

# RMaxx Render System - Repair to minor cracking of surface - Acrylic RenderSpec

## General

## Building Code Compliance

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

### 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](http://reseneconstruction.co.nz)

Telephone: [0800 50 70 40](tel:0800507040)

## 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

### Acrylbond Resin

- Multi-purpose Resin supplied in 5kg and 20kg containers

### MultiStop Bedding Compound

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

### 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 Existing Plaster

#### 2.16.1 General

Prior to undertaking any repairs information supplied may not reveal and detail all defects or pertinent information related to the condition of this building. Such information may be reliant on a full independent inspection report. Cracks will form in concrete, plasters and other cementitious surfaces as they cure and as a result of excessive movement, such as the building settling / structural movement or an earthquake.

The repairs below outline what you can do to repair each instance where the cracking is isolated. Where there is wide spread cracking of any of the following cracks then generally a full mesh system over the system will be sufficient, however you will want to investigate the substrate /structure further and further remedial work may be required.

#### 2.16.2 Capillary Cracks

Their occurrence is not at all unusual and dealing with them is relatively straightforward. Concrete and plaster 'cure' as water used in the 'wet' mixture dries out, inevitably resulting in small surface or capillary cracks forming. They are easily covered by a paint system such as X200.

#### 2.16.3 Minor Hairline (less than 1mm)

Hairline cracks are bigger or wider than capillary cracks, usually up to 1mm across. This is significant when you consider a layer of Resene Lumbersider is applied at only .035mm or in other words it would take 35 coats of Resene Lumbersider to achieve a paint film that was 1mm high. Hairline cracking often occurs as the cementitious surface (usually plaster or render) cures, especially if it is hot or dry, as water in the concrete mixture evaporates quicker than it would normally. Resene X-200 is ideal for brushing into hairline cracks with three coats easily filling a 1 mm crack. Alternatively, Resene Brushable Crack Filler may be used. Once the repairs have been completed you will need to coat the wall using 2 Coats of Resene X200.

#### 2.16.4 Cracking (1-2mm)

Cracks larger than 1mm will need to have a plaster bandage applied over them prior to retexturing the wall surface. Where there are a number of cracks (regardless of size) to the wall surface then it is generally recommended that replastering and remeshing is undertaken.

#### 2.16.5 Structural Cracking (Greater than 2mm)

Where cracking is greater than 2mm in width then the crack must be ground out, making sure to taper an area away from both sides of the crack. Apply Rockcote MultiStop (Refer to TradeSpec Document 4.8) and embed a strip of mesh no less than 75mm wide over the crack forming a bandage. You will then need to re-texture the entire wall with a mineral or acrylic based texture making sure that one coat of Limelock has been used as well as 2 coats of Resene X200.

#### 2.16.6 Control Joint

A controlled Structural Crack is generally installed where there is a lack of a control joint (please refer to TradeSpec Document 1.2 - Design Construction for more information about Control Joints). A structural control joint is created in an existing plaster surface using an Electric Grinder or hand tools and should cut through the plaster and substrate. A control joint should be between 6-12mm. Once formed a PEF Rod should be inserted into the control joint to form a good seal and then a MS Sealant is used to seal the newly formed control joint. In most cases a Control Joint will generally require taping either side of joint and repainting of the joint only.

### **2.16.7 Re-mesh Walls**

Where extensive cracking or delamination has occurred over a wall then it you will need to replaster and embed mesh to the entire wall surface. First you should determine what has caused the cracking to the wall. Prior to undertaking any work that requires remeshing a wall make sure an independent report has been furnished to you that identifies the cause of the problems on the wall. You will need to make sure that other third parties complete any targeted repairs to other building components prior to you starting your plastering.

#### **Delamination**

Where delamination has occurred make sure that you remove all loose material, you will then need to provide a key for the new plaster to adhere to this would be a slurry of acrylbond and MultiStop (Refer to TradeSpec Document 4.7 for more information on forming a key coat).

#### **Multiple Cracks**

Where multiple cracks have occurred there will be a high probability that there is a need for a Control Joint to be formed. Follow the guidelines set out earlier in this TradeSpec to determine how to repair the multiple cracks.

Once you have remedied the cracks you will need to re-render and mesh the entire wall surface, make sure that you have applied a mixture of Acrylbond, Water and MultiStop to form a key before applying any renders (Refer to TradeSpec Document 4.7 for more information on forming a key coat). You will then need to retexture the entire wall with a mineral or acrylic based texture followed by 2 coats of X200.

### **2.16.8.Colour selection**

For further information on Light Reflectance Values (LRV) refer to TradeSpec™ Document 1.6 - Light Reflectance Values

## **Resin/MultiStop Slurry Coat**

### **Surface Preparation**

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

### **Application**

Mix a solution of Acrylbond and Rockcote MultiStop together and apply using a roller or brush. A high solids roller can also be used to ensure the solution is evenly distributed across the wall surface.

For pourous substrates (eg. brick, concrete) mix a 50:50 4L mix of Acrylbond/water and a 1 kg of MultiStop/AAC Adhesive/Hydroplast to the mix.

For other surfaces (including painted) ensure a 4 Litre of Acrylbond is mixed directly with 1 kg of MultiStop/AAC Adhesive/Hydroplast.

If you are unsure of the surface you are applying the slurry to, apply to a small section of wall and test for adhesion.

## **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 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 12m<sup>2</sup> 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 foliage. 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/>*