperature spa pools. These pools invariably turn white very quickly as the geothermal water (if used directly and not via a heat exchanger) is full of minerals and dissolved solids.

## 12 DRINKING WATER?

EPOTEC can be used where drinking water is to be stored. The procedure is the same as for the substrate used. After curing for approximately 7 days the tank is filled with water then changed or washed with warm soapy water then fresh water to remove any surface contaminant.

## APPLICATION QUESTIONS

### 13 HOW LONG DO I LET IT CURE BEFORE FILLING WITH WATER?

Epoxy resins take time to cure. The warmer the temperature the quicker the cure. We recommend 5 – 7 days as a guide to good practise, to allow the film to cure completely.

### 14 HOW LONG BETWEEN COATINGS?

If the weather permits the subsequent coating can be applied as soon as it is hard enough to walk on the first coat. Practically this is overnight curing. If because of bad weather the time is greater than 72 hours (3 days) between coats the surface needs to be lightly sanded to ensure good adhesion.

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## 15 WHAT COVERAGE DO I GET?

Coverage is dependent on the surface porosity and roughness. For normal surfaces a good estimate is:

### Epotec High Build Epoxy:

	NO SEALER	SEALER
CONCRETE WB EPOXY SEALER	Not Required	8 m <sup>2</sup> / Litre
EPOTEC NT – FIRST COAT	Not recommended (20m <sup>2</sup> /5kg pack)	25 m <sup>2</sup> /5kg pack
EPOTEC NT – SECOND COAT	25 m <sup>2</sup> /5kg pack	25 m <sup>2</sup> /5kg pack

## 16 CAN I SPRAY EPOTEC?

EPOTEC NT EPOXY can be sprayed, but we would strongly recommend that the product is applied by BRUSH AND ROLLER. Cleaning of the spray equipment is slow and costly negating the perceived advantage of quick application. Air entrapment is also a very real possibility with spraying, which can lead to blistering.

CONCRETE WB EPOXY SEALER needs to be applied by roller or brush to ensure the best penetration into the concrete.

## 17 MIXING SMALL QUANTITIES?

EPOTEC NT has a mixing ratio of 4:1 parts by weight. This can easily be done on small kitchen scales. E.g. 100 grams Resin (part A) requires 25 grams of Hardener (part B). 1200 grams Resin (part A) requires 300 grams of Hardener (part B).

EPOTEC WB SEALER has a mix ratio of 10:6 (100gm part A to 60gm part B) then 80gm of water added after the part A and B have been mixed.

## 18 COATING IN COLD CONDITIONS?

EPOTEC NT cures by a positive chemical reaction that can be slowed down by low temperatures but will recover as the temperature rises. We DO NOT recommend applying Epotec in ambient temperatures under 13 Deg C or substrate temperatures less than 10 - 13 Deg C. Remember that applying the paint in the correct temperature during the latter half of the day could mean that the overnight temperature could drop below what is expected.

The minimum recommended temperature is 13<sup>o</sup>C, which is the ground temperature. Even though the day temperature may be 18<sup>o</sup>C, if for example a frost has occurred the ground temperature may be only say 8 – 10<sup>o</sup>C. In the middle of winter in some parts of the country the ground temperature can be in the negative and stay that way for much of the day. It is possible to measure the surface temperature of the pool and it is surprising how low this can be. If in doubt, do not paint. Best to paint in the spring, summer conditions.

## 19 DOES EPOTEC NEED TO BE PRIMED?

EPOTEC NT being an epoxy, has excellent adhesion to most surfaces and does NOT need a specific primer. However, advances in technology have allowed us to formulate a penetrating sealer (CONCRETE WB EPOXY SEALER) that is invaluable for ensuring the best adhesion and hold out of top coats is obtained. We recommend the use of the sealer on all unpainted concrete and plaster.

For steel or metal refer to Coating Technologies Limited's technical department.

## 20 EPOTEC IS RAINED ON BEFORE FULL CURE (BLANCHING)?

Approximately 6 – 8 hours (at 20 Deg C) is necessary before the film is cured enough to be unaffected by rain. If say within 3 hours a shower of rain occurs, this may cause the formation of patches of white deposits. This is not detrimental to the coating but obviously does not look nice. These deposits are not water soluble so they will need to be lightly scrubbed off the surface with a Scotch Brite pad. If the pool is badly affected then a sand down and recoat is the only option.

## 21 ACID WASHING?

Acid washing of surfaces will not clean or remove body fats etc. It is not necessary to acid wash fibreglass or pools with sound existing paint films.

Acid is used to etch concrete surfaces to improve adhesion and to remove poorly adhering thin layers of cement fines (laitance). Acid washing can also be used to remove the build-up of lime deposits on the surface of pools.

## 22 WATER BLASTING?

Water blasting will not remove body fats, but the process is good for a general clean to remove grime and algae etc. Water blasting does not provide a key for new paint on fibreglass or old epoxy films, nor will it provide the surface profile necessary when painting concrete or plaster.

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The only water blasting systems that will strip paint, profile the surface of existing coatings or concrete and plaster are either Soda blast or UHP water blast.

**23 WHAT IS THE BEST WAY TO PREPARE MY POOL?**

Regardless of the condition of the paint, some form of blasting the surface must be considered. Hand sanding is always going to only give a marginal result in that it is very difficult using this method to remove all old paint and to provide the correct surface profile. Using very coarse grit papers will remove a lot of paint but it does not necessarily leave the correct profile on the surface. Coarse grit tends to leave deep scratches but few of them (in other words, much of the surface is not actually abraded) and this means that a large amount of the surface area can remain untouched. Course sanding needs to be followed with a hard sand using finer grit (100 - 150#) to ensure the maximum amount of the surface is actually abraded. Hand sanding of concrete can lead to polishing of the surface and this is the opposite of what we want to achieve. Soda Blast, controlled grit blast and UHP (ultra high pressure, up to 45,000psi) are the best options to be considered.

**24 CALCULATING THE AREA TO PAINT (APPROXIMATELY):**

Rectangular, Free form, then max width (m) x max length (m) x 1.6 = area in Sq m

Lazy L, Oval (rounded end plus a sq end) then max width (m) x max length (m) x 1.65 = area in Sq m

Roman (full Oval) then max width (m) x max length (m) x 1.55 = area in Sq m

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