

WATER REPELLENT FOR MINERAL BUILDING MATERIALS

SILAC

TECHNICAL DATA

1.0 DESCRIPTION

SILAC is an acrylic modified silicone water repellent used to render porous exterior building materials water repellent, especially Oamaru stone. Water absorption into the building material is stopped or greatly reduced while water within the material is still able to evaporate out.

When applied, SILAC penetrates into the surface sealing smaller pores and lining the larger pores and capillaries with a water repellent resin.

SILAC may slightly darken concrete and cement based products to which it is applied. Very dense surfaces treated with SILAC may show a slight gloss. SILAC may change the appearance of Oamaru Stone.

SILAC has excellent alkali and U.V. resistance.

2.0 PHYSICAL PROPERTIES:

2.1	Colour	Transparent Liquid
2.2	Specific Gravity	0.825
2.3	Flashpoint	35° C Flammable.
2.4	Viscosity	Low.
2.5	Toxicity	Harmful substance – Contains White Spirit. Non-toxic when dry.
2.6	D.G. Classification	3, UN 1993 Flammable Liquid N.O.S.
2.7	Shelf Life	1 year in sealed containers.
2.8	Coverage	See section 4.4.

3.0 USES

- 3.1 SILAC is generally used to render vertical and inclined surfaces, such as walls and roofs, water repellent. It can be used on concrete, cement plaster, blockwork, bricks, roofing tiles, fibrous cement and natural stone. It has been used successfully on cracked horizontal surfaces such as balconies as a remedial water repellent.
- 3.2 Due to the acrylic content of SILAC, it is capable of sealing surfaces which are too porous for treatment with normal water repellents.
- 3.3 SILAC will lift the colour of exposed aggregate surfaces and is suitable for use as a sealant on slate.
- 3.4 SILAC is very effective in the protection of tile grout from discoloration on shower floors, benches etc.
- 3.5 SILAC is very effective on Oamaru stone helping to maintain a clean and water-repellent surface and preventing degradation.

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TECHNICAL DATA Continued

4.0 APPLICATION INSTRUCTIONS

- 4.1 The surfaces to be treated must be free from dust, dirt, efflorescence, moss, lichen and any other material which is likely to prevent or reduce penetration of SILAC into the surface. Previously painted surfaces are unsuitable for treatment unless the coating can be completely removed to permit absorption. Oamaru stone should be washed and allowed to dry thoroughly, unless weathered. It is important to remove any loose dust (from sawing, masonry work, etc) from the pores before application of SILAC.
Note that the type of substrate and quantity of Silac applied will affect the level of protection afforded. A regular cleaning regime (taking into consideration the type of substrate) will help ensure optimum performance of the treated surface.
- 4.2 SILAC is not generally suitable for use on surfaces exposed to water pressure such as tank walls and horizontal surfaces subject to ponding, excessively porous surfaces, and previously painted surfaces. It is not to be used on substrates with cracks above 0.3mm wide or in poor condition. Oamaru stone and concrete blocks are very porous surfaces and SILAC must be applied at up to 1m² per litre. Please contact the manufacturer for specific application advice when applying to these substrates.
- 4.3 Freshly poured concrete should be left for 6 weeks before application.
- 4.4 The surface should be as dry as possible to permit maximum penetration of SILAC. Some dampness can be tolerated but will reduce penetration and therefore the life expectancy of the treatment.
- 4.5 Before proceeding with application of SILAC, apply a small quantity at the recommended application rate (see 4.6) to an inconspicuous area of the substrate to be treated. Adjust application rate as required; more SILAC is better than less. Allow to dry completely then test for water repellency and any change in substrate appearance. Some substrates of varying porosity, very dense substrates and natural stone substrates may darken or otherwise alter in appearance due to the nature of the substrate.
- 4.6 SILAC should be applied in two applications by flood coat allowing a run-down of about 50mm to ensure penetration; the second being applied as soon as the first has been absorbed i.e., when the surface is no longer glossy. Coverage depends on the substrate and its absorbency. As a guide:
Oamaru stone and porous stone: up to 1m²/lt, normal concrete: 2 - 3m²/lt,
dense concrete and brick: up to 4m²/lt
- 4.7 Large areas are best treated using airless spray equipment. Wear appropriate safety gear, including protective clothing, safety goggles and rubber gloves. Ensure adequate ventilation at all times and avoid breathing vapour. Use low spraying pressure so that SILAC is applied in the form of droplets rather than a mist. Hold the nozzle about 5 - 10cm from the surface being treated. Starting from the top of a surface, SILAC is best applied in vertical sections the width of which is determined by the reach of the applicator. SILAC is applied until the surface being treated will absorb no more.



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SILAC

TECHNICAL DATA Continued

4.0 APPLICATION INSTRUCTIONS (continued)

4.8 Moving the spray nozzle from side to side work down the surface following about 50 mm behind the excess SILAC as it floods down the surface. Ensure any areas with rundowns are treated before the SILAC dries.

To avoid overlapping dried material, apply SILAC to a defined area before stopping – for example, treat entire vertical section to a corner or architectural feature.

4.9 Smaller areas of walls with many windows can be treated by brush or roller. It is harder to get adequate penetration using brush or roller so particular care should be taken to ensure sufficient SILAC is applied.

4.10 Freshly impregnated surfaces should be protected from rain for 4-5 hours by which time they will have become water repellent.

4.11 Protect windows (including cars parked in vicinity), aluminium window frames, plants and any solvent sensitive materials and remove any splashes before the solvent evaporates. Protect areas not to be made water repellent from run-down or overspray. Choose a relatively calm day for application.

4.12 Silicone rubber, polysulphide and polyurethane joint sealants may swell slightly on contact with SILAC. This swelling is only temporary however and the sealant will revert to its original shape when the solvent in SILAC evaporates.

5.0 PACKAGING

4, 20 and 210 litres.

6.0 PRECAUTIONS

Read this data sheet in conjunction with the product label. SILAC is a flammable liquid. Refer to product label for handling and storage details. Refer to Material Safety Data Sheet for handling and first aid information.

Silicone water repellents, including SILAC, are not waterproof coatings. They offer advantages and features that a coating doesn't, most notably, application with minimal change in substrate appearance. They are designed to protect vertical and inclined substrates from water/moisture absorption while allowing the substrate to "breathe" and therefore pass any trapped moisture back into the atmosphere. However, a silicone water repellent should not be used to treat very porous substrates and/or substrates exposed to rain and significant wind pressure without first testing the application for suitability under adverse conditions. In certain conditions, moisture and/or water may overcome the repellency of the water repellent, thereby penetrating into the substrate.



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