WATER REPELLENT
FOR MINERAL BUILDING MATERIALS

AQUELLUX S

TECHNICAL DATA

1.0 DESCRIPTION

AQUELLUX S is a state of the art siloxane water repellent which is used to make porous building materials water repellent without changing their appearance.

The active component used in the manufacture of AQUELLUX S is made by a world leader in water repellent technology. Siloxane water repellents are used to protect all motorway bridges in Sweden from damage caused by salt and freezing weather in the European winter; as well as being used to protect many of the important historical buildings throughout Europe and the USA.

AQUELLUX S is in widespread use throughout New Zealand.

AQUELLUX S has many performance characteristics superior to commonly used silicone, siliconate and silane based materials.

When applied to a surface AQUELLUX S typically penetrates to a depth of between 2 and 5 millimetres. AQUELLUX S then reacts with atmospheric humidity to form a solid tack free resin which lines, without blocking, the pores and capillaries within the surface structure. Water absorption into the building material is stopped or greatly reduced while moisture within the material is still able to evaporate out.

AQUELLUX S has excellent alkali and U.V. resistance. In normal circumstances a treated surface will remain water resistant for more than 10 years depending on the type and condition of the substrate and exposure to weathering. Highly porous surfaces and surfaces more exposed to weathering may require reapplication of AQUELLUX S more regularly.

2.0 PHYSICAL PROPERTIES

2.1	Colour	Transparent Liquid
2.2	Specific Gravity	0.81.
2.3	Flashpoint	>64° C (Combustible).
2.4	Viscosity	Low.
2.5	Toxicity	Harmful substance. Non-toxic when dry.
2.6	D.G. Classification	9 (UN 3082)
2.7	Shelf Life	2 years in sealed containers.
2.8	Coverage	See sections 4.4. and 4.5.

3.0 USES

3.1 AQUELLUX S is used to treat vertical and inclined exterior surfaces such as walls and roofs. AQUELLUX S is capable of bridging hairline cracks up to 0.3mm wide.

3.2 Materials suitable for treatment with AQUELLUX S include concrete, cement plaster, blockwork, bricks, roofing tiles, cement asbestos and fibrous cement, GRC panels and natural stone. Refer section 4.4 for additional details.

3.3 AQUELLUX S is applied to surfaces to help protect against the following:

Leakage and dampness.
Spalling due to frost or freezing.
Efflorescence and leaching of salts.
Penetration of dirt, rust etc. Growth of moss lichen and mildew.

AQUELLUX S

TECHNICAL DATA Continued

Corrosion due to waterborne chemicals.
Reduced thermal insulation due to dampness.
Surface degradation due to dirt and soiling.

Note that the type of substrate and quantity of AQUELLUX S applied will affect the level of protection afforded. A regular cleaning regime will help ensure optimum performance of the treated surface.

3.4 AQUELLUX S is not suitable for use on horizontal surfaces (and inclined surfaces where ponding may occur), surfaces exposed to water pressure such as tank walls or building foundations, excessively porous surfaces, previously painted surfaces or below grade 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 AQUELLUX S must be applied at a minimum rate of 1 litre per 1m^2 of substrate. Please contact the manufacturer for specific application advice when applying to these substrates.

3.5 AQUELLUX S can be used as a primer for water based paints on porous surfaces. Consult manufacturer for details.

4.0 APPLICATION

4.1 The surfaces to be treated must be free of dust, dirt, efflorescence, moss, lichen and any other material which is likely to prevent or reduce penetration of AQUELLUX S into the surface or are incompatible with AQUELLUX S. Substrates that have been sanded (such as Oamaru stone) must be completely washed or vacuumed to remove all traces of dust from within the substrate otherwise the application of AQUELLUX S may flush these particles out causing run down marks. Previously painted surfaces are unsuitable for treatment unless the coating can be completely removed to permit absorption.

4.2 Freshly poured concrete should be left for 6 weeks before application.

4.3 The surface should be as dry as possible to permit maximum penetration. Some dampness can be tolerated but will reduce penetration and therefore the life expectancy of the treatment. If AQUELLUX S must be applied to a damp surface it is advisable to repeat the application a second time after the surface has dried out. Note that application to a damp surface may lead to an uneven surface appearance after the product has dried.

4.4 Before proceeding with application of AQUELLUX S, apply a small quantity at the recommended application rate (see 4.5 & 4.6) to an inconspicuous area of the substrate to be treated. Adjust application rate as required; more AQUELLUX S 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.

4.5 AQUELLUX S should be applied in two applications, 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 concrete blocks and porous stone: maximum 1m^2/lt, normal concrete: 2 – 3m^2/lt, dense concrete and brick up to 6m^2/lt.

4.6 Large areas are best treated using spray equipment. Use low spraying pressure so AQUELLUX S is applied in the form of droplets rather than a mist. Starting from the top of a surface, AQUELLUX S is best applied in vertical sections the width of which is determined by the reach of the applicator. AQUELLUX S is applied until the surface being treated will absorb no more. Moving the spray nozzle from side to side work down the surface following about 50mm behind the excess AQUELLUX S as it floods down the surface. Ensure an overlap is obtained between vertical sections.

AQUELLUX S

TECHNICAL DATA Continued

4.0 APPLICATION (continued)

4.7 Smaller areas or 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 AQUELLUX S is applied.

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

4.9 Protect windows and glass (including vehicles parked in the vicinity if spraying), aluminium and coated window frames, plants, any solvent sensitive materials and surfaces not to be treated and remove any splashes immediately using white spirit or mineral turpentine.

4.10 Silicone rubber, polysulphide and polyurethane joint sealants may swell slightly on contact with AQUELLUX S. This swelling is only temporary however and the sealant will revert to its original shape when the solvent in AQUELLUX S evaporates. Sealants can be satisfactorily applied to surfaces treated with AQUELLUX S (check with sealant manufacturer).

5.0 PACKAGING

4, 20 and 210 litres.

6.0 PRECAUTIONS

Read this data sheet in conjunction with the product label.

Ensure the substrate is completely clean and free from other coatings, dirt, dust, grease, etc. The solvent in AQUELLUX S may flush impurities or dirt from the substrate which could mar the surface appearance.

Silicone water repellents, including AQUELLUX S, 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.

Refer to Material Safety Data Sheet for handling and first aid information.