

Thin-Clad Adhered Masonry Veneer Assembly—Thin-Clad Units 04 43 13.16-US

PRODUCT DESCRIPTION

BASIC USE Thin-clad units direct adhered to a suitable substrate (including waterproofing/air and water-resistive barrier where appropriate) to provide a complete adhered masonry veneer assembly for both interior and exterior applications. Appropriate for use in residential, commercial and institutional building projects.

COMPOSITION AND MATERIAL Thin-Clad Units can be either **Thin-Clad Adhered Calcium Silicate Units** or **Thin-Clad Adhered Dolomitic Limestone Units**.

Thin-Clad Adhered Calcium Silicate Units describes **Thin-Clad ARRIS-tile Renaissance® Units, Thin-Clad Building Stone, and Thin-Clad Brick**. Thin-Clad Adhered Calcium Silicate Units are manufactured calcium silicate units containing no Portland cement. They are pressure-formed and autoclave cured, resulting in high-density, severe weathering modular units, with one or more finished faces. They are then fabricated to the desired thickness to produce the thin units. The units may be site cut, trimmed and finished to custom lengths, shapes or sizes, as required on site.

Thin-Clad Adhered Dolomitic Limestone Units describes **Thin-Clad Adair® Limestone Tile Units, Thin-Clad Adair® Georgian Blend, and Thin-Clad Adair® Armour Course**. Adair® Limestone is a dense, dolomitic limestone, quarried from the Amabel formation in the Bruce Peninsula near Wiarton, Ontario, Canada. It is a natural stone that has been selected, trimmed or cut to specified or indicated shapes or sizes.

The thin-clad units are installed as part of an adhered masonry veneer assembly over a suitable substrate. The adhered masonry veneer assemblies also consist of bonding mortars, flashing, waterproofing, and other accessory components.

SHAPES AND SIZES **Thin-Clad ARRIS-tile Renaissance® Units** (Fort Valley, GA) are available in the following standard sizes:

Code	Height	Length	Corner Return Length	Thickness
RS358 TILE	3-5/8"	23-5/8"	—	3/4"
RS358 TILE RETURN	3-5/8"	22-7/8"	3-5/8"	3/4"
RS758 TILE	7-5/8"	23-5/8"	—	3/4"
RS758 TILE RETURN	7-5/8"	22-7/8"	3-5/8"	3/4"
RS115 TILE	11-5/8"	23-5/8"	—	3/4"
RS115 TILE RETURN	11-5/8"	22-7/8"	3-5/8"	3/4"

To comply with the industry-accepted standard of 15 lbs/ft² for adhered veneer units, the thickness of the **Thin-Clad ARRIS-tile Renaissance® Units** is limited to a maximum of 3/4" with rocked finishes. With smooth finishes we can provide the material in either 3/4" or 1-3/8" standard thicknesses. Corner units with 3-5/8" returns can be provided for smooth and rocked textures.

Additional custom shapes and sizes are available, up to a maximum length of 23-5/8" and face rise of 11-5/8". Profiles such as margins, chamfers, notches and bullnoses are available at a premium price. Refer to the Thin-Clad Profiles Guide for further information or contact your local Arriscraft representative or dealer.

Thin-Clad Brick (Fort Valley, GA) are available as **Elevation Thin Brick** in the following standard sizes:

Code	Height	Length	Thickness	Corner Return Length
ETB214	2-1/4"	Fragmented lengths up to 23-5/8"	3/4"	N/A
ETB214C	2-1/4"	11-5/8"	3/4"	3-5/8"
ETB214T	2-1/4"	Fragmented lengths up to 23-5/8"	1-3/8"	N/A
ETB214TC	2-1/4"	11-5/8"	1-3/8"	3-5/8"

Thin-Clad Building Stone (Cambridge, Ontario) is available in the following standard sizes:

Code*	Height	Length	Thickness	Corner Units	
				Return Length	Face Dimension
Citadel® Building Stone			Texture: Tumbled finish		
CIT/FRE23	2-3/8"	Various lengths up to 23-5/8"	Approx. 3/4"	2" to 4"	6" to 10"
CIT/FRE52	5-1/4"		Approx. 3/4"	2" to 4"	6" to 10"
CIT81	8-1/8"		Approx. 3/4"	2" to 4"	6" to 10"
Edge Rock Building Stone			Texture: Split-faced finish		
SHA/UL50	4-15/16"	Various lengths up to 31-5/8"	Approx. 3/4"	2" to 4"	6" to 10"
EDG102	10-1/4"	Various lengths up to 23-5/8"	Approx. 3/4"	2" to 4"	6" to 10"
Fresco Building Stone			Texture: Split-faced and Tumbled finish		
CIT/FRE23	2-3/8"	Various lengths up to 23-5/8"	Approx. 3/4"	2" to 4"	6" to 10"
CIT/FRE52	5-1/4"		Approx. 3/4"	2" to 4"	6" to 10"
FRE81	8-1/8"		Approx. 3/4"	2" to 4"	6" to 10"
Laurier Building Stone			Texture: Rocked finish		
LAU23	2-3/8"	Various lengths up to 23-5/8"	Approx. 3/4"	2" to 4"	6" to 10"
LAU52	5-1/4"		Approx. 3/4"	2" to 4"	6" to 10"
LAU81	8-1/8"		Approx. 3/4"	2" to 4"	6" to 10"
LAU11	11"		Approx. 3/4"	2" to 4"	6" to 10"
Shadow Stone® Building Stone			Texture: Split-faced finish		
SHA/UL22	2-5/16"	Various lengths up to 23-5/8"	Approx. 3/4"	2" to 4"	6" to 10"
SHA/UL50	4-15/16"	Various lengths up to 31-5/8"	Approx. 3/4"	2" to 4"	6" to 10"
SHA75S	7-5/8"	Various lengths up to 23-5/8"	Approx. 3/4"	2" to 4"	6" to 10"
Urban LedgeStone			Texture: Split-faced finish		
SHA/UL22	2-5/16"	Various lengths up to 23-5/8"	Approx. 3/4"	2" to 4"	6" to 10"
UL35	3-5/8"	Various lengths up to 31-5/8"	Approx. 3/4"	2" to 4"	6" to 10"
SHA/UL50	4-15/16"		Approx. 3/4"	2" to 4"	6" to 10"

* Also available as full-bed masonry units to match the thin options. Refer to ARRISCRAFT•DATA 04 73 13 [Calcium Silicate Masonry Products](#) for full-bed unit thicknesses.

Thin-Clad Building Stone (Fort Valley, Georgia) is available in the following standard sizes:

Code	Height	Length	Thickness		Corner Units	
			Split	Sawn*	Return Length	Face Dimension
Stack						
STA21	2-1/8"	Fragmented lengths up to 23-5/8"	1-1/2"	7/8" 1"	2" to 4"	6" to 10"
STA35	3-5/8"		1-1/4"	1-1/8"	2" to 4"	6" to 10"
STA57	5-7/8"		1-1/8"	1-1/4"	2" to 4"	6" to 10"
Coastal						
COA21**	2-1/8"	Fragmented lengths up to 23-5/8"	1-1/2"	7/8" 1"	2" to 4"	6" to 10"
COA35**	3-5/8"		1-1/4"	1-1/8"	2" to 4"	6" to 10"
COA62**	6-1/8"		1-1/8"	1-1/4"	2" to 4"	6" to 10"
Midtown 2-1/8" Size						
MID21**	2-1/8"	Fragmented lengths up to 23-5/8"	1-1/2"	7/8" 1" 1-1/8" 1-1/4"	2" to 4"	6" to 10"
Midtown 3-5/8" Size						
MID35**	3-5/8"	Fragmented lengths up to 23-5/8"	1-1/4"	7/8" 1" 1-1/8" 1-1/4"	2" to 4"	6" to 10"
Midtown 5-7/8" Size						
MID57**	5-7/8"	Fragmented lengths up to 23-5/8"	1-1/8"	N/A	2" to 4"	6" to 10"

* Sawn face material will contain all listed bed depth sizes blended into a skid or box.

** Can also be provided in full-bed masonry units to match the thin options. Bed depth of 2-7/8" is the norm for full-bed options.

Shipped Thin-Clad Brick and Thin-Clad Building Stone material includes a percentage of shorter random length/fragmented units which can be used by the installer around openings such as windows and doors to create the random ashlar bond pattern, or in internal corners where two walls meet. Some units may need to be field trimmed or guillotine split to ensure units fit snugly together.

Thin-Clad Adair® Limestone Tile Units (Cambridge, ON) are available in the following standard sizes:

Code	Height	Length	Thickness
ADA358 TILE	3-5/8"	23-5/8"	3/4"
ADA358 TILE QUIRK MITERED	3-5/8"	23-5/8"	3/4"
ADA758 TILE	7-5/8"	23-5/8"	3/4"
ADA758 TILE QUIRK MITERED	7-5/8"	23-5/8"	3/4"
ADA115 TILE	11-5/8"	23-5/8"	3/4"
ADA115 TILE QUIRK MITERED	11-5/8"	23-5/8"	3/4"

To comply with the industry-accepted standard of 15 lbs/ft² for adhered veneer units, the thickness of the **Thin-Clad Adair® Limestone Tile Units** is limited to a maximum of 1".

Thin-Clad Adair® Armour Course (Cambridge, ON) is available in 3-5/8" tall x 23-5/8" long x 7/8" thick units, and is to be used in combination with other Thin-Clad Adhered Masonry Units that are installed at-grade.

Thin-Clad Adair® Georgian Blend (Cambridge, ON) is available in the following three sizes, to be used in a three-unit configuration:

Code	Height	Length	Thickness
AGB22	2-5/16"	Random up to 23-5/8"	7/8"
AGB50	5"	Random up to 23-5/8"	7/8"
AGB75	7-5/8"	Random up to 23-5/8"	7/8"

Shipped Thin-Clad Adair® Armour Course and Thin-Clad Adair® Georgian Blend material includes a percentage of shorter random length/fragmented units which can be used by the installer around openings such as windows and doors to create the random ashlar bond pattern, or in internal corners where two walls meet. Some units may need to be field trimmed or guillotine split to ensure units fit snugly together.

Additional custom Thin-Clad Adhered Dolomitic Limestone shapes and sizes are available, up to 5 square feet in total face area. Profiles such as margins, chamfers, notches and bullnoses are available at a premium price. Contact your local Arriscraft representative or dealer.

TOLERANCES Thin-Clad Units are fabricated to the following tolerances:

Thin-Clad ARRIS-tile Renaissance® Units:

- Unit height and length: +/- 1/16".
- Deviation from square, with the measurement taken using the longest edge as the base: +/- 1/16".
- Unit bed: +/- 1/16" for smooth, +/- 1/4" for rocked.
- Custom unit dimensions: +/- 1/8".

Thin-Clad Brick:

- Unit height: +/- 1/16".
- Unit bed: +/- 1/8".

Thin-Clad Building Stone:

- Unit height: +/- 1/16".
- Unit bed: +/- 1/4".

Thin-Clad Adhered Dolomitic Limestone Units:

- Unit height and length: +/- 1/16".
- Deviation from square, with the measurement taken using the longest edge as the base: +/- 1/16".
- Unit bed: +/- 1/16" for smooth, +/- 1/4" for rocked/split.
- Custom unit dimensions: +/- 1/8".

Units shall exhibit a texture approximately equal to the approved sample when viewed under diffused daylight illumination at a 20 foot distance. Minor chipping resulting from shipment and delivery shall not be grounds for rejection. Minor chips shall not be obvious under diffused daylight illumination from a 20 foot distance.

Chips found on *unfinished* faces are not grounds for rejection.

Split and rocked faces are inspected for cracks and blemishes only, as chippage considerations do not apply when the desired surface texture and unit shape are intended to be uneven.

LIMITATIONS Thin-Clad Units should not be installed directly at grade in a manner where they are cantilevered or project directly over the adjacent grade. Stresses may be placed into the veneer as adjacent soil heaves or the building structure settles as it is loaded. If the adhered masonry veneer is to cantilever over adjacent grade, then a minimum



clearance should be observed in keeping in line with International Building Code (IBC) requirements. The IBC requires providing a minimum 2" clearance for adhered masonry veneer over adjacent paved surfaces, or a 4" minimum clearance for adhered masonry veneer over adjacent landscaping.

Thin-Clad Adhered Calcium Silicate Units are generally intended for above grade installations. Manufactured masonry veneer units, regardless of their composition, are inherently absorptive, and as such, are not intended for use below grade. Manufactured units installed below grade will wick moisture from the soil that is in contact with the masonry units and create a condition known as "rising damp" in the masonry veneer.

In colder climates, Thin-Clad Adhered Calcium Silicate Units at grade may become exposed to de-icing compounds. As with other types of manufactured masonry units, calcium silicate masonry units should not be installed where they will be directly exposed to de-icing compounds used to melt snow and ice from pavements.

Thin-Clad Adhered Dolomitic Limestone Units are an all-weathering, highly resistant material exhibiting "long life under hard use" characteristics. They are suitable for use in some applications where Thin-Clad Adhered Calcium Silicate Units may not be appropriate, such as at grade conditions, flooring, and paving. Thin-Clad Adair® Armour Course units are recommended to be used at grade in combination with Thin-Clad Adhered Calcium Silicate Units where the adhered masonry veneer is intended to be extended down to grade. Even though Thin-Clad Adhered Dolomitic Limestone Units are suitable for use directly at grade, care should be taken to ensure that they do not project beyond the plane of the wall to form a ledge as described in the paragraph above.

Thin-Clad Adhered Calcium Silicate Units are not intended for use in flooring or paving applications.

Adhered installation methods are not appropriate for applications where the adhering mortar will be in tension. For example, we do not recommend thin adhered units be installed in soffit applications (some small exceptions may apply; contact Arriscraft Technical Services before proceeding).

COLORS Thin-Clad Building Stone (Cambridge, Ontario) is available in the following standard colors:

Product	Colors
Citadel®	Cashmere, Charcoal, Driftwood, French Country, Greige, Infinity, Moonstone, Silverado, Traditional Grey
Edge Rock*	Driftwood, Glacier, Steel Grey
Fresco	Cashmere, Charcoal, Driftwood, French Country, Greige, Infinity, Moonstone, Silverado, Traditional Grey
Laurier	Charcoal, Ivory White, Mahogany, Midnight Grey, Onyx**, Opal, Walnut
Shadow Stone®	Avalanche, Charcoal, Driftwood, Steel Grey, Tacoma
Urban LedgeStone	Avalanche, Charcoal, Driftwood, Steel Grey, Tacoma

* EDG102 to be used in conjunction with SHA/UL50 to form 2-unit Edge Rock stone blend.
 ** Laurier Onyx available in LAU23 and LAU52 only, and is intended to be used as an accent color. When used other than as an accent, a color premium upcharge is applied.

Thin-Clad ARRIS-tile Renaissance® Units (Fort Valley, GA) are available in the following standard colors:

Color	Finish		
	Standard		Custom (no corners)
	Smooth	Rocked	Satin
Monochromatic	Champagne	•	•
	Limestone	•	•
	Tan	•	•
Monochromatic Range	Café	•	•
Striated	Basalt	•	•
	Ginger	•	•
	Oak Ridge	•	•
Striated Range	Magnolia	•	•
	Montecito	•	•
	Mountain Ridge	•	•
	Redrock	•	•
	Sunset	•	•

- Monochromatic colors consist of a single hue.
- Monochromatic range colors consist of a single hue with a subtle distribution of tones that vary from unit to unit.
- Striated colors are a multi-hued blend.
- Striated range colors are a multi-hued blend and will contain a distribution of colors or shades that vary from unit to unit.

Thin-Clad Brick (Fort Valley, GA) is available in the following standard colors: Basalt, Cedar Woods, Limestone, Magnolia, Montecito, Mountain Ridge, Oak Ridge, Redrock, Sunset.

Thin-Clad Adair® Limestone Tile Units (Cambridge, ON) are available in the following standard colors: Blue-Grey Fleuri, Blue-Grey Veined, Sepia Fleuri, Sepia Veined.

Thin-Clad Adair® Armour Course Units (Cambridge, ON) are available in Quarry Range Blue-Grey or Quarry Range Sepia colors.

Thin-Clad Adair® Georgian Blend (Cambridge, ON) is available as a blend of Sepia and Blue-Grey in a quarry blend (40—60% of each color). Single color versions are available at a premium price.

As a naturally occurring material, Thin-Clad Adhered Dolomitic Limestone Units are subject to variations in color and pattern. Arriscraft strongly recommends that Consultants review submitted samples prior to selecting an acceptable range of color and pattern.



Thin-Clad Building Stone (Fort Valley, Georgia) is available in the following standard colors:

Color	Finish		
	Split	Sawn*	
Stack	Anvil	•	•
	Ash	•	•
	Beach	•	•
	Desert Sand	•	•
	Ice	•	•
	Matrix	•	•
	Sedona Red	•	•
	Sterling	•	•
Coastal	Amalfi	•	•
	Baja	•	•
	Cape Cod	•	•
	Dark Shore	•	•
	Monterey	•	•
	White Cliff	•	•
Midtown	Abbey Road	•	•
	Biscayne	•	•
	Lombard	•	•
	Manhattan	•	•
	Newbury	•	•
	Peachtree	•	•

* 5-7/8" Midtown sawn is not available.

Refer to actual color samples and panels for final color selection. Colors within each product group may be blended in a wall to achieve a more natural appearance. Information pertaining to common color blends for each product line is available upon request. Not all colors within a product group are available in all sizes. Contact Arriscraft for a detailed listing of colors and sizes available.

Custom colors are also available for all Thin-Clad Adhered Calcium Silicate Units on a minimum order basis. Contact your local Arriscraft representative or dealer for additional information.

As a manufactured product, Thin-Clad Adhered Calcium Silicate Units are monitored for color consistency. Slight variations between batches may occur, and it is recommended that the installer mix units from different skids during installation.

FINISHES The standard finishes for **Thin-Clad ARRIS-tile Renaissance® Units** (Fort Valley, GA) include:

- Smooth finish: a finish achieved by lightly honing the surface with a mechanical, fine abrasive head in a wide, circular motion.
- Rocked finish: a surface finish resulting from mechanical splitting and hand-chiseling of the masonry unit to a set depth to achieve a bold rustic appearance.
- Satin finish: a matte textured, relatively fine-grained uniform smooth surface.

The standard finish for **Thin-Clad Brick** (Fort Valley, GA) is Weathered: a rusticated and bruised finish.

The standard finishes for **Thin-Clad Building Stone** (Cambridge, Ontario) include:

- Rocked finish: a surface finish resulting from mechanical splitting and hand-chiseling of the masonry unit to a set depth to achieve a bold rustic appearance.
- Split-faced finish: a surface finish resulting from mechanically splitting a manufactured masonry unit to achieve a rough, stone-like texture. Some split-faced units may have split fronts and backs.
- Tumbled finish: a finish resulting from splitting, and either tumbling or mechanically aging the pieces to create the rusticated look.

The standard finishes for **Thin-Clad Building Stone** (Fort Valley, Georgia) include:

- Split-faced finish: a surface finish resulting from mechanically splitting a manufactured masonry unit to achieve a rough, stone-like texture. Some split-faced units may have split fronts and backs.
- Sawn finish: a finish achieved by cutting the unit to expose the face. Circular blade marks may be evident and should be expected.

The standard finishes for **Thin-Clad Adair® Limestone Tile Units** (Cambridge, ON) include:

- Fine-Dressed finish: a surface dressed with a mechanical honing head in a rubbing motion to remove the saw marks, producing a smooth and even surface, with little or no gloss. No honing marks are visible.
- Medium-Dressed finish: a surface dressed with a mechanical honing head in a rubbing motion to remove the saw marks.
- Split-faced finish: a surface finish resulting from mechanically splitting a dolomitic limestone unit to achieve a rough, stone-like texture.
- Rocked finish: a surface finish resulting from mechanical splitting and hand-chiseling of the masonry unit to a set depth to achieve a bold rustic appearance.

The standard finish for **Thin-Clad Adair® Limestone Georgian Blend** and **Thin-Clad Adair® Limestone Armour Course Units** (Cambridge, ON) is a Split-faced finish.

Consultants should review samples prior to selecting a particular color and finish.

TECHNICAL DATA

APPLICABLE STANDARDS Required properties for **Thin-Clad Adhered Calcium Silicate Units** are described in **ASTM C73, Standard Specification for Calcium Silicate Face Brick (Sand-Lime Brick)**. This standard classifies calcium silicate products as either moderate-weathering or severe-weathering depending on the material's tested physical properties of compressive strength and 24-hour absorption. Thin-Clad Adhered Calcium Silicate Units meet and exceed the requirements necessary to comply with the severe-weathering classification.

Thin-Clad Adhered Dolomitic Limestone Units exceed the requirements of **ASTM C568, Standard Specification for Limestone Dimension Stone; Class III—High Density**. Units have been extensively tested and found to have the typical physical properties outlined below:

Property	Test Method	Imperial Result
Compressive Strength	ASTM C170	22,900 psi
Abrasion Resistance	ASTM C241	18.0
Absorption	ASTM C97	0.75 percent
Density	ASTM C97	167 lb/ft ³
Modulus of Rupture	ASTM C99	2,250 psi
Flexural Strength	ASTM C880	1,600 psi
Coefficient of Thermal Expansion	ASTM C531	6.0 x 10 ⁻⁶ /°F

Independent test reports available upon request.



INSTALLATION

DELIVERY Thin-Clad Units are delivered to the site in protective packaging.

HANDLING Lift skids with proper and sufficiently long slings or forks with protection to prevent damage to units. Protect edges and corners. Depending on weather conditions (lots of rain, humid weather), we suggest removing the plastic stretch wrap from the skids to allow air to flow around the product. If this is done, the unwrapped skid will be less stable and subsequent handling of the skid of units must be done with great care.

STORAGE Upon delivery, isolate units from contact with the ground, vegetation and other material to prevent staining. Stack the units on timbers or platforms at least 75 mm (3") above ground. Place polyethylene or other plastic film between wood and other finished surfaces of unpackaged units when stored for an extended period of time. Cover stored material with a tarp if it will be exposed to weather for an extended period of time.

Do not use salt to thaw ice formed on the surfaces of units.

INSTALLATION Thin-Clad Units must be installed using approved materials and techniques for each specific installation. Refer to the ARRISCRAFT•CADD Library for applicable details. Options are available for drainage plane, insulated drainage plane/Energy Code compliant (IECC, ASHRAE 90.1, SB-10), and barrier wall system installations. Construct all Thin-Clad Units in accordance with all applicable codes and standards and any local requirements stipulated by the authorities having jurisdiction.

A suitably solid substrate should be provided to support the Thin-Clad Units. Design the substrate for a maximum allowable deflection of L/600 (L/720 preferred). Substrate options include:

- 1/2" or 5/8" concrete backer board over wood or steel stud (18-gauge minimum; 16-gauge preferred) framing and exterior sheathing.*
- 1/2" or 5/8" concrete backer board over drainage mat over wood or steel stud (18-gauge minimum; 16-gauge preferred) framing and exterior sheathing.*
- Concrete masonry units (CMU).
- Poured concrete (properly cleaned of forming oils).
- T. Clear ProGUARD DP® Insulated Concrete Board Panels over wood or steel stud (18-gauge minimum; 16-gauge preferred) framing and exterior sheathing.*
- T. Clear ProGUARD DP® Insulated Concrete Board Panels over CMU, or poured concrete.*

Oriented strand board (OSB) is not a suitable exterior sheathing material for substrates behind adhered masonry veneer applications.

*Silver C screws provided by Arriscraft must be used to attach concrete backer board to the structural back-up when Thin-Clad Units are installed over such substrates (including ProGUARD DP® Insulated Concrete Board Panels).

Refer to appropriate Arriscraft ProGUARD DP® Installation Guide and ARRISCRAFT•DATA 04 70 10 — ProGUARD DP® Insulated Concrete Board Panel if installing Thin-Clad Units over ProGUARD DP® Insulated Concrete Board Panels.

Installation on other substrates may be possible. Contact Arriscraft Technical Services for information on installation over specific substrates.

Construct Thin-Clad Units with an adequate number of elastic movement joints, properly located to accommodate differential movement. Refer to ARRISCRAFT•NOTE (Vol. IV, No. 1) Movement Joints for Thin Adhered Veneer for further information.

Mortar joints between Thin-Clad Units in any direction should be consistent to 3/8" thickness, with the following exceptions:

Citadel® Building Stone: 1/2".

Fresco Building Stone: 1/2".

Laurier Building Stone: 1/2".

Stack: dry stack (tight joint).

Midtown: dry stack (tight joint), 3/8", 1/2", 1/4".

Thin-Clad Adair® Limestone Armour Course Units: Tight, 3/8", 1/2", 1/4".

Thin-Clad Building Stone (Cambridge, Ontario), Stack, Coastal, and Thin-Clad Adair® Limestone Georgian Blend are each installed using different bonding patterns. These are typically described as a percentage ratio, from the smallest to the largest units, as follows:

Product	2-Unit	3-Unit	4-Unit
Citadel® Building Stone		25:50:25	
Edge Rock Building Stone	75:25		
Fresco Building Stone		25:50:25	
Laurier Building Stone		20:50:30	10:40:30:20
Shadow Stone® Building Stone	60:40	20:50:30	
*Urban LedgeStone (Ashlar)		20:50:30	
Stack		30:55:15	
Coastal		30:55:15	
Adair® Limestone Georgian Blend		20:40:40	

* If Urban LedgeStone is installed in a coursed bond pattern, the ratio is 22:33:45.

Refer to Arriscraft's Mason's Instructions sheets for illustrations of each recommended bond pattern. Standard bond patterns may also be modified by changing the ratio of small to large units. Contact your local Arriscraft representative or dealer for specific information on custom bond patterns.

Wall configuration is to be designed and constructed utilizing appropriate materials and proper installation instructions. Two main assembly options are recommended, with each using a full complement of products to achieve a complete adhered system assembly. Materials for each option to be considered:

Assembly Option 1 Products

Bonding Mortar

- T.Clear Total Bond.

Pointing Mortars

- LATICRETE® MVIS™ Pointing Mortar
- Other approved pointing mortars.

Waterproofing Elements

- T. Clear ProGUARD DP® WaterArmor AWB (30 perm).
- T. Clear ProGUARD DP® WaterArmor VB (0.07 perm).
- T. Clear ProGUARD DP® WaterArmor TG (12 perm).
- T. Clear WaterArmor LF (Liquid Flashing).
- T. Clear WaterArmor Flashing Tape.
- DOWSIL™ 790.



Assembly Option 2 Products

Bonding Mortars

- LATICRETE® MVIS™ Hi-Bond Veneer Mortar.
- LATICRETE® MVIS™ Masonry Veneer Mortar.
- LATICRETE® MVIS™ Thin Brick Mortar.

Pointing Mortar

- LATICRETE® MVIS™ Pointing Mortar.

Waterproofing Elements

- LATICRETE® MVIS™ Air & Water Barrier (0.157 perm).
- LATICRETE® Air Barrier C3 (3 perm).
- LATICRETE® LATAPOXY® Waterproof Flashing Mortar.
- LATICRETE® LATASIL™.
- LATICRETE® Waterproofing/Anti-Fracture Fabric.
- LATICRETE® Flashing Sealant.

When properly installed utilizing a system, a system warranty can be achieved with either of the assembly options presented above. Elimination or substitution of any materials may negate the system warranty.

T. Clear Total Bond, LATICRETE® MVIS™ Hi-Bond Veneer Mortar, LATICRETE® MVIS™ Masonry Veneer Mortar, and LATICRETE® MVIS™ Thin Brick Mortar are polymer-fortified mortars that meet the requirements of ANSI A118.4 and should be applied to achieve 100% coverage. Mortar should be burned into the backs of the units and substrate and then additional mortar should be applied with an appropriate trowel to the substrate and back of the unit to optimize bond. Traditional unit masonry mortars (such as Type N or Type S mortars) are not appropriate bonding mortars.

Inclusion of a water-resistive barrier is recommended for exterior applications. For interior applications, a water-resistive barrier is not necessarily required.

T. Clear ProGUARD DP® WaterArmor AWB and LATICRETE® MVIS™ Air & Water Barrier are ABAA-approved air barriers.

Assembly Option 1 Permeability Considerations

T. Clear ProGUARD DP® WaterArmor VB (0.07 perm) is a low-perm water-resistive barrier and may not be applicable in all cases depending on the required perm rating for the water-resistive barrier and where it is located in the wall. T. Clear ProGUARD DP® WaterArmor AWB (30 perm) is a high-perm water-resistive barrier, and in combination with T. Clear WaterArmor LF, may be more appropriate in such cases. T. Clear ProGUARD DP® WaterArmor TG (12 perm) is a high-perm water-resistive barrier.

Assembly Option 2 Permeability Considerations

LATICRETE® MVIS™ Air & Water Barrier (0.157 perm) is a low-perm water-resistive barrier and may not be applicable in all cases depending on the required perm rating for the water-resistive barrier and where it is located in the wall. LATICRETE® Air Barrier C3 (3 perm) is a high-perm water-resistive barrier, and in combination with LATICRETE® Flashing Sealant, may be more appropriate in such cases.

LATICRETE® MVIS™ Pointing Mortar or other approved pointing mortars should be applied using a grout bag or grout gun to fill the joints between the Thin-Clad Units. The joints should then be tooled when thumbprint hard to a smooth, tightly compressed surface like a traditional masonry application. Joint filling methods, such as the float method, commonly used in tile installations, should not be used with Thin-Clad Units.

DOWSIL™ 790 or LATICRETE® LATASIL™ are silicone sealants that can be used for movement joint applications, around windows and doors, and

sealing underneath flashing. A good quality backer rod should be used with any application of the sealant.

Other installation systems may be applicable. Contact Arriscraft Technical Services with any questions.

AVAILABILITY AND COST

AVAILABILITY Thin-Clad Units are available worldwide. Delivery times for orders will vary based on the complexity of the order. Arriscraft cannot be responsible for delays due to fire, acts of God, or any other cause beyond its control or which could not be reasonably foreseen. Contact Arriscraft for a list of dealers in your area.

COST Quoted on a project basis for job-specific manufacturing to project requirements.

WARRANTY

Arriscraft warrants its products against deterioration for the life of the building, provided the products have been erected and used according to accepted masonry standards, within the guidelines of local building codes and as recommended by the manufacturer. Complete warranty information is outlined on the Arriscraft standard form of Product Warranty.

MAINTENANCE

Although masonry is largely considered to be maintenance-free relative to other building materials, proper post-construction maintenance and care is crucial for creating long lasting and aesthetically pleasing masonry buildings. Some of the more common maintenance items are addressed in the Arriscraft Care, Cleaning and Maintenance document, such as cleaning, repointing mortar joints, replacing silicone joints, scuff or chippage repairs, wall protection, cutting material, water repellents, and sealers.

Clean Thin-Clad Units in accordance with the cleaning guidelines in the Care, Cleaning, and Maintenance document. Various proprietary masonry cleaning detergents and acid-based cleaning systems may alter the color of Thin-Clad Units. Always pre-test cleaning agents and methods on the job-site mock-up panel or a small, inconspicuous area of the wall. The Consultant and/or Owner should approve the test area prior to the start of full-scale cleaning operations.

Arriscraft does not recommend the application of water repellent or graffiti-proofing sealers to Thin-Clad Adhered Calcium Silicate Units in exterior applications; however, they may be used for interior applications or Thin-Clad Adhered Dolomitic Limestone Unit applications. For more information refer to the Care, Cleaning, and Maintenance document.

TECHNICAL SERVICES

Arriscraft offers consultation services to assist with the preparation of details, specifications and with pricing. Enquiries are addressed promptly and without obligation.

Arriscraft distributes an integrated technical information system including:

- ARRISCRAFT•CADD: sample details which are available in .dwg, .dxf, and .pdf formats.
- ARRISCRAFT•DATA: product data sheets.
- ARRISCRAFT•NOTE: technical discussions with respect to building construction issues.
- ARRISCRAFT•SPEC: master guide specification Sections.

All of these technical resources are available to be downloaded from the Arriscraft web site at www.arriscraft.com. Arriscraft also makes available samples for color and finish, coursing charts and copies of test reports upon request.

