

Pro-Pel

Technical Data Sheet

DESCRIPTION

Pro-Pel is a VOC-free Lithium Silicate densifier and chemical hardener used for polishing concrete. Pro-Pel Lithium is chemically activated by the alkali in concrete to solidify and fill the voids. This chemical reaction produces a smooth, denser surface for easy grinding and polishing techniques. Pro-Pel easily penetrates the concrete and is used to reduce vapor transmission in concrete. It is very effective in reducing radon gas by blocking the internal pores of the concrete.

Pro-Pel works as a curing aid through a combined chemical and moisture retention reaction aiding the complete hydration process.

Pro-Pel controls hairline checking and temperature cracking on new concrete slabs. Pro-Pel should be applied to concrete that is properly placed and structurally sound.

Pro-Pel does not leave a surface membrane like an acrylic or chlorinated rubber clear products. This makes Pro-Pel the choice because it is compatible with all flooring adhesives and does not require stripping before applying floor adhesives or paints.

FEATURES/BENEFITS

Hardens and Densifies Concrete

Curing Aid for Green Concrete

No flushing or rinsing required

Does not yellow or discolor

Hardens the surface against damage

Easy Penetration for ease of application

Improves Light Reflectivity

Reduces Hairline Checking

Environmentally Safe and non-hazardous

VOC Content - 0.00 g/L

Produces surface gloss that improves with abrasion

Reduces vapor transmission

Reduces Radon Gas emissions

Improves Freeze Thaw Resistance

TECHNICAL INFORMATION

VOC Content - 0 g/L

Type Solids - Lithium Silicate

Flashpoint - none

Viscosity - water thin

pH - 10.9

Specific Gravity - 1.10

Color - Clear

Odor - None

Surface Breathable - Yes

Skid Resistance - Fair

Drying Time at 70F (21C)

Light Foot Traffic - 2 to 3 hrs

Wheel Traffic - 24 hours

Physical State: Liquid

Lithium Densifier

COVERAGE

Typical rate on ground concrete is 400-600 ft²/gal (9.8-14.7 m²/litre)

Typical rate for hard trowelled concrete is 300-400 ft²/gal (7.4-9.8 m²/litre)

Typical Rate on broom finish concrete is 300 ft²/gal (7.4 m²/litre)

For best results we recommend 2 coats.

SHELF LIFE

3 Years in original, unopened container.

Protect from Freezing.

PACKAGING

55 gallon drums (205 Litre)

5 gallon pails (18.9 Litre)

10 Litre Jugs

*Product comes in Concentrate and Ready to Use Formulations

MIXING INSTRUCTIONS

Concentrated Formulation - Dilute 1 part potable water to 1 part Pro-Pel. Stir for 1 minute. Product is now ready to use.

Ready to Use Formulation - no dilution is required.

WARRANTY

We warrant our products to be of good quality and free of defects in material and workmanship. See full warranty upon request.

PRIMARY APPLICATIONS

Warehousing/ Distribution Centres/ Malls/ Commercial and Retail Stores/Parkades/ Arenas/ Broom Finish Concrete

SURFACE PREPARATION

Protect surrounding areas from overspray, spills, tracking and equipment contact. In case of accidental contact, rinse thoroughly with water immediately.

Old Concrete/Existing Concrete Ensure all surfaces are structurally sound and free of all contaminants such as oil, contaminants and any film forming curing compounds and sealers.

Fill and repair all holes, cracks and deteriorated areas before application.

All Concrete should be thoroughly cleaned and rinsed with clean water. After washing allow the concrete to dry completely before application.

New Concrete/Concrete Polishing Ensure surfaces are clean and free of all contaminants, and any film forming curing compounds or sealers.

Ensure the concrete has been cured for a minimum of 3 days before application.

During cooler temperatures or higher relative humidity conditions, the drying interval should be increased to achieve the level of dryness necessary for good penetration.

Green Concrete Ensure surfaces are clean and free of all contaminants, and any film forming curing compounds or sealers.

On colored concrete, wait 3 days before applying Pro-Pel.

Lithium Densifier

INITIAL GRINDING - for salt & pepper look

Grinding the concrete to an initial surface profile (200-400 grit) is an option if you would like the salt and pepper look of the concrete. Grinding must occur prior to the application of Pro-Pel. Concrete substrates that are contaminated with oil, grease or other substances after grinding to the initial surface profile should be thoroughly cleaned and dried before continuing.

Apply first coat at approximately 400-600 ft²/gal (9.8-14.7 m²/litre) using a low pressure sprayer or by spreading evenly with a micro fiber pad. A micro fiber pad gives better even distribution of the product and will minimize puddling. Keep the surface wet for 30 minutes by applying more product where the surface has dried or by redistributing the product with a micro-fiber pad.

Do not allow material to form puddles on the surface as this may cause white residue to form and stain.

When dry, proceed with additional required polishing steps. After the 800 grit level and before the final polishing steps, uniformly apply the 2nd coat at 600-800 ft²/ gal (14.7-19.63 m²/litre) spread with micro-fiber pad, keep the surface wet for 30 minutes by re-dispersing product with micro-fiber pad. Do not puddle.

Allow to dry and remove any residue with polishing diamonds. No water-flush is required.

POLISHING CONCRETE / HARDEN AND DUSTPROOF

If you want to polish concrete without the salt and pepper look, use the following procedure.

Apply Pro-Pel to the surface of concrete at a rate of 300-400 ft²/gal (7.4-9.8 m²/litre) using a sprayer or micro-fiber pad. Make sure concrete stays wet for 30 minutes by re-applying more Pro-Pel or by re-distributing the existing product using a micro-fiber pad. Do not puddle the product. No rinsing of Pro-Pel is needed. Let Pro-Pel dry before polishing the concrete.

If you are looking to harden and dust-proof the concrete, no other steps are required.

VAPOR TRANSMISSION / RADON GAS

Moisten the surface with Pro-Pel by sprayer or microfiber pad. When spraying a spray nozzle that produces a flow of 1/4 gallon per minute under 40 psi is recommended. Spray in a fine fog pattern. Make sure concrete stays wet for 30 minutes by re-applying more Pro-Pel or by re-distributing the existing product using a micro-fiber pad. Do not allow the product to form puddles. After 30 minutes let the surface dry, no water flushing is needed.

After 1st coat has dried for 4 hours apply the 2nd coat of Pro-Pel. Follow the same procedure as the 1st coat.

Typically 2 coats is all that is needed.

FINAL STEPS**POLISHING**

After treatment, continue honing, burnishing, and polishing the treated concrete to the intended final finish profile. Use anywhere from 400-1500 grit using progressively finer polishing disks.

If wet polishing, remove the slurry residue between diamond changes using a wet vacuum or squeegee and rinse thoroughly removing excess water and slurry. After the final finish profile is achieved, allow the polished concrete to dry completely prior to any further surface treatment.

For increased stain resistance and water repellency, apply one coat of Repel after the concrete has completely dried.

BURNISHING

Pro-Pel Lithium can be burnished to a high sheen on steel trowel concrete floors. A high-speed burnisher (2000-2200 rpm) with appropriate maintenance pad is needed.

MAINTENANCE

Pro-Pel Lithium polished floors require very little maintenance other than scheduled scrubbing with water and a neutral or alkaline cleaner. All spills should be cleaned immediately. No waxes or subsequent surface treatments are necessary. Periodic applications of Repel should be applied as required. Refer to maintenance sheet for full recommendations.

CLEAN-UP

Clean up equipment and tools with a mild soap and water.

CAUTIONS

Immediately wash off over-spray from glass, aluminum, or highly polished surfaces with water to avoid etching. Product is slippery when wet.

Do not apply product if the temperature of the concrete is less than 40°F (4°C) or above 135°F (57°C)

Keep the product from freezing. Do not allow Pro-Pel to form puddles, remove puddles by moving the product around with a microfibre pad or broom puddles out before they dry as staining may occur.

Wear skin and eye protection. Wash thoroughly after handling. See MSDS for complete precautions.

TESTING**For Concrete Polished to 800 Grit**

Red Wine - 10 minutes - Good

Mustard - Poor

Used Motor Oil - 1 Hour - Very Good