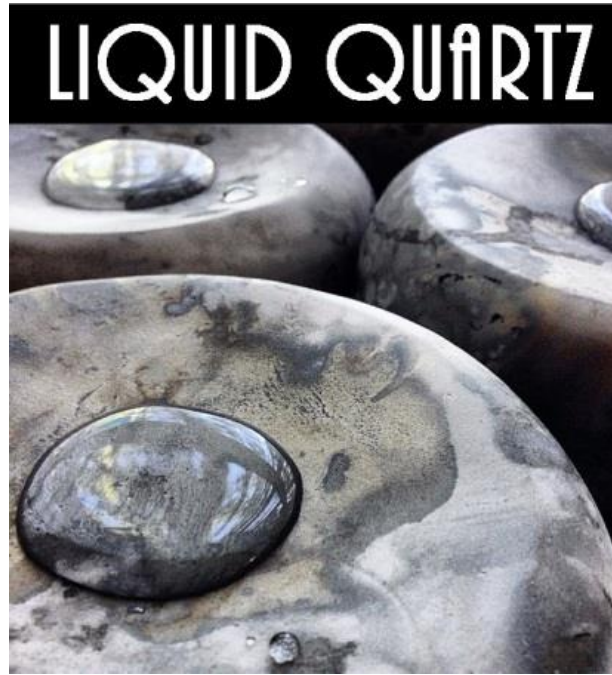




Ovoid Vessels with Olive Oil | Red Wine | Water



All images © Anna-Marie Wallace | Made OF Australia



Ovoid Vessel | Food by Jock Zonfrillo Restaurant Orana

**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, or alternatively fired work (pit, smoke, saggars, barrel, naked raku etc.) to create a completely invisible yet highly effective protective barrier.**



Raw Earth Plate with Honey | Saggars Fired



Saggars Fired Tableware

## **Before you begin:**

Work can be bisque fired or fully vitrified so long as the surface is stable, with no flaking or crumbling. Liquid Quartz™ will not hold an underfired clay body together. All underglazes & surface treatments must be properly fired & structurally sound before sealing.

## **Surface Preparation:**

Ensure your surface is free from dirt, oil, & other contaminants before sealing. Remove any residues from oxides, minerals, or organic materials that may be left behind from your firing process.

Scrub all surfaces clean with a hard brush or similar, using clean water &/or an abrasive cleaner if desired (like a cream cleanser or bicarbonate soda solution), ensuring any traces of carbon, organic matter or other debris are completely removed from the surface. Soak the pieces if necessary to ensure no corrosive minerals (salts / oxides etc.) or cleaning products remain. Rinse well.

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

Dry thoroughly to avoid trapping any moisture in the clay body (this could take days, depending on how much water your clay body has absorbed during the cleaning process).

Whilst water based & skin neutral, we recommend always wearing plastic gloves during application to avoid any skin irritation or penetration, as this product contains nanoparticles that could permeate the skin.

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

## **Dipping (the recommended method for all commercial/domestic tableware):**

The most thorough application process that ensures the entire surface area is well coated, & has absorbed enough sealer for optimum stain & water resistance. This method ensures there is no wastage from overspray or missed areas from improper brushing or spraying. It allows each section of the clay body to absorb exactly the right amount of sealer, depending on its porosity.

Submerge the piece in a bath of Liquid Quartz™ for up to 20 seconds, agitating

to ensure no air pockets are present & the whole surface has been sealed.

## **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.

Spray Liquid Quartz™ on the clay surface evenly until completely wet, 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 & contact with the sealed surface.

If spraying small items, place into an oversize plastic container during application to catch any overspray for reuse. Simply pour the excess back into the bottle when done.

The 250ml & 1L sizes come with an extra fine spray nozzle provided, but larger quantities come in pouring containers. You can transfer your Liquid Quartz™ from its larger container into any spray bottle for application. Remember to shake well before decanting to ensure even distribution of the active particles.

### **Brushing:**

Brush Liquid Quartz™ over the clay surface until completely wet, repeat this process until the clay body stops soaking up the sealer. Different quantities may be required for different pieces or sections of the same piece depending on porosity. When the sealer beads on the surface, optimum coverage has been reached & no more will be absorbed.

### **Pouring:**

To seal the unglazed inside of a vessel, Liquid Quartz™ can be poured in & allowed to absorb for up to 20 seconds. The remaining liquid can be poured back into the container & reused.

### **Sealing Partially Glazed Pieces:**

There are many potters who glaze the food contact surface of their work only, leaving the rest raw or naked to showcase the texture of the clay. There are also many glazes that craze or crawl, leaving exposed areas of clay. These unglazed areas can be sealed with Liquid Quartz™ to prevent water seepage behind the glaze, staining of the unsealed areas during washing or use (from lipstick, dirty dish water etc.),

or bacteria growth in the slightly porous, unglazed sections of the piece. It can also reduce the extended drying time unglazed ceramics require once wet.

Liquid Quartz™ can be applied to any unsealed section of your work, using any of the methods mentioned here, to provide added moisture protection & stain resistance. It can also stop seepage in wood fired or poorly glazed pieces wherever it is able to reach the exposed clay body & create a barrier.

Since Liquid Quartz™ is a permeating sealer; it will not soak into any glazed, waxed or oiled surface, as it requires a porous surface penetrate (so a second coat of Liquid Quartz™ sealer is also impossible). You can safely submerge or spray over any glazed sections of your work without concern, it will simply bead off any properly cured glaze during application. If you are at all concerned about your unconventional glaze, please test Liquid Quartz™ in an inconspicuous area first.

### **Drying/Curing:**

After each method of application, place the still wet pieces on a non-absorbent surface to dry (a plastic sheet, dish drainer, or glass / stainless

steel table top). The pieces will be touch dry fairly quickly but will take a full 24 hours to cure completely to achieve the most durable finish.

### **Safety Considerations:**

Some works will have uneven or varied porosity, caused by hot / cold spots in the kiln, mixed clay bodies or varying firing temperatures. 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. Pieces not sealed correctly may not be food safe. The seal will only be as effective as your application.

**Important: Liquid Quartz™ will not create a seal over a glaze. It cannot make your underfired, lead based, or other toxic glazed surfaces food safe. It is effective for sealing porous surfaces only. It will not seal over Raku glazes.**

**Likewise, if you use a post firing chemical or potentially toxic ingredient in the firing of your work that will not burn out or cure 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:**

Tested & certified food safe & 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 primarily 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, assisting your ceramic ware to 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.

Average coverage: 50-75ml/m<sup>2</sup>. The average bisque fired plate will require less than 15ml of product, (much less for high fired, vitreous works, but possibly more for very porous pieces).

## **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. Avoid harsh chemical cleaners & abrasives to prolong the life of the sealed surface.

## **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, always 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.