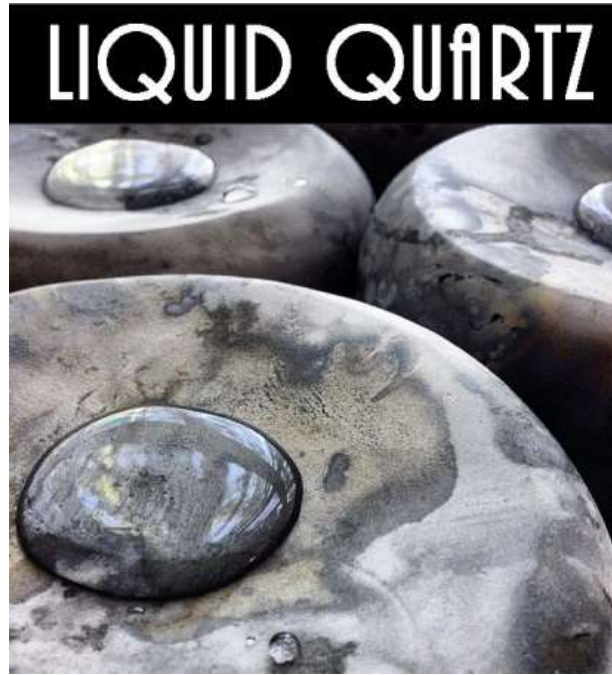


Raw Earth Plate | by Anna-Marie Wallace



All images © Anna-Marie Wallace | Made OF Australia



Wabi Sabi Plates & Chopsticks | by Anna-Marie Wallace



Detached Teacups | by Anna-Marie Wallace

**The first of its kind, Liquid Quartz™ is a non-toxic, food-safe, water based sealer that allows you to turn your unglazed decorative ware into waterproof, highly stain resistant functional ware. It can be applied to any unglazed, fired clay body; bisque ware, vitrified ceramics, alternatively fired work (pit, smoke, saggur, barrel, naked raku etc.) & will create a completely invisible, breathable, protective barrier.**



Image Jock Zonfrillo, Orana | plate by Anna-Marie Wallace

## **Surface Preparation:**

Ensure your bisque ware or high fired ceramics are free from dirt & debris before sealing. This includes ensuring residues from any oxides or minerals, as well as any organic material left behind from your alternative firing process is gone.

Scrub all surfaces clean with a hard brush or similar, preferably using an abrasive cleaner (like a cream cleanser designed to remove scum etc. or bicarbonate soda) to remove traces of carbon, organic matter & other contaminants. Soak the pieces if necessary to ensure no corrosive minerals remain (salts/oxides etc.).

Smooth any surfaces you do not wish to leave textured or rough at this stage & rinse the pieces thoroughly to remove any particulate matter resulting from sanding / buffing.

Dry the ceramics thoroughly to avoid trapping any moisture in the clay body.

Once all surfaces are clean & dry you are ready to seal your work by brushing, spraying or dipping Liquid Quartz™.

## **Dipping:**

### **The recommended application method for all commercial/domestic tableware.**

The most thorough method of application, dipping ensures the entire surface area of the clay is coated & each section has absorbed enough sealer for optimum stain & water resistance.

Dipping ensures there is no wastage from overspray or missed sections from improper brushing; it allows the clay body to absorb exactly the right amount of sealer, depending on its porosity.

Submerge the pieces in Liquid Quartz for about 20 seconds. The average plate / dish will require around 15ml of product, (possibly less for high fired, very vitreous works, & maybe more for very porous pieces).

Place the sealed pieces on a non-absorbent surface to dry (a plastic drop sheet or a glass / stainless steel table top is ideal). The pieces will be touch dry almost immediately but will take 24 hours to cure completely.

Avoid handling the work for this period to ensure you don't leave oily fingerprints or disrupt the self-arranging particles while they create an even protective barrier.

## **Spraying:**

Larger works that need to be protected from the elements but are too big for dipping (outdoor sculptural pieces or exterior mosaics that are already installed for example) can be sprayed.

Apply Liquid Quartz™ to the clay surface evenly until completely wet, wait a few minutes for the product to soak in then reapply. Repeat this process until the clay body stops soaking up the sealer; when the sealer beads on the surface, optimum coverage has been reached & no more sealer will be absorbed. Leave to cure for 24 hours, avoiding rain & all contact with the sealed surface.

The 250ml & 1L sizes come with an extra fine spray nozzle already provided, but larger quantities come in pouring containers. You can transfer your Liquid Quartz™ from its larger container into any plastic, metal or glass spray bottle for spray application.

## **Brushing:**

Like spraying, brushing involves the application of as many coats as required until the sealer no longer soaks in to the clay body. Different amounts may be required for different sections of the piece depending on porosity.

Brush Liquid Quartz™ onto the clay surface until completely wet, wait a few minutes for the product to soak in then reapply. Repeat this process until the clay body stops soaking up the sealer; when the sealer beads on the surface, optimum coverage has been reached & no more sealer will be absorbed.

Place the sealed pieces on a non-absorbent surface to dry (a plastic drop sheet or a glass / stainless steel table top is ideal). The pieces will be touch dry almost immediately but will take 24 hours to cure completely. Avoid handling for this period to ensure you don't leave oily fingerprints or disrupt the self-arranging particles while they create an even protective barrier.

## **Pouring:**

To seal the inside of unglazed vessels, Liquid Quartz™ can be poured into the vessel & left to absorb for around 20

seconds, like the dipping method. The remaining liquid can then be poured back into the container & reused.

## **Sealing Partially Glazed Pieces:**

There are many potters who like to glaze the food contact surface of their work & leave the rest naked to showcase the texture of the clay etc.; these unglazed surfaces can be sealed with Liquid Quartz™ to prevent water soaking into the exterior of the pieces & contributing to the many possible problems partially glazed pieces are prone to (e.g. water seeping in behind the glaze causing cracking, staining of the unsealed areas or hygiene concerns with bacteria growth in the unglazed part of the piece, not to mention the extended drying time for work with unsealed sections).

Liquid Quartz™ can be applied to the unsealed section of your work, using any of the above methods, for added moisture protection & increased thermal shock / stain resistance.

It will bead off the glazed section during application & not affect any fully cured glaze, since Liquid Quartz™ is a permeating sealer, it will not adhere to

any glazed, waxed or oiled surface; you can even submerge or spray over any fully cured glazed section without concern. If you are unsure if your glaze is fully vitrified, you can test Liquid Quartz™ in an inconspicuous area first.

## **Safety Considerations:**

Some works will have uneven or varied porosity, caused by hot / cold spots in the kiln, mixed clay bodies or varying pit/saggar temperatures etc.; be sure to watch for areas that require more sealer than others (which will soak up more during application) & ensure each section is adequately covered, the barrier will only be as effective as the application is thorough, if you miss a section, or apply too little, the piece may still absorb water & possibly allow bacteria to grow from food or drink remaining in the porous surface.

Pieces not sealed correctly may not be food safe.

**Important: If you use a post firing chemical or any potentially toxic ingredient in the firing of your work that will not burn out at the temperatures you fire to &/or has a particle size of less than 20-100nm, you should always test your work for food safety before using it.**

## **Certification:**

Certified food safe; tested & meeting the requirements for food contacting articles & materials according to paragraphs 30 & 31 of the German Food, Article & Feed Law. Also meeting the requirements of EC Regulation No. 1935/2004 of the European Parliament & of the Council on materials & articles intended for contact with food.

Liquid Quartz™ is classified as a NON HAZARDOUS SUBSTANCE according to NOHSC criteria & is classified as NON DANGEROUS GOODS according to the ADG. MSDS available upon request.

## **Composition:**

Made from SiO<sub>2</sub> (Silicon Dioxide or Crystal Quartz); a naturally occurring oxide & one of the most abundant minerals in the earth's crust.

SiO<sub>2</sub> is most commonly used in the production of glass, ceramic glazes, underglazes, clay & clay body stains.

## **General Information:**

Liquid Quartz™ is antibacterial & prevents the formation of algae, moss, fungus, scale & efflorescence, it is skin neutral & UV resistant.

Liquid Quartz™ is stable to -70°C, is dishwasher / microwave / oven safe to 450°C & is thermal shock absorbing, helping your ceramic ware resist cracking caused by sharp changes in temperature. SiO<sub>2</sub> is also highly abrasion resistant (7 on the Mohs scale).

Liquid Quartz™ is touch dry in a few minutes & fully cured in 24 hours without firing or further treatment. Avoid handling during this time to allow the self-organising particles to create an even protective barrier.

Always shake before use to ensure the even distribution of the active particles.

While water based & skin neutral it is always best to wear gloves when using any product to avoid irritation of any skin cuts / abrasions.

Average coverage: 50-75ml/m<sup>2</sup>.

## **Care & Maintenance:**

Liquid Quartz™ reduces the need for harsh chemical cleaners & detergents as it is hydrophobic & oleophobic; resisting staining from oil, grease, acids, alkalis & alcohol. Any surface treated with Liquid Quartz™ is essentially self-cleaning, as water will simply bead off

the correctly sealed surface, taking contaminants with it.

## **Trouble Shooting:**

If contaminants find their way in to your sealer, it can be poured through a fine mesh sieve to remove the particulate matter.

While surfaces treated with Liquid Quartz™ display stain resistance far superior to any unsealed clay body, prolonged contact with certain foods may still mark some sealed surfaces, the same way a matte glaze might be affected under similar circumstances. To minimise the possibility of any permanent staining, you should endeavour to rinse your tableware clean as soon as possible.

It is recommended to always test the sealer for effectiveness for its intended purpose before volume production, especially if using a new firing process or clay body you are unsure of.

**Nanotech Products Pty Ltd.** guarantee satisfaction when the product is used as directed. The manufacturer's warranty is limited to replacement of the product or a refund of the purchase price.