
DESCRIPTION

LIQUID QUARTZ is a single component, spray down sol-gel based clear coating designed to protect concrete, terrazzo, tile and existing coatings by creating a high strength, quartz mineral barrier. **LIQUID QUARTZ** chemically fuses with substrates and does not require a substrate profile, eliminating grinding or sanding prior to application. **LIQUID QUARTZ** self levels allowing applicators to spray down **LIQUID QUARTZ** and walk away without backrolling. **LIQUID QUARTZ** provides superior resistance to harsh chemicals, abrasion, mold, mildew, moss, chlorides & salt spray, acid rain, UV damage, oxidation, animal & bird waste damage, gum, and graffiti. On porous surfaces such as new or ground concrete, Quick Seal should be applied to 2-3x **LIQUID QUARTZ** coverage.

FEATURES

- Single component, spray down, no backroll, self leveling clear top coat
- Does not require substrate profile, eliminating grinding or sanding prior to application
- Excellent abrasion and scratch resistance
- Excellent impact resistance
- Excellent chemical resistance
- UV resistant
- Comes in gloss, satin and matte finish
- Easy clean coating greatly reduces maintenance costs

TYPICAL USES

- Can be applied directly to densified, polished concrete, terrazzo, tile and porous surfaces that have been sealed with Quick Seal, and ferrous metals including: coated/painted iron & steel or direct to stainless steel & galvanized steel; Non-Ferrous metals including aluminum, copper and bronze (raw, powder coated, painted or primed). Concrete walls, structures, floors, masonry pavers, unglazed tile, bricks and cement block.
- Moisture, corrosion/rust, oxidation, galvanic corrosion, acid rain, food and beverage acids, fuels and oils, wind drag, dirt build up, ice buildup and animal and bird waste damage. UV stable.

COLORS

Clear to slight amber to rose (depending on temp and humidity) always dries clear. Gloss, satin or matte finish.

PACKAGING

1 gallon buckets, 5 gallon pails, 55 gallon drums, 275 gallon totes

COVERAGE

Calculation for theoretical coverage: 400 – 600 Ft²/gal on Concrete @ Recommended spread rate 3 – 4 mils Wet,
1 – 1.5 mils Dry

STORAGE

Twelve to eighteen months in factory delivered, unopened drums. Store on pallets and keep away from extreme heat, freezing, and moisture. Store at temperatures between 50 °F and 80 °F (10 °C and 27 °C).

MIXING

Ready to use. There is no need for mixing or diluting.

TECHNICAL DATA (All values @ 77 °F / 25 °C)	US	Metric
Volatile organic compounds (ASTM D2369)	< 0.83 lb./gal	< 100 gm/ liter
Theoretical coverage	400 – 600 Ft ² /gal @ 1.0-1.5 mils DFT	9-14 m ² /liter @ 25-38 microns
Specific Gravity of materials (ASTM D792)	7.36 lbs./gal	0.88 kg/ liter
Shelf life @ 77 °F /25 °C	12-18 Months	12-18 Months
Flash point - pensky martin closed cup	15 °F	-9 °C
Application Temperature	45 – 105 °F	7 – 40 °C
Abrasion Resistance CS-17 1000 Cycles (ASTM 4060)	23 mg Loss	
Surface Flammability (ASTM E162)	Heat Index 0 (Best Result)	
Adhesion to 800 Grit Polished Concrete (ASTM 4541)	1200+ PSI Cohesive Concrete Failure	
Accelerated UV Exposure 1000 hrs. (ASTM G154)	dE: <0.5	
Thermal Cycling (ASTM 6944) 50C - 4 Hours Immersion @ 25C - 4 Hours -29C - 16 Hours	No Effect	
Solvent Resistance - MEK (ASTM 4752)	1000 Rubs - No Effect	
Shore D Hardness (ASTM D2240)	72 +/- 3	
Operating Temperature	-200F - 350F	
PROCESSING PROPERTIES (Under standard lab conditions)		
Touch Dry	2-3 hours	
Dry Through	3-5 hours	
Recoat interval	0-60 minutes	
To be walked on	Min 6-8 hours	
To be exposed to vehicular traffic	Min 3 days	
Full Cure	5-7 Days	
<i>Properties and values are highly dependent on equipment, spray gun, mix chamber temperature, pressure and related parameters. Variations are possible and expected.</i>		

SURFACE PREPARATION

Protect all surfaces not designated for coating application. Do not apply to surfaces that are frozen, dirty, or have standing water, grease, oil or other contaminants. Intended surfaces must be clean, dry and absorbent. Confirm surface absorbency with a light water spray - intended surface should wet uniformly. If surface does not wet uniformly, use a recommended cleaner, auto scrubber, or other process to remove surface contaminants. Surface must be clean and dry prior to application.

NEW CONCRETE - Not recommended for concrete less than 28 days old

EXISTING CONCRETE - Intended surface must be clean, dry and structurally sound. Remove any and all contaminants including bond breakers, surface grease and oil, dust and construction debris. For larger surface areas, use an autoscrubber with an appropriate cleaner. Surface must be dry prior to application of Advanced Resins products. QUICK SEAL must be applied prior to LIQUID QUARTZ for direct to concrete applications. Refer to QUICK SEAL instructions and TDS for how to install properly.

METAL - Intended surface must be clean, dry and structurally sound. Remove any and all contaminants including bond breakers, surface grease and oil, dust and construction debris. Existing corrosion must be removed prior to LIQUID QUARTZ application. Cold rolled steel must be coated with an anti corrosion primer prior to LIQUID QUARTZ application. Apply LIQUID QUARTZ direct to non-ferrous metals, galvanized and stainless steel.

EXISTING COATING - LIQUID QUARTZ provides high performance protection to existing coatings as a top coat. Ensure existing coating is in sound condition and well adhered to substrate. Ensure existing coating is clean and free of any oil, grease or other contaminants. If existing coating has finish imperfections such as pinholes, bubbles, or other visible blemishes, they must be corrected prior to application of LIQUID QUARTZ. If surface finish blemishes will be corrected with screening, do not use more aggressive than a 400 grit screen - below 400 grit will result in poor finish of LIQUID QUARTZ. Failure to address existing surface finish imperfections will result in poor finish of LIQUID QUARTZ. Ensure all dust is removed prior to LIQUID QUARTZ application. LIQUID QUARTZ is not designed to improve bond of existing coating to substrate, if existing coating bond fails to substrate, LIQUID QUARTZ will not be able to protect substrate as LIQUID QUARTZ is bonded to the existing coating.

SURFACE & AIR TEMPERATURE - 45 - 105F (7 - 40C)

EQUIPMENT - For horizontal substrates, use an acetone proof pump sprayer with a cone tip. For vertical or upright substrates, use an HVLP spray gun.

STORAGE & HANDLING - Store in a cool, dry place <80F. Always seal container after dispensing. Published shelf life assumes upright storage of factory-sealed containers in a dry place <80F.

APPLICATION:

Before use, read Preparation, Hazard and Precautionary Statements. ALWAYS TEST using the equipment and procedures prior to starting the job.

TYPICAL COVERAGE RATES

Concrete Sealed with QUICK SEAL - 400-600* square feet/gallon

Densified, 800+ grit Polished Concrete - 600 - 800* square feet/gallon

Metal - 600 - 800 square feet/gallon

Existing Coating - 600 - 800 square feet/gallon

*Coverage rates will vary based on substrate porosity and application method.

HORIZONTAL SURFACES - While container is closed, gently shake to avoid air entrapment and air bubbles in finish. Ensure surface is free of any dust, debris and other contaminants. Dust may settle back onto floor between surface preparation and application and may affect finish of LIQUID QUARTZ. Wipe floors immediately prior to applying LIQUID QUARTZ to ensure dust is removed. LIQUID QUARTZ can be applied directly to concrete only if concrete is densified, 800+ grit polished concrete. If concrete is troweled, ground, honed or polished under an 800 grit finish, apply QUICK SEAL prior to application of LIQUID QUARTZ. Refer to QUICK SEAL instructions and TDS for how to install properly. Once surface is clean and dry, LIQUID QUARTZ application may begin. Use an acetone proof pump sprayer, ex. Swissmex, with a cone tip. Keep spray tip 18 inches off the ground and apply product slowly in a circular motion, similar to how a stain is sprayed on concrete. Spray one coat, 3-4 mils WFT keeping a wet edge, with the goal to create a wet, reflective film as you are spraying. Only one coat is applied, it is very important to take your time - GO SLOW TO LET IT FLOW. Overhead light or a spotter is helpful to gauge wet film thickness as product is applied.

Apply LIQUID QUARTZ over Epoxy Wet on Wet (WOW Method): LIQUID QUARTZ can be applied over epoxy while epoxy is still wet. Application steps:

- Pour LIQUID QUARTZ into acetone proof pump sprayer. Pump until significant resistance to further pumping is achieved to create plenty of pressure to prevent drips or sputtering.
- Pump sprayer must have a cone tip.
- Apply epoxy as normal.
- Let epoxy flow out for 20 minutes after application.
- After epoxy flows out for 20 minutes, there is a 30 minute window to apply LIQUID QUARTZ over the epoxy while it is still wet.
- Walk over epoxy with spikes.
- Spray apply LIQUID QUARTZ over epoxy, keeping spray wand 18 inches off floor, spraying in circular motions, similar to how acetone dye is sprayed when staining concrete.
- Overlap wet edge of previous pass 50%.
- To repeat above point, after the epoxy has flowed out for 20 minutes, there is a 30 minute window to apply LIQUID QUARTZ while epoxy is still wet.
- When planning application route, ensure applicator ends at an exit to avoid walking over recently applied LIQUID QUARTZ.

Top coating Epoxy less than 2 weeks old: If coating over epoxy the day after epoxy is applied, or between 1 – 14 days old, spraying LIQUID QUARTZ may create air bubbles in LIQUID QUARTZ film. To eliminate bubbles, apply LIQUID QUARTZ with a flatmop/microfiber pad using the following method:

- Solvent wipe floor prior to LIQUID QUARTZ application to remove dust, dirt, grime and debris.
- Add 8 oz of Xylene per 1 gallon of LIQUID QUARTZ
- Pour LIQUID QUARTZ into acetone proof pump sprayer.
- Remove spray head from acetone-proof sprayer wand so that there is an open end.
- Pump Sprayer 7 pumps to achieve a nice, even flow of LIQUID QUARTZ out of open end without sputtering.
- Saturate 17" flat-mop pad/microfiber with LIQUID QUARTZ w/ xylene added
- For best results, use two people: Tech 1 applying LIQUID QUARTZ in ribbons, Tech 2 spreading product with flatmop/microfiber
- Tech 1: Place open end of wand on floor. Keeping open end of wand pressed to the floor to avoid splashing, apply a ribbon of LIQUID QUARTZ.
Tech 2: Stay 3 feet back following behind Tech 1, spreading the ribbon with the saturated flatmop/microfiber

pad. While spreading, flat-mop head should be angled diagonally, about 45 degrees, so that the top half of flatmop is leading the back half.

- Do not overwork LIQUID QUARTZ with microfiber – ONE SWIPE, ONE TOUCH.
- Tech 2 retrace path, overlapping previously applied area 3 inches.
- When Tech 2 retraces path back to starting point, Tech 1 applies ribbon of LIQUID QUARTZ on the wet edge of the previous, retraced path, with Tech 2 following 3 feet behind and repeating application technique.
- Tech 1 does not apply a ribbon while Tech 2 is retracing path, Tech 1 only applies ribbon on wet edge of the retraced path, otherwise too much product will be applied.
- When planning application route, make sure Tech 1 and Tech 2 end application at an exit so that they do not have to walk across recently applied LIQUID QUARTZ to exit.

VERTICAL SURFACES - While container is closed, gently shake to avoid air entrapment and air bubbles in finish. Ensure surface is free of any dust, debris and other contaminants. Once surface is clean and dry, LIQUID QUARTZ application may begin. Use an HVLP spray gun with a 10 micron filter set to 25 PSI, with a 1 inch by 8 inch elongated, vertical spray pattern. Spray one coat 2-3 mils WFT in a cross hatch pattern, left-to-right and top-to-bottom being one coat, keeping a wet edge while applying.

EQUIPMENT CLEAN UP

Clean tools and flush out spray equipment with acetone within 15 minutes after application. Once product cures, it can not be removed from spray equipment.

LIMITATIONS

As treated and untreated surfaces look similar, finish work on an obvious point such as a corner or mark where you have stopped. When you start work again you can apply over the dry edge without sanding.

CAUTION: If using spray application method in an enclosed space, make certain to tent off the area being sprayed with plastic tarps to avoid spray dust from traveling and contaminating other surfaces with over spray dust. Tented and enclosed areas always require to be positively supplied with fresh air and have ventilated exhaust to outside using fans. Never spray near any open flame or any possible source of ignition such as pilot light, or anything that may spark, as this may cause ignition and explosion of the fumes and vapors. (In enclosed areas, make sure to have an observer watching the applicator for any signs of physical distress.)

Wash surface with a low-pressure hose or wipe down with damp rag to remove dirt and spills. Although LIQUID QUARTZ is highly scratch resistant, it is not scratch-proof. Do not use abrasive cleansers or abrasive scouring pads. If an area gets damaged or is mechanically abraded, lightly sand the area with 400 grit sandpaper and reapply touch up to LIQUID QUARTZ. If substrate is damaged, make necessary repairs first, then re-apply LIQUID QUARTZ.

WARRANTIES AND DISCLAIMERS

Advanced Resins Coating Systems, a Texas, USA Corporation warrants that this product shall conform to the technical specifications published in the product literature. The quality and fitness of the product is dependent upon the proper use and application of the product by the applicator. Advanced Resins Coating Systems has no role in the application of the finished polymer other than to manufacture and supply its components. It is vital that the person applying this product understands the product and is fully trained and certified in the use of spray equipment and application of sol-gel materials. There are no warranties that extend beyond the description on the face of this instrument, except when provided in writing, directly by Advanced Resins Coating Systems and executed under seal by a company officer.