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**DESCRIPTION**

Premera Crystal Densifier is part of the One Day Polish system: Step 1 is a densify and polish step, and Step 2 is a Guard that protects from food and drink acids and stains and can be continuously burnished. Premera Crystal Densifier is a single component, spray down, sol-gel based quartz polymer that both densifies concrete and chemically fuses a polishable, crystal clear, quartz-mineral barrier layer on top of concrete. Crystal Densifier self-levels and does not require back rolling. The Premera One Day Polish System significantly reduces time to polish concrete, while also providing high chemical and abrasion resistance to concrete.

Using the Premera One Day Polish System, 1 crew of 2 people with 1 burnisher can polish approximately 2000 square feet of 100 transitional profile concrete to 3000 grit polish per hour.

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**FEATURES**

- Single component, spray down, no backroll, self-leveling clear polymer.
- Polish concrete from 50 transitional profile to 3000 grit burnished finish in 1 step
- Excellent abrasion resistance
- Excellent impact resistance
- Excellent chemical resistance
- UV resistant
- Easy-clean effect greatly reduces maintenance costs

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**TYPICAL USES**

- Concrete floors
- Concrete countertops

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**COLORS**

Clear to slight amber to rose (depending on temp and humidity) always dries clear.

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**PACKAGING**

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

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**COVERAGE**

Calculation for theoretical coverage: 300-400 Ft<sup>2</sup>/gal on Concrete @ Recommended application rate 4-5 mils

Wet, 2 mils Dry.

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**STORAGE**

Twelve 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).

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**MIXING**

Ready to use. Product should be stirred with a paint stick to limit introduction of air. There is no need for mixing or diluting.

| TECHNICAL DATA (All values @ 77 °F / 25 °C)                                                      | US                               | Metric                      |
|--------------------------------------------------------------------------------------------------|----------------------------------|-----------------------------|
| Volatile organic compounds (ASTM D2369)                                                          | < 1 lb./gal                      | <150 gm/ liter              |
| Theoretical coverage                                                                             | 400 Ft2 /gal @<br>1-1.5 mils DFT | 38 m²/liter @ 50<br>microns |
| Specific Gravity of materials (ASTM D792)                                                        | 8 lbs./gal                       | 0.96 kg/ liter              |
| Shelf life @ 77 °F /25 °C                                                                        | 12 Months                        | 12 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                       |                             |
| Accelerated UV Exposure 1000 hrs.<br><br>(ASTM G154)                                             | dE: <0.5                         |                             |
| Thermal Cycling (ASTM 6944)<br>50C - 4 Hours<br>Immersion @ 25C - 4 Hours<br>-29C - 16 Hours     | No Effect                        |                             |
| PROCESSING PROPERTIES (Under standard lab conditions)                                            |                                  |                             |
| Touch Dry                                                                                        | 60-90 Minutes                    |                             |
| Tack Time / Time Until Polishable                                                                | 60 Minutes                       |                             |
| Polishable Window                                                                                | 4 Hours                          |                             |
| Recoat interval                                                                                  | 0-60 minutes                     |                             |
| Foot Traffic                                                                                     | 4 Hours                          |                             |
| To be exposed to vehicular traffic                                                               | 48 Hours                         |                             |
| Properties and values are highly dependent on temperature. Variations are possible and expected. |                                  |                             |

## SURFACE PREPARATION

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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. Surface must be clean and dry prior to application.

**NEW CONCRETE** - New concrete must be cured out at least 28 days. If a specific aggregate exposure is required, grind concrete as normal to exposure aggregate. Once aggregate is exposed, bring concrete to a 50 transitional profile. Ensure all deep surface scratches are removed with the 50 transitionals prior to applying Crystal Densifier, surface scratches will transfer through if not removed. Remove all dust, debris and contaminants from surface after 50 transitional profile is achieved. Once surface is clean and dry, Crystal Densifier is ready to be applied.

**EXISTING CONCRETE** - If a specific aggregate exposure is required, grind concrete as normal to exposure aggregate. Once aggregate is exposed, bring concrete to a 50 transitional profile. Ensure all deep surface scratches are removed with the 50 transitionals prior to applying Crystal Densifier, surface scratches will transfer through if not removed. Remove all dust, debris and contaminants from surface after 50 transitional profile is achieved. Once surface is clean and dry, Crystal Densifier is ready to be applied.

**SURFACE & AIR TEMPERATURE** - 50 - 95F (7 - 40C)

**EQUIPMENT** - For horizontal substrates, use an acetone proof pump sprayer with a cone tip.

**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:

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

## TYPICAL COVERAGE RATES

Concrete with a 50 transitional Finish: 300-400 sq.ft. / gallon

\*Coverage rates will vary based on substrate porosity

**HORIZONTAL SURFACES** - While container is closed, gently shake to resuspend nanoparticles while avoiding 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 Crystal Densifier. Solvent wipe floors immediately prior to applying Crystal Densifier to ensure dust is removed. Once surface is clean and dry, Crystal Densifier 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, 4 mils WFT keeping a wet edge and overlapping 50%, with the goal to create a wet, reflective film as you are spraying. Only a single coat is applied. Do not rush application, 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.

Crystal Densifier will become dry within 60 minutes. After 60 minutes, use a propane powered burnisher **without** a dust control skirt on it, otherwise streaks will be left in the finish. The burnisher must be propane powered. Example of an appropriate burnisher is the Pioneer Eclipse PE420BU 28" Propane Burnisher. Use a 3000 grit diamond pad to burnish the film. Run RPMs at mid power setting. Walk at a fairly slow pace of approximately 20 feet every 30 seconds, letting the burnisher heat up film. Retrace burnished path, walking backwards. On the next path, overlap previous path by about 1/3<sup>rd</sup>, or 10 inches. Repeat steps above. After burnishing with 3000 grit diamond pad, do a final burnish over the entire area with a white pad. 1 crew of 2 people with 1 burnisher should be able to do approximately 2000 square feet per hour.

Concrete porosity varies, and there may be dull spots after burnishing. In areas where the concrete absorbs more product, dull areas can be spot treated. When spot treating, wait until previously applied product is dry before spot treating to prevent walking over tacky material. Wait until spot treated area becomes dry to burnish.

Once burnishing is complete, Crystal Guard may be applied. Refer to Premera Crystal Guard TDS for application instructions.

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#### **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**

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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 the Premera ODP System 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 with T2 MCM. If substrate is damaged, make necessary repairs first, then apply T2 MCM.

#### **WARRANTIES AND DISCLAIMERS**

*Premera 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. Premera 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 Premera Coating Systems and executed under seal by a company officer.*