

ICF Render System - ICF Solid Render System - RMaxx RenderSpec

General

Description of Works/Specification Notes

This specification deals with Resene Construction Systems ICF Solid Render System applied over a Insulated Concrete Formwork (polyblocks). The system incorporates the application of a pre-coloured acrylic texture finish.

Building Code Compliance

If the project has a building consent then the following clauses apply.

B1 - Structure

This specification complies with the requirements as set out in B1 - Structure which requires buildings, building elements and sitework to withstand the combination of loads and physical conditions they are likely to experience during construction, alteration and throughout their lives. Loads and physical conditions include self-weight, temperature, water, earthquakes, snow, wind, fire.

B2 - Durability

This specification complies with the requirements as set out in B2 - Durability which must always be considered when demonstrating compliance with each of the clauses of the Building Code. It ensures that a building throughout its life will continue to satisfy the performance of the Building Code. It confirms the use of materials that will remain functional throughout the specified intended life of the building, but not less than 50, 15 or 5 years

This cladding system meets the expected durability of the NZBC of at least 15 years

E2 - External Moisture

This specification complies with the requirements as set out in E2 - External Moisture which demonstrates External roof, wall claddings and external openings will prevent external moisture from causing undue dampness or damage.

F2 - Hazardous building materials

This specification complies with the requirements as set out in F2 - Hazardous building materials which safeguards people from illness and injury from quantities of gas, liquid, radiation and solid particles caused by exposure to building materials

On Going Maintenance Instructions

Provide ongoing maintenance instructions required to meet the performance requirements of the NZBC.

Building Consent Authority Requirements

All the appropriate inspections are to be carried out by a BCA representative and that it complies with the NZBC requirements.

Documents

Abbreviations

The following abbreviations are used throughout this work section:

- BCA - Building Consent Authority
- LBP - Licensed Building Practitioner
- PPCS - Proprietary Plaster Clading System
- MPNZA - Master Painters of New Zealand Association
- MSDS - Material Safety Data Sheet
- NZBC - New Zealand Building Code

Manufacturers Documents

Copies of the above relevant company documents referred to in this specification are available at;

Resene Construction Systems
Web: reseneconstruction.co.nz
Telephone: 0800 50 70 40

No Substitutions

Substitutions are not permitted to any specified Resene Construction Systems system. Materials and execution to Resene Construction Systems specification except where varied by this specification and supported by architectural detailing.

Qualifications

Use only LBP registered plasterers licensed to apply the Resene Construction Systems exterior render systems.

Documentation

Finish Sample

Submit one 300 mm x 300 mm sample of the selected texture finish and colour for approval on request by the main contractor or specifier. Obtain signature of acceptance on sample and return to the Registered Plasterer.

Maintenance Instructions

Provide Resene Construction Systems Maintenance Guide on or before practical completion of the contract for issuing to the building owner. Resene Construction Systems Maintenance Guide to be provided on request.

Producer Statement

If the project has a building consent then a producer statement shall be supplied by the plasterer in the form as required by the BCA.

Health and Safety

Refer to the requirements of the Health and Safety in Employment Act 2015 and Worksafe NZ: Guidelines for the provision of facilities and general safety in the construction industry. If the elimination or isolation of potential hazards and risks is not possible then minimise hazards and risks in this work on site by using the proper equipment and techniques as required in the MPNZA Painters hazard handbook. Supply protective clothing and equipment. Inform employees and others on site of the hazards and put into place procedures for dealing with emergencies. Obtain from Resene Construction Systems the Material Safety Data Sheets for each product. Keep sheets on site and comply with the required safety procedures. Confirmation at the start of the project as to whether a Site Specific Safety Plan is to be produced by the Registered Plasterer prior to works starting.

Warranty

Warrant this system under normal environmental and use conditions against failure. Resene Construction Systems system warranty.
Materials: by Resene Construction Systems - 15 Years Materials only
Execution: by Registered Plasterer - 5 Years Workmanship only

OnSite Assistance

Allow to inspect the whole of the work at each stage. Determine a programme for onsite assistance including notification when each part and stage of the work is ready for inspection prior to the work commencing. Permit representatives of Resene Construction Systems to inspect the work in progress and to take samples of their products from site if requested.

Components Used

MultiStop Bedding Compound

- Polymer-modified, cement based dry plaster mix. Supplied in 15kg bags.

TecStop Render

- Polymer-modified cement-based dry plaster mix. Supplied in 18 kg bags

RMaxx Render

RCS RMaxx - is a high-yielding, cement-free dispersion based basecoat mortar. Thanks to its high elasticity, it can prevent the formation of cracks and is thus also ideal for use as renovation filler.

Mesh - Blue (1200mm wide)

- Alkali Resistant 6mm x 5mm Weave mesh supplied in 50m rolls

Rockcote RenderPrime

- Water based acrylic polymer dispersion. Supplied in 15 litre pails.

Classico Texture

- 100% acrylic, high-build texture coating. Supplied in 15 Litre pails

Resene X200

- Acrylic reinforced waterproof membrane. Supplied in 4 and 10 litre pails. Tinted to the selected colour

Soudal Gorilla MS Sealant White

Gorilla MS is a high performance MS sealant, which is UV-resistant, waterproof, paintable*, solvent-free and with superior flexibility.

Ideal for the sealing of expansion and connection joints with a wide range of movement. Suitable for a wide range of substrates including blockwork, brickwork, granite, marble, timber, coated and uncoated aluminum.

Supplied in 420gm cartridges

Features and Benefits:

- Non slump
- The whitest of whites
- 900% elongation of break
- High performance MS
- BRANZ Appraised
- Works on damp surfaces
- Paintable 1 hour after application
- UV resistant
- AsureQuality tested
- Easily repairable
- Interior & exterior
- Solvent-free

Installation/Application

Check and Prepare ICF Substrates

Preparation based on new substrate installations.

Preliminary Checks

It is the builder's responsibility to ensure the ICF structure is set out true in the correct alignment, as required by the Designer. Before Rendering, check that timber blocking is provided to support any external fittings where required, e.g., around all openings, at soffits, at joints, and at internal corners.

A straight edge should be used to check that the wall is flat. Any irregularities should be removed by straightening with a rasp.

Wall Alignment

Using a straight edge, check joints are smooth and that the wall is flat and true. Builder to re-align ICF if incorrect. If straightening is completed using Render additional costs may be incurred.

Liquid membrane flashings to openings

A liquid membrane should be installed around the perimeter of the window prior to the windows being installed. Refer to E2/AS3 for compatible products. RCS Hydroplast is a suitable product to be used.

Builder Supplied Flashings

Make sure all builder-supplied flashings are in place. The architectural drawings provide a list of possible flashings.

RCS Flashing Installation

Refer to the flashings as outlined within the Resene Construction Systems Specification

Control/Expansion Joint Setouts

For more information about control joints refer to the technical note on the Resene Construction webpage at the following link <https://reseneconstruction.co.nz/control-joints/>

The main contractor/substrate installer is responsible for all control joints, which must comply with the substrate supplier's specifications.

Clean Surface

If the substrate has been left exposed to UV / sunlight for more than two weeks, dust and dirt may build up on the surface, the surface may also discolour (yellow) you must remove all surface dust, oxidation, and other contaminants to reveal fresh polystyrene. Use a rasp or a stiff broom to prepare the substrate.

Masking

Before applying the render, masking must be applied to all joinery, pipes, roofs, and all areas likely to be marked by the render. Use drop cloths and ground covers to keep the working areas clean.

Colour selection

For more information about light reflectance values refer to the technical note on the Resene Construction webpage at the following link <https://reseneconstruction.co.nz/light-reflectance-values/>

Penetrations

PVC sheathed electrical cables must be prevented from direct contact with the sheets. When cables must penetrate the sheets for exterior electrical connections, the cable must be directly supported by passing through an electrical conduit.

Rockcote MultiStop Bedding Notch/Key Coat

Surface Preparation

Ensure surface is clean, sound, dry and free from dust, dirt, grease, mould and lichen.

Application

Plaster to be applied with a notched tile trowel (3-5mm notch) across the entire surface of the substrate immediately prior to installation.

Apply plaster only when the temperature is between 5°C and 30°C and will be in that range for the 24 hours period following application

If you are using the notched key coat for adhering a substrate or moulding to a masonry surface ensure that in summer or hot dry conditions pre-wet the masonry substrate. Allow the wet sheen to dissipate. This will reduce the chance of delamination due to rapid suction from the dry/hot substrate.

Curing:

Protect newly applied plaster from rain and water run off for the first 24 hours.

Plaster Systems Tecstop Render

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

Limitations

Do not apply less than 3mm per coat. Requires over-coating with finishing textures. If you rasp the product making sure you broom the surface clean. If used in high traffic areas use a mesh coat over the top.

Do not apply less than 3mm per coat or more than 20mm in one coat. Painted surfaces should have

Technical Data

Mix ratio: 10kg plaster requires approx. 6L of water

Coverage: 5mm thick, Approx 2m²

Resene Construction Systems RMaxx - Base Coat

Surface Preparation

When using RMAXX make sure the substrate is clean, sound, dry and free from dust, dirt, grease, mould and lichen. If necessary, water blast, sand or rasp the surface accordingly. For reworking old facades, substrates should be clean, dry, stable and free from loose particles. Always remove any film-forming release agents. Brush down thoroughly or water blast (and leave to dry afterwards) previously rendered surfaces. Highly-absorbent substrates are to be primed with RCS RenderPrep primer. Check tensile bond strength of critical substrates.

Application

RMAXX is ready for use after stirring. Apply RMAXX with a stainless steel trowel to a thickness of about 2-3mm. Dilute with max. 1 % clean water, if necessary. The reinforcement mesh (5x5 mm mesh size) must be completely embedded in the basecoat mortar and fully covered by it. Do not apply when substrate or ambient temperatures are below + 5 °C or in excessive heat above + 30°C. For reworking old facades, it may be necessary to use a 2layer buildup with reinforcement mesh. Allow the RMAXX to dry between layers.

Curing

In normal conditions (+ 20°C / 65 % relative humidity) allow approx. 24-48 hours for drying subject to the application thickness. During the setting and drying process, water evaporates from the material which is why it is significantly influenced by the ambient temperatures. Lower temperatures and/or higher humidity may extend the drying time.

Application of Resene Umbrella additive to assist the improvement of dry times can be added to the RMAXX prior to application.

Application

Resene Construction Systems Mesh (Standard Weave)

General

Measured and cut slightly longer than the height/length of the area to be covered.

Application of Fibreglass Mesh

Apply the pre-measured mesh from the top of the wall.

Press the fibreglass mesh into the render mix with a steel trowel starting at the centre and working outwards towards the sides, so that it is completely embedded with the render mix forced right through the mesh holes.

Ensure there are no wrinkles or trapped bubbles in the mesh and that it is fully embedded just below the surface of the render.

Do not embed the leading edge of mesh as this locates your next mesh layer.

Mesh must not be exposed but retained as close to the surface as possible.

Overlap mesh 100 mm with the adjacent drop of mesh, and trowel to embed together.

Ensure the fibreglass mesh covers all exposed areas of the substrate, including any recesses around the exterior joinery and internal corners.

Fibreglass Mesh must be bought to the outside edge of all Flashings.

Apply 450 x 150 mm strips of fibreglass mesh 'butterflies' diagonally at every corner of openings for window and door joinery, meter boxes etc.

After the render mix has cured, trim off excess length accurately against the flashing edge.

Resene Construction Systems RMaxx - Level Coat

Surface Preparation

When using RMAXX make sure the substrate is clean, sound, dry and free from dust, dirt, grease, mould and lichen. If necessary, water blast, sand or rasp the surface accordingly. For reworking old facades, substrates should be clean, dry, stable and free from loose particles. Always remove any film-forming release agents. Brush down thoroughly or water blast (and leave to dry afterwards) previously rendered surfaces. Highly-absorbent substrates are to be primed with RCS RenderPrep primer. Check tensile bond strength of critical substrates.

Application

RMAXX is ready for use after stirring. Apply RMAXX with a stainless steel trowel to a thickness of about 1 mm over the existing mesh coat of RMAXX. Dilute with max. 1 % clean water, if necessary. Allow the RMAXX to dry between layers. Once dry (see "Curing") or hardened, a finishing render from the Resene Construction Systems suitable for RMAXX can be applied, e. g. Rockcote Classico.

Wait at least 24-48 hours before applying classico and subsequent paint coats.

Curing

In normal conditions (+ 20°C / 65 % relative humidity) allow approx. 24-48 hours for drying subject to the application thickness. During the setting and drying process, water evaporates from the material which is why it is significantly influenced by the ambient temperatures. Lower temperatures and/or higher humidity may extend the drying time.

Application of Resene Umbrella additive to assist the improvement of dry times can be added to the RMAXX prior to application.

Rockcote RenderPrime

Application

Apply to trowelled plasters once dry (Dependent on surface porosity, typically 4-6m² per litre). Apply one coat of Resene Renderprime over the plaster substrate by commercial grade knapsack sprayer, spray, long pile roller or brush and allow to dry. Evenly coat all surfaces to ensure uniform curing.

Rockcote Classico Texture Finish

Limitations

Check colour before use

Ensure same batch numbers are used on a single wall where possible

Should not be applied in temperatures below 5°C or above 35°C

Not suitable for areas of continual damp or areas submerged in water

Surface Preparation:

Ensure surface is clean, sound, dry and free from dust, dirt, grease, mould and lichen.

Application

Texture is applied not less than 1mm with a steel trowel to a flat finish then float using a circular action to an even texture over the following five minutes with a plastic float. Apply plaster only when the temperature is between 5°C and 30°C and will be in that range for the 24 hours period following application.

Coverage approximately 12m² per pail

Resene X200 Paint Finish (2 Coats)

Application

Use a 12-20mm synthetic fibre roller or texturing roller depending on surface. Apply two coats, First coat 2 sq. metres per litre, Second coat: 3.5 sq. metres per litre

Maintenance

Plan what maintenance you propose to undertake.

Take into consideration the type of work that is required, & the time of year you want to get it done. Most external maintenance is completed in the summer as this is generally the best weather for drying and for general outside work such as gardening. If you are planning on fixing brackets, security lights or any other fixture to the exterior make sure you have the skills & equipment to undertake the task.

If you are unsure call a specialist.

If it relates to a penetration through the exterior cladding call us direct on 0800 50 70 40 - a simple phone call could save you time & money later. Maintenance sounds difficult & costly - in fact, it can be quite the opposite.

It can become difficult & costly if it is never undertaken, by which time other issues may have arisen that could have been acted upon sooner through regular general maintenance.

There are virtually no "maintenance free" exterior claddings on the market, in fact, almost nothing is maintenance-free - many people tend to throw things away these days when they breakdown as it is cheaper than getting it fixed. This is not the case with your exterior cladding, you can't just throw it away, it is protecting your family & your belongings. It is quite interesting to note that most people maintain their garden, & vehicle so they look good. Yet when it comes to cleaning the exterior windows, & walls or clearing leaves from a blocked gutter it seems to get left alone as it is perceived to be "difficult" or there are better things to do, maybe the dirt & leaves will simply disappear one day. This generally isn't the case & regular maintenance is required.

One of your major life investments is property so why not look after it? General Maintenance is a requirement of the Resene Construction Systems Performance Guarantee.

Extent of Maintenance

The extent and nature of necessary maintenance is dependent on the

- Type of cladding or components used
- Position of cladding or components on the building
- Geographical Location of the building
- Specific site conditions.
- Areas that are considered non-maintainable
- Heavily textured areas

Wash Exterior Surfaces

You will need to clean down your Resene Construction Systems Plaster Finish every 12 -18 mths. Most airborne dirt particles accumulate on exterior surfaces during the summer months. So before the winter rain washes the dirt down over the walls, give these areas a clean, this will dramatically reduce the chances of your Resene Construction Systems Plaster Finish being stained.

Washing by rain removes most atmospheric contaminants, but sheltered areas, such as walls directly below eaves, are protected from the direct effects of rain and require regular manual washing. This work should be completed using a low-pressure water blaster (300 psi or less), keep the blaster at a 45-degree angle and 300mm away from the cladding when cleaning. For best results use "Resene Roof wash and paint cleaner". Apply the diluted solution with a soft broom, & wash off with copious amounts of freshwater. Most detergents have a detrimental effect on fish life so avoid letting the washings runoff into the stormwater system. DO NOT use harsh solvent-based cleaners.

However, it is important that high-pressure water is not directed at sensitive junctions such as window surrounds and other flashings. Great care must be taken to avoid water being driven past anti-capillary gaps and flashings into the wall cavities.

Roof Junctions and Spouting

When cleaning, check your spouting to make sure there are no leaves that could block drains, or overflows when it rains. Trim back branches and clear gutters at the same time. Consider fitting gutter guards (however, dirt can still get through, so you do need to check under the gutter guards from time to time). Check apron flashing diverters (kick-outs) to make sure these are diverting water away from the cladding.

Deck and Ground Clearances

Exterior claddings require a minimum ground clearance to ensure no moisture gets to the timber of the wall due to capillary action. Ground clearances between the cladding and ground/deck must be maintained. For more information on required Ground Clearances refer the NZBC..

If your lawn adjoins the house, a 150-225mm wide mowing strip along the edge will stop grass and weeds growing in these difficult-to-mow areas - and keep the area drier. A mowing strip will also prevent damage to the house from hitting the cladding with the mower. You can also use concrete, bricks, pavers or treated timber for a mowing strip, laid on a concrete base or on polythene but make sure there is at least 100mm gap between the pavers and the base of the cladding.

Check Sealants

Check for cracked, missing or loose sealant. You will find sealants have been used around windows, doors, electrical fittings, plumbing fittings and along the soffit line. All deteriorated sealants should be removed and resealed

Check hidden areas

Check behind foliage, under decks and areas that are heavily shaded for signs of algae and mould. If possible increase the circulation of air around these points by pruning foilage. The use of mulch, bark or stones in these areas will also lower the risk of algae appearing on the surface of the coatings.

Damaged Areas

Contact your Registered Plasterer they will provide the necessary expertise to remedy the damage. If you are unable to contact a registered Resene Construction Systems Plasterer call Resene Construction Systems - FreePhone 0800 50 70 40 -we will arrange for an inspection & provide an assessment for the repair the exterior cladding.

Non-Maintainable Areas

Parapets are considered non-maintainable areas. They are in such a location as the degree of difficulty to maintain these areas according to the general maintenance requirements of the building code without risk to your health and safety is considered high. If you have areas that are non-maintainable we would require that these are checked every 6 months. Any non-maintainable areas will also need to be repainted/coated every 2-3 years.

Repainting a Dwelling

Repainting the exterior should be undertaken by a professional painter every 7 - 10 years to ensure the integrity of the entire system is kept good. If you select a colour which has an LRV less than 25% you can expect to repaint every 7 years. It is recommended that when you repaint your dwelling that you consider the use of Resene X200 as your choice of paint.

Maintainable Parapet Areas utilising Liquid Membranes

If you have areas that have maintainable liquid membrane eg. large sloping sills, balustrades, chimney breasts we would require that these are checked every 12 months. Any maintainable areas will also need to be repainted/coated every 3-5 years.

Important:

This specification must be read in conjunction with the Resene Construction Systems technical drawings.

No alteration to the Resene Construction Systems RenderSpec® is permitted.

All Technical Data Sheets are available at <https://reseneconstruction.co.nz/technical-library/technical-data-sheets/>

All Safety Data Sheets are available at <https://reseneconstruction.co.nz/technical-library/safety-data-sheets/>