# 4272S SUMNER™ SCHIST

## 1. GENERAL

 This section relates to SUMNER™ Schist veneer and stone as a facade cladding attached to and laterally supported by a structural wall. Sumner Schist has been issued a Codemark™ Certificate of Conformity.

 **Documents**

### 1.1 DOCUMENTS REFERRED TO

 Documents referred to in this section are:

 [NZBC B1](http://www.masterspec.co.nz/redirect.aspx?pl=222)/AS1 Structure general, 2.0 Masonry

 [NZBC E2](http://www.masterspec.co.nz/redirect.aspx?pl=347)/AS1 External Moisture

 [AS/NZS 2908.2](http://www.masterspec.co.nz/redirect.aspx?pl=1059) Cellulose-cement products - Flat sheet

 [NZS 3604](http://www.masterspec.co.nz/redirect.aspx?pl=301) Timber-framed buildings

 [NZS 4210](http://www.masterspec.co.nz/redirect.aspx?pl=314) Masonry construction, materials and workmanship

### 1.2 MANUFACTURER'S DOCUMENTS

 SUMNER™ and other manufacturer's and supplier's documents relating to work in this section are:

 SUMNER™ Cladding System Technical Manual

 BEAL Appraisal Certificate No. C1108 SUMNER Natural Stone Veneer Cladding System

 Codemark Certificate of Conformity No. BCS-141814-CMMNZ

 Copies of the above literature are available at:

 Web: [www.sumnerschist.co.nz](http://www.sumnerschist.co.nz)

 Email: james@sumnerschist.co.nz

 Telephone: 09 579 3326

 Facsimile: 09-579 7308

 **Warranties**

### 1.3 WARRANTY - MANUFACTURER/SUPPLIER

 Provide a material manufacturer/supplier warranty:

 15 years For material components of SUMNER™ Cladding System

 - Provide this warranty on the manufacturer/supplier standard form.

 - Commence the warranty from the date of practical completion of the contract works.

 Refer to the general section 1237 WARRANTIES for additional requirements.

### 1.4 WARRANTY - INSTALLER

 Provide an installer warranty:

 15 years For installation and weather tightness

 - Provide this warranty on the installer standard form.

 - Commence the warranty from the date of practical completion of the contract works.

 Refer to the general section 1237 WARRANTIES for additional requirements.

 **Requirements**

### 1.5 QUALIFICATIONS

 Installers to be experienced in the installation of SUMNER™ Cladding Systems and licensed by SUMNER™. If requested provide evidence of qualification / experience prior to commencing work.

### 1.6 NO SUBSTITUTIONS

 Substitutions are not permitted to any specified system, or associated components and products.

### 1.7 SAMPLES

 Refer to the general section 1270 CONSTRUCTION for details of how samples will be reviewed.

 Provide the following samples for review by the Contract Administrator:

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 **Compliance information (Additional options available)**

### 1.8 INFORMATION REQUIRED FOR CODE COMPLIANCE

 Provide the following compliance documentation: -

 - Manufacturer's, importer's or distributors warranty

 - Installer's warranty

 - Producer Statement - Construction from the installer

 - Producer Statement - Construction Review from an acceptable suitably qualified person

 - Other information required by the BCA in the Building Consent Approval documents.

 **Performance - Wind (design by contractor)**

### 1.9 DESIGN PARAMETERS WIND - DESIGN BY CONTRACTOR

 Design the installation to the manufacturer's requirements and as appropriate for the project wind design stated in the general section 1220 PROJECT.

### 1.10 MAXIMUM HEIGHT

 SUMNER™ Schist may be used under general conditions to maximum height of 3 stories, and on chimneys to a maximum height of 10.0m.

## 2. PRODUCTS

 **SUMNER™ Cavity System Materials**

### 2.1 SUMNER™ CAVITY BATTENS

 45mm x 18mm thick SUMNER™ vertical and horizontal cavity battens manufactured from ABS. Batten lengths; horizontal 1.00m, vertical 2.00m.

### 2.2 SUMNER™ BOARD

 9mm thick SUMNER™ high density fibre cement sheet to [AS/NZS 2908.2](http://www.masterspec.co.nz/redirect.aspx?pl=1059).

 Sheet size 2400mm x 1200mm.

### 2.3 FASTENERS - TIMBER FRAME

 10g x 60mm stainless steel 316 CSK square drive screws.

### 2.4 FASTENERS - METAL FRAME

 10g x 60mm stainless steel 410 CSK philips self drill screws.

### 2.5 FASTENERS - MASONRY BACKING

 65mm SUMNER™ HPS M6 anchors.

### 2.6 SUMNER™ PRIME

 Designed for site preparation of substrates that are to receive stone adhesive.

### 2.7 SUMNER™ BOARD TAPE

 SUMNER™ Flexible Flashing Tape.

### 2.8 FACADE PANEL FIXING BRACKETS

 SUMNER™ stainless steel fixing brackets, fixed with 32mm stainless steel screws.

### 2.9 SUMNER™ GRIP ADHESIVE

 Two part adhesive specifically designed for heavy weight veneer classification.

 **SUMNER™ Stone Materials**

### 2.10 SUMNER™ SCHIST PANELS

 SUMNER™ Schist non-load bearing masonry panels. Refer to SELECTIONS for type and size.

### 2.11 SUMNER™ CLADDING STONES

 Loose stone supplied by SUMNER™. Refer to SELECTIONS for type and size.

### 2.12 SOLID L CORNERS

 SUMNER™ formed L shaped corners to give a continued effect on corners and columns.

### 2.13 NATURAL ENDS

 SUMNER™ panels extending past the end of the column to overlap panel on the return face, to give a continued effect on corners and columns.

### 2.14 CAPPINGS

 SUMNER™ capping stones and sills. Refer to SELECTIONS for type and size.

### 2.15 L ANGLE TRIMS

 SUMNER™ L angle trims for windows and doors and other but-to details.

## 3. EXECUTION

 **Conditions**

### 3.1 HANDLING AND STORAGE OF MATERIALS

 Store all stone and adhesives indoors and elevated off concrete floors.

### 3.2 PRE-INSTALLATION REQUIREMENTS

 Check work previously carried out and confirm it is of the required standard for this part of the work.

 Moisture content: 18% maximum

### 3.3 TOLERANCES

 To [NZS 4210](http://www.masterspec.co.nz/redirect.aspx?pl=314), table 2.2 Maximum tolerances.

### 3.4 MEASURE MATERIALS

 Measure materials accurately by weight or volume using suitably calibrated equipment.

### 3.5 WET WEATHER

 Keep stone dry at all times prior to laying. Protect the top row of uncompleted stone walls. Protect freshly laid stonework during interruption through rain and at completion of each day's work.

### 3.6 COLD WEATHER CONSTRUCTION

 When air temperature is below 10°C take the precautions required by [NZS 4210](http://www.masterspec.co.nz/redirect.aspx?pl=314): 2.18 Cold weather construction.

### 3.7 HOT WEATHER CONSTRUCTION

 When air temperature is above 32°C, or there is a drying wind and lower temperatures, take the precautions required by [NZS 4210](http://www.masterspec.co.nz/redirect.aspx?pl=314): 2.19 Hot weather construction.

### 3.8 KEEP FACE WORK CLEAN

 Keep clean during erection and until completion of the contract works. Turn back scaffold boards at night and during heavy rain. Do not rub face work to remove stains.

 **Application - generally**

### 3.9 INSTALLATION MANUAL

 Carry out all work in accordance with SUMNER™ Technical and Installation Manual.

### 3.10 COLOUR MIXING

 Check all stone panels delivered to site for colour variation, prior to commencing work. Ensure stone panels are thoroughly blended from several pallets to ensure an even colour spread throughout the work.

### 3.11 UNIFORMITY

 Carry up work with no portion more than 1500 mm above another at any time.

### 3.12 BONDING

 Lay stone panels to the required bonding. Refer to SELECTIONS for type.

 **Surface preparation**

### 3.13 SURFACE PREPARATION - SUMNER™ BOARD

 The SUMNER™ Board should be dry and free of all dust, paint or other surface contaminants before the commencement of the Schist stone installation.

 **Installation**

### 3.14 INSTALL SUMNER™ BATTENS TO SUBSTRATE

 Fix SUMNER™ battens to substrate to [NZBC E2](http://www.masterspec.co.nz/redirect.aspx?pl=347)/AS1: 9.0 Wall claddings, and in accordance with the SUMNER™ Technical and Installation Manual, vertically at 600mm centres, horizontally across top and bottom plates, with 75mm x 3.14 galvanized flat head nails over the wall wrap and flashings.

 Ensure that the substrate is suitable for the veneer application, has been installed to the SUMNER™ requirements, and to [NZBC B1](http://www.masterspec.co.nz/redirect.aspx?pl=222)/AS1.

### 3.15 INSTALL SUMNER™ BOARD

 Fix SUMNER™ board over battens in accordance with the SUMNER™ Technical and Installation Manual, minimum clearance 100mm above exterior paving.

### 3.16 PRIME AND TAPE

 Brush apply SUMNER™ Prime to all surfaces that are to receive stone adhesive. Ensure bottom edge of SUMNER™ Board is primed. Apply SUMNER™ Tape to all sheet joints, corners and details in accordance in accordance with the SUMNER™ Technical and Installation Manual. Tape vertical and inter-storey junctions.

### 3.17 FORM TEMPORARY FOOTING

 Form a level temporary timber framed footing fixed to the concrete foundation for the first course to start on.

### 3.18 INSTALL SUMNER™ PANELS - FIRST COURSE

 Mix SUMNER™ GRIP strictly in accordance with the SUMNER™ Technical and Installation Manual. Starting from an external corner, apply the adhesive to the wall, 1 course high, with a 10mm notched trowel. Butter a thin coat of adhesive to the backside of a short natural end panel. Press the panel into the adhesive on the wall, leaving the panel overhanging the corner by the thickness of the stone. Continue this process along the wall, using the standard SUMNER™ panels, hard butting the panels together (no grout between the joints). For the return wall, butt a standard SUMNER™ panel into the back of the overhanging natural end.

 It is important to note that the corner should alternate on every course to avoid seeming.

### 3.19 INSTALL SUMNER™ PANELS - SECOND AND SUBSEQUENT COURSES

 Using screws fix the SUMNER™ facade panel fixing bracket so that it sits hard on top of the 1st course.

 Install the fixings at 600mm centres horizontally and vertically using a 32mm screw;

 Horizontally - fix 1 SUMNER™ fixing to every stud.

 Vertically - set out a vertical chalk line and fix 1 SUMNER™ fixing at 600mm vertically.

 Continue laying the courses, staggering the joints from that of the previous course.

 On the bottom edge of the panels (to be laid), where the SUMNER™ facade panel fixing bracket will be located, use the angle grinder to check out a seat to the SUMNER™ fixing, so as the panels can hard butt with the 1st course.

### 3.20 FORM INTERNAL CORNER

 To form a clean joint in the internal corner, cut a 45 degree mitre on the standard panel and return.

### 3.21 FORM EXTERNAL CORNERS - SOLID L CORNERS

 Lay preformed L shaped stones. Cladding is in modular predefined lengths. Check dimensions before starting work to ensure the corners will work.

### 3.22 FORM EXTERNAL CORNERS - OVERLAP NATURAL ENDS

 Use pre-selected panels with minimal face variation and butt them hard into the short natural ends, which extend past the end of the corner. Alternate courses. Use a string line or similar to ensure that the exposed edge of the corner is flush and plumb and that none of the panels sit back too far.

 **Flush mounted windows and doors**

### 3.23 FORM FLUSH MOUNTED WINDOW AND DOOR JAMBS

 Create staggered jointing to window and door jambs by alternating natural short and long end panels on each course. Lay as a standard panel, butting the natural end of the panel up to the edge of the joinery.

### 3.24 FORM FLUSH MOUNTED WINDOW AND DOOR HEADS

 Screw a SUMNER™ facade panel fixing bracket above the window and door head flashing allowing 5mm for drainage (from the cavity), to sit in the centre of where a standard panel will be located.

### 3.25 FORM FLUSH MOUNTED WINDOW SILLS

 Cut a 15° mitre to the top of a standard panel; adhere to the backing, leaving a 55mm space below the bottom of the joinery. Cut a 15° mitre to the back edge of the capping stone, adhere stone to backing. The top edge of the stone should sit 2mm - 3mm below the edge of the joinery. Do not obstruct joinery weep holes.

 **Deep reveal windows and doors**

### 3.26 FORM DEEP REVEAL WINDOW AND DOOR JAMBS

 Set the windows with the edge of the joinery having a 40mm clearance from the internal corner of the masonry reveal. Treat the corner of the reveal the same as an external corner. Butt the edge of the panel into the internal corner of the reveal.

### 3.27 FORM DEEP REVEAL WINDOW AND DOOR HEADERS

 Screw a SUMNER™ facade panel fixing bracket to the edge of the masonry reveal in the centre of where a standard panel will be located. Adhere standard panels.

### 3.28 FORM DEEP REVEAL WINDOW SILLS

 Form a plastered bevel to allow the sill to be laid at 15°. Allow to dry for 24 hours. Cut a 15° mitre to the top edge of the standard panel and finish at the edge of the sill reveal. Cut a 15° mitre to the back edge of the SUMNER™ capping stone, coat cut face and plastered sill with adhesive and adhere the capping to the sill as per panels.

 Set the height of the joinery including the 50mm thick capping stone, not to obstruct the joinery weep holes. Height will depend on the depth of the reveal, giving allowance for the 15° bevel.

 **Stone columns**

### 3.29 FORM EXTERNAL SOLID-L CORNERS

 Lay preformed L shaped stones. Cladding is in modular predefined lengths. Check column dimensions before starting work to ensure the corners will work.

### 3.30 FORM EXTERNAL CORNERS - OVERLAP NATURAL ENDS

 Use pre-selected panels with minimal face variation and butt them hard into the short natural ends, which extend past the end of the column. Alternate courses. Use a string line or similar to ensure that the exposed edge of the corner is flush and plumb and that none of the panels sit back too far.

 **Completion**

### 3.31 PROGRESSIVE CLEANING

 Clean off all contaminants from the face work immediately after they occur.

### 3.32 LEAVE

 Leave work to the standard required by following procedures.

### 3.33 REMOVE

 Carefully remove all masking tape from joinery and the temporary timber footing from the foundation. Place in main rubbish disposal area on site.

## 4. SELECTIONS

### 4.1 SUMNER™ CAVITY BATTENS

 Brand: SUMNER™

 Size: horizontal: 18mm x 1.0m

 vertical: 18mm x 2.0m

### 4.2 SUMNER™ BOARD

 Brand: SUMNER™

 Type: Fibre cement sheet

 Size: 2400mm x 1200mm x 9mm

 Fixing Method: ~

### 4.3 SUMNER™ PRIME

 Brand: SUMNER™ Prime

### 4.4 SUMNER™ BOARD TAPE

 Brand: SUMNER™ Flexible Flashing Tape

### 4.5 SUMNER™ FACADE PANEL FIXING BRACKETS

 Brand: SUMNER™

 Material: Stainless steel

### 4.6 SUMNER™ GRIP ADHESIVE

 Brand: SUMNER™ Grip

### 4.7 SUMNER™ LEDGE SERIES SCHIST PANELS

 Brand: SUMNER™

 Stone type: SUMNER™ ~

 Panel size: 152mm height x 610mm length x 30mm thick (75kg/m²)

 Corners: ~

 Bonding pattern: Stretcher bond

### 4.8 SUMNER™ TRADITIONAL SERIES SCHIST PANELS

 Brand: SUMNER™

 Stone type: SUMNER™ ~

 Panel size: 200mm height x 565mm length x 30mm thick (75kg/m²)

 Corners: ~

 Bonding pattern: Stretcher bond

### 4.9 SUMNER™ BLUESTONE SERIES LOOSE STONE

 Brand: SUMNER™

 Stone type: ~

 Stone thickness: 30mm - 50mm thick (91.9kg/m²)

 Corners: natural ends

 Bonding pattern: Stretcher bond

### 4.10 SUMNER™ OTAGO SERIES LOOSE STONE

 Brand: SUMNER™

 Stone type: ~

 Stone thickness: 35mm thick (89.9kg/m²)

 Corners: ~

 Bonding pattern: Stretcher bond

### 4.11 SUMNER™ SANDSTONE SERIES LOOSE STONE

 Brand: SUMNER™

 Stone type: ~

 Stone thickness: 15mm thick (50kg/m²)

 Corners: natural ends

 Bonding pattern: Stretcher bond

### 4.12 SUMNER™ SILLS AND CAPPINGS

 Brand: SUMNER™

 Stone type: ~

 Dimensions: ~mm height x ~mm length x ~mm thick

### 4.13 SUMNER™ L ANGLE TRIMS

 Brand: SUMNER™

 Stone type: ~

 Dimensions: ~mm height x ~mm length x ~mm thick

### 4.14 SUMNER™ STONE COLUMNS

 Brand: SUMNER™

 Stone type: ~

 Dimensions: ~mm height x ~mm length x ~mm thick

 Corners: ~