Resene Construction Systems

Plaster Systems

Technical Data Sheet

Product name:

PSL Seismolock Render

Description:

Seismolock is a thin fibre-reinforced plaster designed to structurally upgrade existing URM (unreinforced masonry) buildings to resist earthquake loads. The system is easily applied and provides a simple and economical alternative to traditional strengthening methods, thereby reducing construction time and site disruption. The use of this product needs to be specified by an engineer when using it to achieve earthquake strengthening.

Typical Use:

Flushing concrete block, brick and concrete. Seismolock Render provides earthquake strengthening properties.

Expectation:

Seismolock Render will adhere well to clean, dry concrete and brick and will dry and cure well in a thin coat. Seismolock Render will provide good durability for an indefinite period depending on the life of the substrate.

Limitations:

Do not apply less than 3mm per coat or more than 8mm in one coat. Requires over-coating with finishing textures for external walls only. Seismolock is designed to be applied to DRY substrates. Do not wet down masonry or brick surfaces before the application of Seismolock and do not apply Seismolock to surfaces which are wet from rain or overnight dew. Brick, concrete block and masonry surfaces must be free of oil, paint, dirt and lichen growth.

Technical Data:

Mix ratio:	20kg plaster requires approx. 6L of water
Coverage:	10mm thick, Approx 1m^2, subsequent coats 3mm thick
Substrates:	Brick, concrete, concrete block, stone
Abrasive strength:	Excellent
Adhesion:	Excellent
Vapour Permeability:	No vapour barrier formed
VOC:	N/A
Colour:	grey
Packaging:	20kg bags
Clean up:	Water while product is wet
Use by:	6months from date of manufacture
Storage:	Cool, dry place, of the ground

Application Temperature:	+ 5 °C to + 30 °C
Usual No Coats:	1
Drying Time:	24 hours
Touch Dry:	4 hours
Dry to Recoat:	12 hours
Film Build:	Approximately 3mm dry film build per coat
Thinning:	N/A
Mean Vapour flow rate:	29.46g/m²d (ASTM E96/E96M-13 Water Method)
Mean Resistance:	3.75MNs/g (ASTM E96/E96M-13 Water Method)

Surface Preparation:

Any loose or unsound surface material must be hacked off back to a solid base. The surface of glazed bricks must be removed with a scabbling tool to ensure a good plaster bond. On smooth dense concrete surfaces, a suitable key must be applied to provide a suitable bond for the Seismolock plaster. Where required, corner beads or any depth gauge beads must be in place prior to the plaster application.

Application:

Render is applied not less than 5mm thick with a steel trowel. Apply with firm pressure doubling back with more plaster to achieve a flat uniform finish. Plastering techniques like screeding, floating and scraping can be used to achieve desired flatness as required.

5mm is the minimum plaster thickness for the first coat over any substrate. When using seismolock with embedded layers of fibreglass mesh, the first coat is 5mm thick with subsequent plaster coats 3mm thick.

One mesh plaster system - 8mm
Two mesh plaster system - 11mm
Three mesh plaster system - 14mm
Four mesh plaster system - 17mm
Five mesh plaster system - 20mm

Plastering

The plaster mix can be applied to the wall by trowel, hopper gun or plaster pump. The plaster is applied in strips about one metre wide and the mesh is laid against the wet Seismolock and then trowelled into the surface of the plaster.

Note: Ensure the fibreglass mesh is laid into the wet plaster in the direction specified by the designer. Generally the mesh is laid in vertical drops, but for some design cases the mesh is laid in horizontally.

The plaster and mesh application is continued in strjps along the wall with each new layer of mesh overlapping the preceding one by at least 150mm. If multiple layers of fibreglass mesh are specified, allow the preceding mesh and plaster coat to at least reach the Initial set stage before applying the next coat of plaster. Try

and organise your work so that whole wall areas are completed in one day. When an area can't be completed in one day a CONSTRUCTION JOINT must be formed to allow the next day's work to be lapped into the previous reinforced mesh coats. The diagram below shows how to form a construction joint with at least 500mm of fibreglass mesh exposed at each layer with a stepped or staggered system to ensure adequate bond and continuity at the joint.

Curing:
Do not let Seismolock dry out for the first 48 hours. Protect newly applied Seismolock from temperature extremes and rain for at least 24 hours. Apply Seismolock plaster only when the temperature is between so to 35° and will be in that range for the 24 hour period after application. Aim to work on the shaded areas of the building, avoiding walls in direct sunlight.

Clean up:
Wash equipment and spills as soon as possible with water.

Environmental and Safety
Ensure washing water does not enter waterways. Wet waste should be disposed of in empty bags, once dry dispose of in trade waste. The powder is an irritant and appropriate PPE dust masks are advised when handling. The wet compound is Alkaline and prolonged skin contact should be avoided. Wear rubber gloves, dust masks and safety glasses when handling products.

Material Safety Data Sheets are available upon request or access directly from https://reseneconstruction.co.nz/technical-library/safety-data-sheets/