Sealers Full Instructions
Preparation, Application & Recoat

Surface Preparation

- All surfaces must be clean – all contaminants including dirt, dust, grease, oil, curing compounds, cement laitance, airborne pollutants, mildew, mould etc must be removed using a compatible chemical cleaning product and / or mechanical process. If surfaces are not clean, sealer adhesion and final finish will be compromised. Poor surface adhesion may lead to delamination of the sealer, indicated by surface whitening / flaking or peeling of the coating.
- If surface has been ground – all dust and laitance must be removed by vacuum and pressure wash / wet vac. If dust is not removed, this may become incorporated into sealer during application and affect final appearance. Surface dust will also affect sealer adhesion and may lead to coating delamination.
- If acid etching has taken place, acid must be neutralised before sealer is applied. If neutralisation does not take place, acid will continue to attack and weaken the substrate surface. This will compromise the adhesive strength of the sealer. Residual acid may also "shock" sealer resins, delivering a white powdery finish to water based sealers and an uneven blotchy finish to solvent based sealers. Acid neutralisation may be achieved by treating the area with a 500g bicarbonate of soda: 9L water solution, followed by a pressure wash.
- All surfaces must be sound – although clear sealers will bind surfaces to a certain extent, they are not engineered for use as surface hardeners. Both new and old concrete surfaces will exhibit varying degrees of porosity. High porosity areas will absorb sealer more readily, resulting in a dull appearance. Additional coats of sealer will deliver a uniform finish in these situations.
- All surfaces must be dry – a moisture test is required 100% of the time to ascertain if the substrate is dry enough to seal. Electronic moisture meters are recommended, however a simple test may be performed as per below. If sealer is applied to substrates that are not dry, whitening, blistering or bubbling of the coating may occur. Sealer must be protected from all forms of moisture during the curing phase.
- Simple moisture test - place a 300 x 300 mm piece of black plastic / rubber mat on the area to be sealed at the hottest part of the day. After 2 hours, remove and inspect. If any condensation is present on the under-side of the plastic, or the substrate has darkened, then it is too wet to seal. Be patient, allow to dry further and repeat test until no moisture is detected.
- If area has been previously sealed, refer to the recoating section of this document.
- **Important Note:** If concrete slab has been ground, heat generated will expel moisture. If slab is outside and left overnight, as it cools it will act like a sponge, absorbing moisture from the damp night air. If slab is then sealed early the following day, before moisture has the opportunity to leave again, sealer blistering may occur. It is recommended to leave open slabs until at least midday in good drying conditions to allow it to breathe out before applying sealer.
- For further advice contact Crommelin, 7 days a week 1800 655 711

Phone: +61 8 9458 5711 ▪ **Fax:** +61 8 9451 4749 ▪ **7 Day Technical Support:** 1800 655 711
Email: sales@crommelin.com.au **Website:** www.crommelin.com.au

Sealer Choice

- Correct sealer should be chosen that delivers the required performance and breathability characteristics suitable to the substrate. If substrate breathability is compromised by either the application of an inappropriate sealer or over application, moisture entrapment may occur, leading to possible whitening and / or delamination of the sealer.
- Natural sealers – high breathability
- Gloss sealers – medium breathability
- Satin sealers – low breathability
- In general, natural stone products require high rates of breathability and the appropriate sealer should be used.
- In areas subject to high moisture exposure such as around swimming pools, highly breathable sealers should be applied.
- For further advice contact Crommelin, 7 days a week 1800 655 711

When to Seal

- Only when substrate is completely dry. If excessive moisture is in the substrate when sealer is applied, or during the curing phase, this may affect final finish. Whitening, bubbles of blisters may form.
- It is recommended that sealer is applied late morning to early afternoon – after substrate moisture has been released and dew point has been exceeded.
- Do not seal if surface / ambient temperature is too high; carrier solvent will evaporate too quickly and not allow resins / polymers to coalesce at the correct rate.
- Do not seal if rain is expected during cure time, or if humidity is too high, or likely to be during the initial cure phase. This may affect final finish and whitening may form.
- Do not seal if surface / ambient temperature is too low, carrier solvent will not evaporate and allow resins / polymers to coalesce at the correct rate.
- Weather details may be checked at: http://www.bom.gov.au/climate/data/index.shtml?
- For further advice contact Crommelin, 7 days a week 1800 655 711

Slip Resistance

- The application of gloss or satin sealers may increase the slipperiness of the coated surface. If slip resistance is critical, do not apply a coating sealer.
- In grip critical applications, such as sloping surfaces or where standing water may be present, natural penetrating sealers are recommended.
- Slip resistance may be improved with the addition of slip resistant agents into solvent based gloss and satin / low sheen sealers.
- Slip resistance should always be determined by a site specific trial patch before full sealer application.
- For further advice contact Crommelin, 7 days a week 1800 655 711

Sealer Application

- Surface porosity testing should always be conducted before sealer application to ensure that sealing is actually required. If surface porosity is low, appropriate sealer must be applied at an appropriate rate, or sealing may not be required. Conduct porosity testing by the addition of water droplets to surface to be sealed. If water is readily absorbed into surface and surface darkens, the surface is open to the application of a sealer. If water is not readily absorbed, the surface does not darken and water droplets bead, the surface is not open to sealing.
- Ensure substrate is completely dry before sealer application. (Refer to "When to seal" section)
- A trial patch is always recommended to ensure final finish and performance characteristics are as required. If this is not conducted and final finish is not as desired, removal of sealer may be a difficult process.
- Sealer should only be applied as per recommended coverage rates. Not enough sealer and performance will be compromised. Too much sealer and substrate breathability will be compromised and moisture / adhesion issues may be experienced.
- Do not thin sealer with any solvent other than recommended compatible product. Different solvents have different flash points, which can compromise sealer cure and performance characteristics. For example, sealer solvent flash point is 46°c, Xylene flash point is 26°c.
- If sealing a driveway or similar area subject to motor vehicle traffic, use appropriate sealer and do not expose to vehicular traffic until full cure has been achieved. If a motor vehicle is parked on a sealed surface prior to the sealer achieving full cure, marking may occur. If an inappropriate sealer has been applied to a surface subject to motor vehicle traffic, marking may occur.
- The sealed area should be protected from light foot traffic for 24 hours after application.
- Remember – less is more! You can always add another coat, as long as this doesn't compromise substrate breathability. It's much harder to remove excess sealer if there is too much.
- For further advice contact Crommelin, 7 days a week 1800 655 711

Re-coating

- Unlike timber products, there is no need for annual sealer re-applications. Re-coating is only required when existing coating has degraded to the point where surface is porous enough to accept additional sealer.
- Surface porosity testing should always be conducted before re-coating to ensure that sealing is actually required. If surface porosity is low, re-sealing may not be required. Refer to "Sealer Application" section for surface porosity testing details.
- If area has been previously sealed, ensure that the existing coating is compatible with the sealer to be used. If existing and new sealers are incompatible, poor adhesion may be achieved.
- During re-coating, ensure that new total film thickness achieved does not compromise the breathability of the substrate. If substrate breathability is compromised by excessive film build, moisture entrapment issues including surface whitening and sealer delamination may occur.
- Never apply a gloss or satin topical sealer on top of a natural penetrating sealer. The existing penetrating sealer may repel the new topical sealer and lead to coating delamination.
- Never apply a natural penetrating sealer on top of a gloss or satin topical sealer. The existing topical sealer will prevent the penetrating sealer to be absorbed into the substrate. Excessive penetrating sealer that does not penetrate into the substrate will become sticky and attract dirt. This may only be removed chemically.
- If in doubt about any of the above, remove existing sealer chemically or mechanically before re-coating.
- For further advice contact Crommelin, 7 days a week 1800 655 711

Moisture Related Issues

- **Sealer coating bubbles / blisters** – if excessive substrate moisture is present, this will try and leave the surface as increasing atmospheric temperatures open substrate pores and draw moisture up. If sealer coating is yet to fully cure, and is still in a plastic state, moisture will be trapped under the coating and expand causing blisters. This situation is more common when using premium high solids sealers than lower solids equivalents.
- **Sealer clouding** – substrate moisture may become trapped within the sealer coating as it cures, exhibited by a white cloudy appearance.
- **Sealer whitening** – if excessive sealer film builds have been applied, either initially or during subsequent re-coating, substrate breathability will be compromised. Moisture will become trapped at the substrate surface and appear as whitening.
- **Efflorescence** – efflorescence is not caused by sealer application, rather a natural or man made issue that is regarded as a building defect. Efflorescence and the natural passage of moisture in and out of a substrate may become a problem if incorrect sealer choice is made, or excessive film builds are applied.
- **Sealer delamination** – substrate moisture will retard sealer ability to penetrate and bond to the surface. The passage of moisture may then delaminate the sealer from the surface, resulting in a white appearance (caused by thousands of tiny cracks in the surface) of flaking / peeling sealer.
- Refer to the "Common Sealer Problems and Solutions" section for more details.
- If any of the above issues are experienced, contact Crommelin, 7 days a week 1800 655 711, for further advice

Glossary of Terms

- **Contaminants** – unwanted constituent or impurity in a material, physical body, natural environment etc.
- **Laitance** – accumulation of fine particles on the surface of fresh concrete due to an upward movement of water.
- **Initial cure phase** – period between application and film forming.
- **Breathability** – the ability of a substrate to allow moisture vapour to be transmitted.
- **Carrier Solvent** – a liquid in which a solute is dissolved.
- **Surface Porosity** – the quality of being porous, or full of tiny holes.
- **Friable Substrate** - easily crumbled, powdery, dusty, chalky or soft.

Phone: +61 8 9458 5711 ▪ **Fax:** +61 8 9451 4749 ▪ **7 Day Technical Support:** 1800 655 711
Email: sales@crommelin.com.au **Website:** www.crommelin.com.au

Common Sealer Problems and Solutions

Problem	Solution
Cloudy/milky surface appearance	Ensure moisture issue has been rectified. For solvent based sealers - apply liberal coat of compatible solvent, leave to react and agitate the affected area with brush or similar. Solvent will re-emulsify / open up the sealer enough for the trapped moisture to be released. As solvent evaporates, sealer film will cure as normal. For water based sealers, removal and reapplication is required.
Bubbles/blisters	For large blisters - ensure moisture issue has been rectified. For solvent based sealers - apply liberal coat of solvent, leave to react and re-emulsify sealer in effected areas. Rework sealer with brush or similar to dissolve blisters and allow to cure as normal. Ensure blisters are not caused by the presence of existing incompatible sealers. If so, remove totally and re-apply. Note: over-rolling during application may also trap small bubbles in the sealer coating. For water based sealers, removal and reapplication is required.
Overlap lines	Usually caused by application of insufficient film thickness or poor surface preparation where dust etc may be concentrated in lines by application tools. For solvent based sealers - if due to insufficient sealer, apply additional coat of sealer at correct film thickness. If due to contaminants, removal and reapplication is required. For water based sealers, removal and reapplication is required.
Inconsistent sheen level	Usually caused by inconsistent substrate porosity or standard of preparation. Apply additional coat of sealer at correct film thickness.
Delamination in between coats	Usually caused by application of sealer over a non-compatible existing coating, or contamination between coats by dust, moisture etc. Remove sealer totally and re-apply.
Delamination from substrate	Usually caused by poor surface preparation, or when moisture is present in substrate during sealer application. May also be caused if the substrate is in a poor condition / friable. A densifier may be required before re-sealing. Remove sealer totally and re-apply.

For further advice contact Crommelin, 7 days a week 1800 655 711

Phone: +61 8 9458 5711 ▪ **Fax:** +61 8 9451 4749 ▪ **7 Day Technical Support:** 1800 655 711
Email: sales@crommelin.com.au **Website:** www.crommelin.com.au

Crommelin®
Waterproofing & Sealing Australia since 1957

Sealers Full Instructions
Preparation, Application & Recoat
APPENDIX

Substrate and Ambient Temperature Considerations:

Applying sealers when the substrate temperature differs significantly from the surrounding air temperature can cause bubbling, poor adhesion, uneven curing, and reduced coating performance.

Substrate temperature: Temperature of the surface being sealed (concrete, pavers, stone).
Ambient temperature: Surrounding air temperature.

Concrete and masonry change temperature more slowly than air, meaning surfaces may remain cold after cool nights or stay warm after sunset. A visible dry surface does not guarantee suitable coating conditions.

Why Temperature Difference Causes Problems

When a sealer is applied to a surface that is significantly colder or hotter than the surrounding air:

- Moisture can condense on the surface as an invisible film.
- Solvent or moisture vapours may become trapped beneath the sealer film.
- The coating may cure unevenly or too quickly at the surface.

These conditions most commonly occur early in the morning, late in the day, or when shade moves from one area to another.

Possible Effects on Sealer Performance

Incorrect temperature conditions may result in:

- Poor adhesion or delamination
- Blistering, bubbling, pinholes, or craters
- Patchy sheen or colour
- Extended curing times or surface tackiness

Application Guidelines

To minimize risk:

- Measure substrate temperature, ambient temperature, and dew point before application.
- Ensure the substrate temperature is at least 3°C above the dew point.
- Apply sealers only within the recommended temperature range (typically 10°C–35°C).
- Avoid application:
    - Early morning after cold nights
    - Late afternoon or evening during rapid cooling
    - When the substrate temperature differs from ambient air temperature by more than 5°C
- Allow surfaces time to stabilise before sealing following rapid temperature changes.

Failure to observe appropriate temperature conditions may affect coating appearance, performance, and durability.

For further advice, contact Crommelin Technical Support before application.