

## Application Process for Acid Washing Concrete

### Safety First.

Handling any type of acid is highly hazardous and should only be done with the appropriate safety equipment, handling knowledge and procedures. Before you do anything make sure that you have read the Safety Data Sheet and understand the personal and environmental risks, precautions and equipment required when using Hydrochloric Acid. You can download the Safety Data Sheet from our website <https://concretetools.co.nz/product/colourcrete-hydrochloric-acid-20l>

At a minimum you should wear rubber gloves and boots, protective glasses and clothing that leaves no skin exposed. Use of a respirator is highly recommended and advised particularly if you are working inside or in a confined area.

Make sure that you have a hose ready to use in case of a spill so that you can wash it off immediately with copious amounts of fresh water.

**NEVER** add the water to the acid, **ALWAYS** put the water in first and add the acid second.

Be extremely careful of the fumes from the acid container when decanting or using it.

Only decant in a safe well-ventilated area that can be washed down quickly.

The acid will burn your skin or eyes if it comes in contact with them so make sure that you have plenty of water available to wash it off immediately.

**NEVER** fill the watering can on the surface that you are treating as you will mark the surface permanently.

**DO NOT** overfill the watering can.

**DO NOT** walk in the acid solution as the footprints will remain in the concrete for ever.

### What you need:

Safety gear  
Plastic Watering can (definitely NOT metal)  
Hose/ Water blaster  
Stiff Broom  
Colourcrete Hydrochloric Acid  
Colourcrete Neutraliser

## Preparation:

- Acid washing DOES NOT clean the concrete, or etch under dirt, moss, mould, paint or any other debris, we recommend that you use a good degreaser/detergent such as CTI Synclean to clean the concrete and power wash the surface thoroughly before you attempt to acid wash it.
- Ensure that you mask off and protect any areas that you do not wish to treat or that can be affected by splashes. Even diluted acid will stain, mark, etch and kill any glass, paint, cement, stainless steel, steel, vehicles, plants, grass and most other objects it comes in contact with.

## Application

- Dampen the concrete down to avoid acid burning it
- Put 8 litres of water in a watering can and add 1litre of Hydrochloric acid to it then mix it thoroughly.
- If you are etching coloured concrete reduce the concentration to 15 parts water and one-part acid then mix it thoroughly.
- We recommend that you use a weaker solution to start with and retreat the area if need be.
- One litre of acid solution will treat approximately 50m<sup>2</sup>.
- While the concrete is still damp, evenly sprinkle acid over the concrete & work it around with stiff broom.
- Always start at the lowest point and work your way towards the highest point.
- Avoid applying excess solution as it will form rivers that are noticeable later.
- **DO NOT** pour the acid mix in one area or this will burn the concrete.
- **DO NOT** let the acid dry on the concrete
- Hose off with copious amounts of water.

## Neutralise Your Concrete after Acid Washing

- Mix 1 bag of Colourcrete Neutraliser with 20L Water – Mix Well
- Sprinkle over the concrete with a watering can & work around with clean stiff broom
- Again – Wash off with copious amounts of water preferably power washing it with a water blaster to remove any salts, efflorescence, loose stone and fines.

When concrete is completely dry, it will be ready to seal.

## Why do you only add the Acid to the water, not the other way around?

A chemical reaction occurs when water is mixed with acid resulting in a large amount of heat being released. This reaction intensifies with the addition of more acid. If you were to add water to acid, it does not dilute immediately. Instead it initially creates a much more concentrated solution, which will boil violently creating a hazardous environment of fumes and even splashing acid out of the container. If, however you add the ACID to the WATER, the solution will safely dilute with minimal reaction.

**NEVER add the water to the acid!**

## Alternative to Hydrochloric Acid:

If you are looking for an alternative to Hydrochloric Acid that is non-hazardous and more friendly to the environment you can use our **CTI Barracuda** as a direct replacement following the same process above (mix one-part Barracuda to five parts water) and you will not need to neutralise it. CTI Barracuda has a lot of advantages over Hydrochloric Acid.

- Non hazardous
- Etches more evenly
- Easier to control, no rivers or over etching in low points
- Less risk of damaging areas that don't need treating
- No fumes, safer to use inside or in confined areas.
- Doesn't kill plants
- Safer to use