



KEIM Soldalit Application Guide

KEIM Soldalit is a premium sol-silicate mineral paint system. Unlike standard acrylics, it chemically bonds (silicifies) to masonry substrates while providing a high-strength mechanical grip to existing sound coatings. To ensure the KEIM Australia 25-year warranty, the following methods must be followed in accordance with the current Technical Data Sheet (TDS).

1. The System Specifications

- **Minimum Two-Coat System:** The standard KEIM Soldalit exterior system requires a minimum of two coats (one base coat and one topcoat). Single-coat applications over bare or patched exterior substrates are not approved for the warranty.

2. Substrate Assessment & Preparation The applicator must verify the condition of the substrate as per KEIM TDS requirements to ensure the mineral bond forms correctly.

- **Hazard Warning (Lead Paint):** Extreme caution must be exercised during the removal of pre-1960s coatings, as they may contain lead.
- **Gloss Surfaces:** Any gloss, satin, or shiny surfaces must be mechanically sanded back to a dull finish using sandpaper or an abrasive pad to create a sound physical key.
- **Stripping:** The use of poultice-based strippers is not recommended as they can induce an osmotic reaction, drawing salts to the surface. Use KEIM Dispersion Remover for acrylic removal.
- **Water Absorption Test (The Runners Test):** Mist water onto the dry substrate using a spray bottle or Karsten Tube.
 - **High Absorption:** If water runs down in short, thick tracks, the surface is highly absorbent. Prime the surface with KEIM Soldalit-Fixativ.
 - **Low/Normal Absorption:** If water runs down in long, thin tracks, the absorbency is within normal limits. Proceed to the first coat.
 - **Non-Absorbent:** If water beads on the surface, a hydrophobic sealer is present. This must be mechanically removed before application.
- **Adhesion Test (For Existing Coatings):** Perform a Cross-Cut Test by scoring a "#" pattern into the old paint and applying high-tack tape. If the old coating peels, the substrate is not sound. Per the Soldalit TDS, all loose or flaking material must be removed prior to application.

3. Repairs & Filling

- **Texture Matching (CRITICAL):** KEIM Soldalit is a thin-film mineral coating that will perfectly replicate the physical texture beneath it. The applicator must ensure that the physical texture of any patched render exactly matches the surrounding surface. A smooth, steel-trowelled patch on a sponge-finish



render will remain highly visible under glancing sunlight regardless of paint opacity.

- **Approved Fillers:** Use only KEIM recommended mineral fillers (e.g., KEIM Spachtel).
- **Prohibited Fillers (CRITICAL):** NEVER use gypsum, resin, or acrylic-based fillers. These materials possess different porosity and moisture retention properties compared to the mineral system, which will lead to visible defects or coating failure.

4. Using KEIM Soldalit-Fixativ On porous surfaces, Fixativ is essential to regulate absorption and strengthen the substrate.

- **As a Primer:** Apply undiluted KEIM Soldalit-Fixativ to the point of saturation, working from the bottom of the wall upwards to avoid permanent run-marks.
- **As a Diluent:** On very porous substrates, dilute the first coat of KEIM Soldalit with a maximum of 5% to 10% KEIM Soldalit-Fixativ (approximately 0.25kg - 0.5kg per 5kg drum).
- **Warning:** Never use water to dilute KEIM Soldalit; always use the dedicated Fixativ to maintain the mineral chemistry.

5. Selection of Base Coat & Topcoat Select the appropriate first coat based on the substrate condition:

- **Standard Surfaces:** Use KEIM Soldalit.
- **Hairline Cracks (up to 0.5mm):** Use KEIM Soldalit-Grob (fibre-filled) as the first coat to bridge micro-fractures.
- **Structural Cracks (0.5mm - 1mm) or Textured Finish:** Use KEIM Contact-Plus. This high-build coat contains mineral fibres and glass beads to bridge larger gaps and provide a grainy, aesthetic texture.
- **Topcoat:** Regardless of the base coat used, the final coat must always be standard KEIM Soldalit.

6. Application Method

Environmental Constraints

- **Temperature & Moisture:** Ambient and substrate temperatures must be between 5°C and 30°C. Surfaces must be "wind dry" with a moisture content no greater than 18%.
- **Solar Load:** Avoid application on sun-heated surfaces. Elevated substrate temperatures cause rapid evaporation, preventing proper silicification and resulting in visible lap marks.

Facade Management & Roller Application



- **Equipment & Technique:** Use a high-quality, 15mm-20mm long-pile polyamide roller. Maintain a "wet edge" at all times to prevent visible joints and apply in a cross-hatch pattern.
- **Scaffold Lifts & Natural Breaks (CRITICAL):** Applicators must paint continuously down to a "natural architectural break" (such as an expansion joint, corner, or downpipe). Scaffold teams must work "wet-on-wet" across multiple levels simultaneously to prevent horizontal dry-lines and banding across the facade.
- **STRICTLY NO SPOT-PRIMING:** Spot-priming or localised touch-ups over dry exterior patches with a roller are strictly forbidden. This creates a raised, permanent 3-coat "halo" that will flash aggressively in direct sunlight. If a facade is patched, the entire architectural section (from break to break) must be seamlessly recoated.

Airless Spray Application

- **Hose Requirement (CRITICAL):** A new or dedicated hose must be used. The high alkalinity of KEIM products will detach dried acrylic residue from old hoses, causing frequent nozzle blockages.
- **Pump Selection:** Both diaphragm and piston pumps can generally be used. However, for KEIM Soldalit-Grob, do NOT use a diaphragm pump.
- **KEIM Soldalit Settings:** Nozzle: >435 | Filter: 30 mesh Pi (Gun filter) | Back pressure: > 85 bar.
- **KEIM Soldalit-Grob Settings:** Nozzle: ≥ 443 | Filter: Remove all filters (without filter) | Back pressure: > 110 bar.
- **Back-rolling:** The first coat must be back-rolled immediately after spraying to ensure the material is worked into the substrate pores.

7. Drying & Curing

- **Drying Appearance (CRITICAL):** Mineral paints dry unevenly and will lighten as they cure. DO NOT attempt to "touch up" or over-roll the coating during the drying phase, as this will disrupt the curing process and create permanent visible defects.
- **Drying Time:** Allow a minimum of 12 hours between coats as specified in the TDS.

8. Maintenance & Optional Service Life Extension

- **Routine Cleaning:** Rinse the facade every 12-24 months with a garden hose or low-pressure water (Maximum 400 psi) to remove salt and contaminants. Safety Warning: Never use high-pressure "turbo" heads, as they will mechanically damage the mineral structure.
- **Optional Life Extension:** While not compulsory for the warranty, the service life of the KEIM system can be significantly extended at any point in the future. After a low-pressure clean, apply a single coat of KEIM Soldalit at 6 sqm/kg. Whenever this refresh coat is applied, it fuses with the existing



mineral layers and adds a minimum of 10 years extra life to the system from that date.

9. Warranty & TDS Compliance Checklist To validate the 25-year warranty, the following documentation must be retained:

1. **Invoices:** Proof of purchase from KEIM Australia.
2. **Batch Records:** Logs of batch numbers from all drum lids (Soldalit, Grob, and Fixativ).
3. **Site Log:** Records of weather conditions, absorption test results, and confirmation of new hose usage for spray applications.
4. **TDS Verification:** Written confirmation that the project adhered to the recommendations in this document and the current KEIM Soldalit Technical Data Sheet (TDS).