

# SCULPTURAL<sup>®</sup>



NEW DESIGNS

NOW AVAILABLE IN 16 DESIGNS



SEAMLESS SCULPTURAL WALL SURFACE DESIGNS

## INTRODUCTION

Armourcoat Sculptural® is a range of seamless sculptural wall surface designs.

Armourcoat Sculptural® walls are constructed from a series of pre-cast panels that are bonded to the substrate. The panel joints are then filled and sanded and a final decoration is applied to the surface. Armourcoat Sculptural® designs are created by combining computer-aided design with traditional hand sculpting to create designs that fit together with total accuracy yet retain the essence of being hand crafted.

Some of the designs are based on a single panel that creates a repeating pattern; others are made from a sequence of different panels that can be integrated together in many different ways to create totally unique sculpted walls. The multiple panel designs make it possible to create non-repetitive seamless sculptural walls where the designs flow and change across the surface just as in nature. As a consequence, no two walls need ever be identical.

Armourcoat Sculptural® panels are mineral based and incorporate up to 30% post-consumer recycled content (depending on design), are non-toxic, and are completely non-combustible. The panels are extremely dense and hard with a smooth ceramic-like surface. Once the panels are installed each design can be finished in a range of decorative surface finishes. Some of the designs have been modeled in such a way as to enable the application of Armourcoat polished plaster finishes whilst other designs are more suited to a sprayed finish.

The following pages illustrate the range of stunning designs available. A custom service is available from design to manufacture and installation, to produce bespoke one-off designs. For further information, please visit our website.

[sculptural.armourcoat.com](http://sculptural.armourcoat.com)

MONROE



SHOCK WAVE



RIBBONS



HOUR GLASS



FLOW STRAIGHT



FLOW WAVE



INKANA



CYPHER



BERGMAN



QUILT



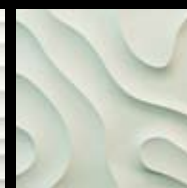
JET STREAM



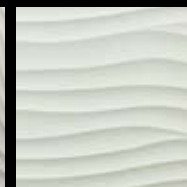
LEAVES



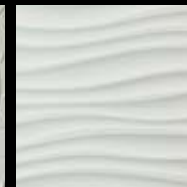
CORAL



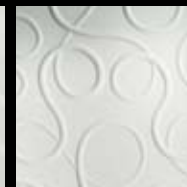
FLOW



AESIS



DOODLE



# DOODLE



SCULPTURAL DESIGN	PANEL DIMENSIONS (mm)	MAX PANEL DEPTH (mm)	WEIGHT (kg/m <sup>2</sup> )	NUMBER OF PANEL DESIGNS	PANEL ORIENTATION (Horizontal/Vertical)	FINISH: SPATULATA / ARMURALIA	SPRAY: PERLATA / PAINT	RECOMMENDED ORIENTATION (Horizontal/Vertical)	RECOMMENDED FINISH
Doodle	1200 x 800	14	14	3	H	No	Y	H	Paint

SCALE 1:10

# CYPHER



SCULPTURAL DESIGN	PANEL DIMENSIONS (mm)	MAX PANEL DEPTH (mm)	WEIGHT (kg/m <sup>2</sup> )	NUMBER OF PANEL DESIGNS	PANEL ORIENTATION (Horizontal/Vertical)	FINISH: SPATULATA / ARMURALIA	SPRAY: PERLATA / PAINT	RECOMMENDED ORIENTATION (Horizontal/Vertical)	RECOMMENDED FINISH
Cypher	1200 x 800	15	14	2	H/V	No	Y	H	Perlata/Paint

SCALE 1:10

# AESIS



SCULPTURAL DESIGN	PANEL DIMENSIONS (mm)	MAX PANEL DEPTH (mm)	WEIGHT (kg/m <sup>2</sup> )	NUMBER OF PANEL DESIGNS	PANEL ORIENTATION (Horizontal/Vertical)	FINISH: SPATULATA / ARMURALIA	SPRAY: PERLATA / PAINT	RECOMMENDED ORIENTATION (Horizontal/Vertical)	RECOMMENDED FINISH
Aesis	1200 x 800	18	16	2	H/V	Difficult	Y	H	Perlata/Paint

SCALE 1:10

# INKANA



SCALE 1:10

SCULPTURAL DESIGN	PANEL DIMENSIONS (mm)	MAX PANEL DEPTH (mm)	WEIGHT (kg/m <sup>2</sup> )	NUMBER OF PANEL DESIGNS	PANEL ORIENTATION (Horizontal/Vertical)	FINISH: SPATULATA / ARMURALIA	SPRAY: PERLATA/ PAINT	RECOMMENDED ORIENTATION (Horizontal/Vertical)	RECOMMENDED FINISH
Inkana	1200 x 800	13	14	3	H	No	Y	H	Paint

# FLOW



SCULPTURAL DESIGN	PANEL DIMENSIONS (mm)	MAX PANEL DEPTH (mm)	WEIGHT (kg/m <sup>2</sup> )	NUMBER OF PANEL DESIGNS	PANEL ORIENTATION (Horizontal/Vertical)	FINISH: SPATULATA / ARMURALIA	SPRAY: PERLATA/ PAINT	RECOMMENDED ORIENTATION (Horizontal/Vertical)	RECOMMENDED FINISH
Flow	1800 x 600	13	15	4	H / V	Yes	Yes	H	Spatulata

SCALE 1:10

# FLOW WAVE



SCALE 1:10

SCULPTURAL DESIGN	PANEL DIMENSIONS (mm)	MAX PANEL DEPTH (mm)	WEIGHT (kg/m <sup>2</sup> )	NUMBER OF PANEL DESIGNS	PANEL ORIENTATION (Horizontal/Vertical)	FINISH: SPATULATA / ARMURALIA	SPRAY: PERLATA / PAINT	RECOMMENDED ORIENTATION (Horizontal/Vertical)	RECOMMENDED FINISH
Flow Wave	1800 x 600	13	15	1	H	Yes	Yes	H	Spatulata / Perlata



# FLOW STRAIGHT



SCULPTURAL DESIGN	PANEL DIMENSIONS (mm)	MAX PANEL DEPTH (mm)	WEIGHT (kg/m <sup>2</sup> )	NUMBER OF PANEL DESIGNS	PANEL ORIENTATION (Horizontal/Vertical)	FINISH: SPATULATA / ARMURALLIA	SPRAY: PERLATA / PAINT	RECOMMENDED ORIENTATION (Horizontal/Vertical)	RECOMMENDED FINISH
Flow Straight	1800 x 600	13	15	1	H / V	Yes	Yes	H	Spatulata

SCALE 1:10

# CORAL



SCULPTURAL DESIGN	PANEL DIMENSIONS (mm)	MAX PANEL DEPTH (mm)	WEIGHT (kg/m <sup>2</sup> )	NUMBER OF PANEL DESIGNS	PANEL ORIENTATION (Horizontal/Vertical)	FINISH: SPATULATA / ARMURALIA	SPRAY: PERLATA / PAINT	RECOMMENDED ORIENTATION (Horizontal/Vertical)	RECOMMENDED FINISH
Coral	1200 x 800	22	16.5	3 / 4	H	No	Yes	H	Perlata / Paint

SCALE 1:10

# HOUR GLASS



SCULPTURAL DESIGN	PANEL DIMENSIONS (mm)	MAX PANEL DEPTH (mm)	WEIGHT (kg/m <sup>2</sup> )	NUMBER OF PANEL DESIGNS	PANEL ORIENTATION (Horizontal/Vertical)	FINISH: SPATULATA / ARMURALLIA	SPRAY: PERLATA / PAINT	RECOMMENDED ORIENTATION (Horizontal/Vertical)	RECOMMENDED FINISH
Hour Glass	1200 x 800	18	23	1	H / V	Difficult	Yes	H	Perlata / Paint

SCALE 1:10



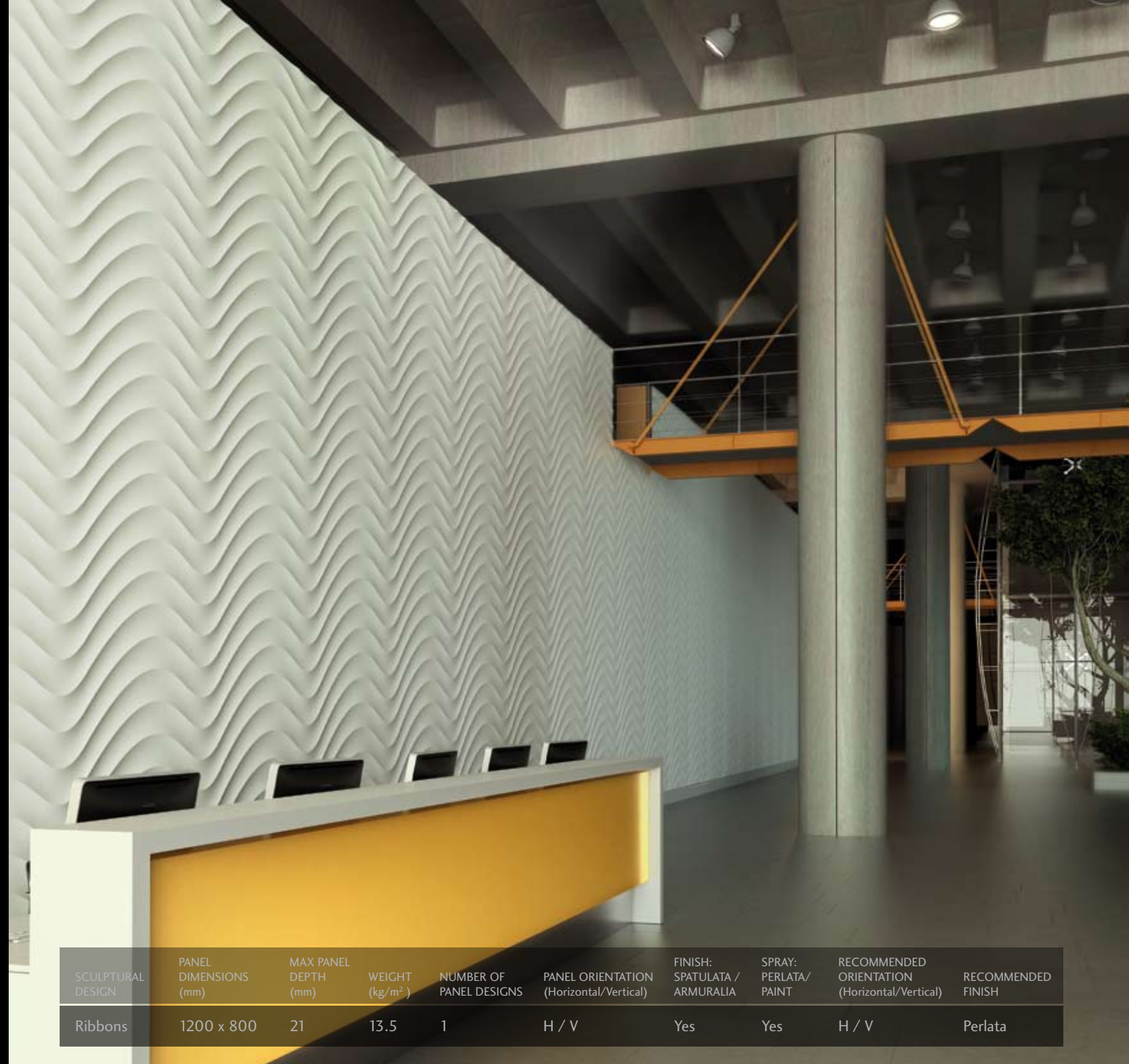
# LEAVES



SCULPTURAL DESIGN	PANEL DIMENSIONS (mm)	MAX PANEL DEPTH (mm)	WEIGHT (kg/m <sup>2</sup> )	NUMBER OF PANEL DESIGNS	PANEL ORIENTATION (Horizontal/Vertical)	FINISH: SPATULATA / ARMURALIA	SPRAY: PERLATA / PAINT	RECOMMENDED ORIENTATION (Horizontal/Vertical)	RECOMMENDED FINISH
Leaves	1200 x 800	18	15	2	H	No	Yes	H	Paint

SCALE 1:10

# RIBBONS



SCALE 1:10

SCULPTURAL DESIGN	PANEL DIMENSIONS (mm)	MAX PANEL DEPTH (mm)	WEIGHT (kg/m <sup>2</sup> )	NUMBER OF PANEL DESIGNS	PANEL ORIENTATION (Horizontal/Vertical)	FINISH: SPATULATA / ARMURALIA	SPRAY: PERLATA/ PAINT	RECOMMENDED ORIENTATION (Horizontal/Vertical)	RECOMMENDED FINISH
Ribbons	1200 x 800	21	13.5	1	H / V	Yes	Yes	H / V	Perlata

# JET STREAM



SCULPTURAL DESIGN	PANEL DIMENSIONS (mm)	MAX PANEL DEPTH (mm)	WEIGHT (kg/m <sup>2</sup> )	NUMBER OF PANEL DESIGNS	PANEL ORIENTATION (Horizontal/Vertical)	FINISH: SPATULATA / ARMURALIA	SPRAY: PERLATA / PAINT	RECOMMENDED ORIENTATION (Horizontal/Vertical)	RECOMMENDED FINISH
Jet Stream	1200 x 800	20	13.5	1	H / V	No	Yes	H	Perlata

SCALE 1:10

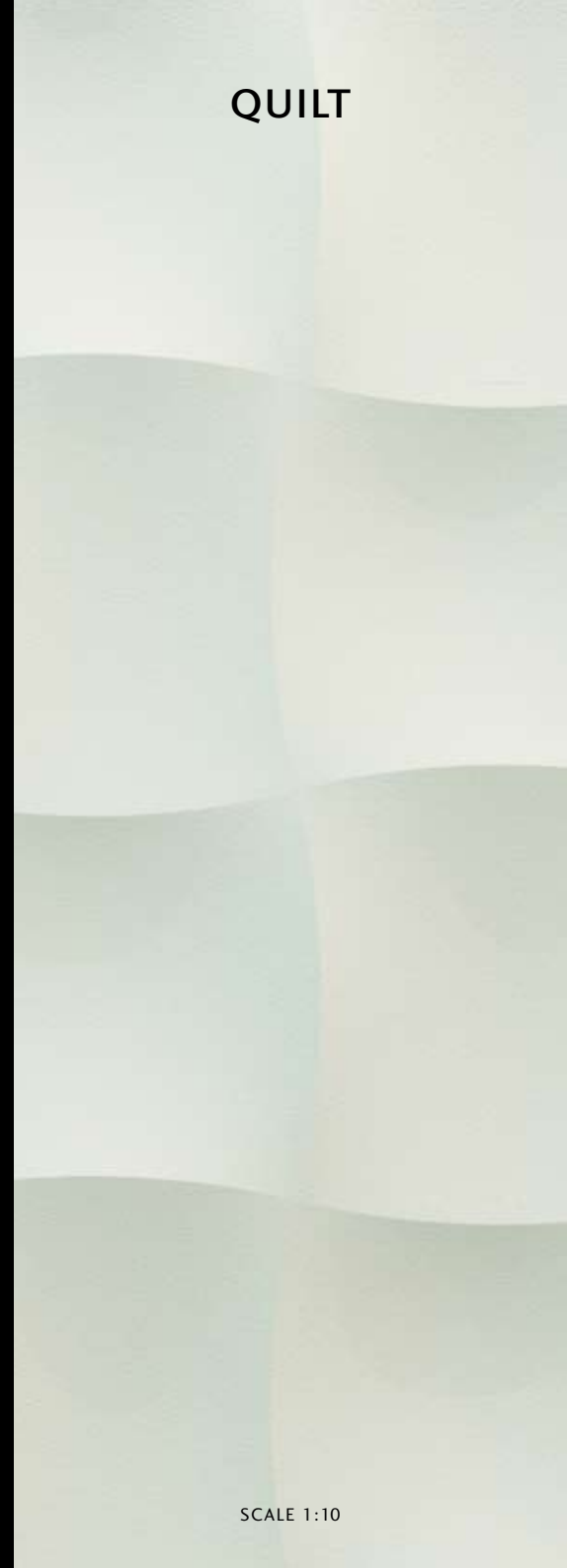
# SHOCKWAVE



SCALE 1:10

SCULPTURAL DESIGN	PANEL DIMENSIONS (mm)	MAX PANEL DEPTH (mm)	WEIGHT (kg/m <sup>2</sup> )	NUMBER OF PANEL DESIGNS	PANEL ORIENTATION (Horizontal/Vertical)	FINISH: SPATULATA / ARMURALIA	SPRAY: PERLATA/ PAINT	RECOMMENDED ORIENTATION (Horizontal/Vertical)	RECOMMENDED FINISH
Shock Wave	1200 x 800	15	14	1	H / V	Yes	Yes	H / V	Spatulata

# QUILT



SCULPTURAL DESIGN	PANEL DIMENSIONS (mm)	MAX PANEL DEPTH (mm)	WEIGHT (kg/m <sup>2</sup> )	NUMBER OF PANEL DESIGNS	PANEL ORIENTATION (Horizontal/Vertical)	FINISH: SPATULATA / ARMURALIA	SPRAY: PERLATA / PAINT	RECOMMENDED ORIENTATION (Horizontal/Vertical)	RECOMMENDED FINISH
Quilt	1200 x 800	30	20	1	H	Yes	Yes	H	Spatulata

SCALE 1:10

# MONROE



SCULPTURAL DESIGN	PANEL DIMENSIONS (mm)	MAX PANEL DEPTH (mm)	WEIGHT (kg/m <sup>2</sup> )	NUMBER OF PANEL DESIGNS	PANEL ORIENTATION (Horizontal/Vertical)	FINISH: SPATULATA / ARMURALLIA	SPRAY: PERLATA / PAINT	RECOMMENDED ORIENTATION (Horizontal/Vertical)	RECOMMENDED FINISH
Monroe	1200 x 800	20	14	1	V / H	No	Yes	V / H	Perlata

SCALE 1:10

# BERGMAN



SCULPTURAL DESIGN	PANEL DIMENSIONS (mm)	MAX PANEL DEPTH (mm)	WEIGHT (kg/m <sup>2</sup> )	NUMBER OF PANEL DESIGNS	PANEL ORIENTATION (Horizontal/Vertical)	FINISH: SPATULATA / ARMURALIA	SPRAY: PERLATA / PAINT	RECOMMENDED ORIENTATION (Horizontal/Vertical)	RECOMMENDED FINISH
Bergman	1200 x 800	20	15	1	H	No	Yes	H	Perlata / Paint

SCALE 1:10

### Material composition

Armourcoat Sculptural® wall panels are made from a high strength fibre reinforced gypsum plaster combined with an inert mineral filler. The filler, a post-consumer recycled material, constitutes up to 30% (depending on design) of the panel's composition. The panels are non-toxic, and contain no VOCs or formaldehyde.

### Panel dimensions and weight

The panel dimensions vary depending upon the design but most designs are either 1800mm x 600mm or 1200mm x 800mm. The overall thickness of the panels may vary from 14mm – 25mm depending upon the depth of the sculpting to the surface. The panels vary in weight depending upon the actual design and the weight of the panels will vary from 14 – 20kg /m<sup>2</sup>.

### Fire resistance

Armourcoat Sculptural® panels are entirely non-combustible and rated as Class 'O' for flame and smoke development when tested to BS476 part 6 & 7.

### Installation

Armourcoat Sculptural® walls must be installed by trained and accredited Armourcoat agents. Armourcoat has a network of agents working around the world. For locations where there is no local agent, we can provide specialist trainers to work with local contractors to install Armourcoat Sculptural® walls.

### Suitable substrates

Armourcoat Sculptural® panels are non-combustible, however the substrate to which the panels are to be applied must be constructed in accordance with the minimum fire ratings that are required for the project.

In order to achieve an accurate installation that will not crack over time it is necessary to have a substrate that can be screwed or fixed directly into, but that is inherently stable and unaffected by changes in temperature or humidity. We recommend that the substrate is constructed from one layer of 12mm plywood followed by a layer of 12.5mm foil backed plasterboard. The foil backed plasterboard ensures that the

moisture for the bonding adhesive does not permeate into the plywood and cause it to expand or move. If foil backed plasterboard is unavailable, apply an oil based primer to the plywood at least 24 hours prior to fixing the plasterboard.

Other suitable substrates include two layers of Hardie Villaboard, Blueclad board, or one layer of Versapanel by Euroform followed by one layer of plasterboard.

Armourcoat Sculptural® panels can be installed onto a double layer of plasterboard but it is necessary to insert self tapping aluminum drywall plugs into the wall for each and every screw. This process is time consuming and as a result the installation time and cost will be higher.

For full details on substrate specification please refer to Product Data Sheet 22 or Sculptural Substrate Specification Sheet.



### Substrate tolerance

It is critical that the substrate to which the panels are to be applied is flat and true without any sudden bumps or deviations. Bumps or flares in the wall will cause misalignment between the panels which may remain visible in the finished work. Acceptable tolerance +/- 1 mm in 1 m & +/- 3 mm in 2m. If the substrate does not

meet the acceptable tolerances then it is necessary to survey the wall and determine the deviation from a flat plane at each and every panel corner intersection. Shims or packers are then used to pack out to the required depth at each intersection. This will create additional cost.

SCULPTURAL DESIGN	PANEL DIMENSIONS (mm)	MAX PANEL DEPTH (mm)	WEIGHT (kg/m <sup>2</sup> )	NUMBER OF PANEL DESIGNS	PANEL ORIENTATION (Horizontal/Vertical)	FINISH: SPATULATA/ ARMURALIA	SPRAY: PERLATA/ PAINT	RECOMMENDED ORIENTATION (Horizontal/Vertical)	RECOMMENDED FINISH
Doodle	1200 x 800	14	14	3	H	No	Y	H	Paint
Cypher	1200 x 800	15	14	2	H/V	No	Y	H	Perlata / Paint
Inkana	1200 x 800	13	14	3	H	No	Y	H	Paint
Aesis	1200 x 800	18	16	2	H/V	Difficult	Y	H	Perlata / Paint
Flow	1800 x 600	13	15	4	H / V	Yes	Yes	H	Spatulata
Flow Wave	1800 x 600	13	15	1	H	Yes	Yes	H	Spatulata / Perlata
Flow Straight	1800 x 600	13	15	1	H / V	Yes	Yes	H	Spatulata
Coral	1200 x 800	22	16.5	3 / 4	H	No	Yes	H	Perlata / Paint
Hour Glass	1200 x 800	18	23	1	H / V	Difficult	Yes	H	Perlata / Paint
Leaves	1200 x 800	18	15	2	H	No	Yes	H	Paint
Ribbons	1200 x 800	21	13.5	1	H / V	Yes	Yes	H / V	Perlata
Jet Stream	1200 x 800	20	13.5	1	H / V	No	Yes	H	Perlata
Shock Wave	1200 x 800	15	14	1	H / V	Yes	Yes	H / V	Spatulata
Quilt	1200 x 800	30	20	1	H	Yes	Yes	H	Spatulata
Monroe	1200 x 800	20	14	1	V / H	No	Yes	V / H	Perlata
Bergman	1200 x 800	20	15	1	H	No	Yes	H	Perlata / Paint



**Location**

Standard Armourcoat Sculptural® panels are suitable for internal use and areas that are not exposed to the elements or large temperature fluctuations.

**Wall size**

We do not recommend installing Armourcoat Sculptural® panels to wall in excess of 10 metres in length or 40m<sup>2</sup> in surface area without some form of control joint or expansion gap. In situations where the aesthetics demand long uninterrupted surfaces the control joint can be filled with a flexible filler or mastic that is close in colour to the rest of the wall.

Large walls are subject to a risk of small hairline cracks developing between the panels due to slight substrate movement or thermal expansion and contraction.

**Internal and external corners**

It is possible to create both internal and external corners with Armourcoat Sculptural® designs. Please note, however, that it is a time-consuming process that will add additional cost. We therefore do not recommend the use of Armourcoat Sculptural® walls in situations where there are multiple changes of surface plane within a small area.

External corners are created by cutting and mitering the panel and then installing the panels around the corner. 2-3mm of the panel is lost in the cutting and mitering process but this is made up with the Bondplast™ filler. The nose of the corner is then hand shaped with a chisel, file or sandpaper to create a pencil round that still reflects the sculptural shape of the corner.

Internal corners are also created by mitering the panels however in mitering a panel that is 20mm in thickness for an internal corner a section of the design of about 40mm in width is lost with the consequence that the sculpted lines of the surface will not line up. It is therefore necessary to use two panels instead of one which does create significant panel wastage. Due to this panel wastage internal corners are more expensive to create than external corners.

**Curved walls**

Armourcoat Sculptural® designs can be installed onto curved walls provided they are of a consistent radius. The minimum radius for curved walls is 2500mm. All the panels are custom made for each project to the required radius and special packing crates are made to support the curved panels. There are additional costs for the mould bases, additional casting time and the custom made crates.

**Colour/surface finish**

To achieve the best visual results we would recommend the use of light colours as the level of contrast between the lit and shaded areas is greatest. Using darker colours will reduce the dramatic effect created by the lighting. Armourcoat can offer a number of specialist finishes that can be applied to the surface. Some of the designs have certain finish limitations due to the form and shape of the surface.

Finishes that can be offered include:

**SPATULATA:** A smooth glossy polished plaster finish. Please be aware that the surface finish will not be the same as the normal Armourcoat Spatulata finish as it is applied in a completely different way using different tools.

**ARMURALIA FINE TEXTURED STONE:** A smooth lightly pitted finish with a semi polished surface. Please be aware that the surface finish will not be the same as the normal Armuralia finish as it is applied in a completely different way using different tools.

**PERLATA DECORATIVE PAINT FINISH:** Made from pearlescent mica and has a subtle sparkle or shimmer to the surface. Available in a range of 96 colours.

**PAINT:** The surface can be painted with matt emulsion paint. We recommend a spray application for best results.

### Lighting

Achieving the correct lighting is critical to the success of Armourcoat Sculptural® walls. To get the best results it is important to light the surface to achieve the optimum interplay between highlight and shadow.

The walls can either be down lit, up lit or even cross lit for any design that runs vertically. The angle of incidence for the light source to the face of the wall can vary depending upon the effect required, but as a guide we would recommend that the light strikes the wall surface at an angle of between 8-25° with 15-18° being about the optimum. For a 3m high wall you would set the halogen spots into the ceiling about 400mm from the face of the wall. The light will be striking the wall at about 12° 1m from the floor, 15° at 1.5m and 23° at 2m up.

For even more dramatic effect it is possible to install LED colour change 'Luminaire' lighting in combination with a programmable DMX control system. This makes it possible to wash the wall in almost any colour, have different colours fading in and out or any number of unique programmable coloured lighting effects.



### Inspiration

The first part of the process is to formalize the design in terms of shape, form and function. This will consider the detailing, fixing points and structural integrity of the design. Once a concept has been established and key detailing has been worked out, transforming it into the finished design can be achieved in a variety of ways.

### Design

Certain designs are developed using 3D modeling software such as Solidworks, Rhino or Autocad, and the original master is then cut using precision CNC routers. Other designs may be entirely hand-sculpted or modeled in clay to achieve the correct feel and form. It is possible to combine computer aided design with a degree of hand sculpting to reach the desired result.

### Creating the model and mould

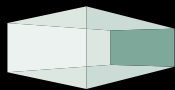
Once the master has been created it is necessary to produce one or more mould negatives from which the final pieces can be cast. The type of mould will either be Plywood/MDF, GRP (Glass Reinforced Polyester) or Silicone – depending on the size, shape and complexity of the master.

SCULPTURAL®



[sculptural.armourcoat.com](http://sculptural.armourcoat.com)

FOR FURTHER INFORMATION



ARMOURCOAT®  
SURFACE FINISHES

Armourcoat Limited, Morewood Close, Sevenoaks, Kent TN13 2HU, United Kingdom  
Telephone: +44(0)1732 460668 Fax: +44(0)1732 450930 Email: [sales@armourcoat.co.uk](mailto:sales@armourcoat.co.uk) Website: [www.armourcoat.com](http://www.armourcoat.com)

©2009 Armourcoat Ltd. Armourcoat Sculptural is a product and trademark of Armourcoat Ltd.

SCULPT0909