



## PRODUCT DESCRIPTION

**BASIC USE** Thin-clad units direct adhered to a suitable substrate and waterproofed 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 Adhered Masonry Veneer Units can be either **Thin-Clad Adhered Calcium Silicate Units** or **Thin-Clad Adhered Dolomitic Limestone Units**.

Thin-Clad Adhered Calcium Silicate Units describes both **Thin-Clad ARRIS-tile Renaissance® Units** and **Thin-Clad Building Stone**. 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 both **Thin-Clad Adair® Limestone Tile Units** and **Thin-Clad Adair® Ashlar Limestone**. 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 are available in a variety of standard sizes:

CODE	HEIGHT	LENGTH	CORNER RETURN LENGTH	BED
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/ft<sup>2</sup> 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". An alternate bed depth of 2" is available. 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 Building Stone** is available in a variety of standard sizes:

CODE	HEIGHT	LENGTH	THICKNESS		CORNER UNITS	
			SPLIT BED	SAWN BED*	RETURN LENGTH	FACE DIMENSION
<b>Stack</b>						
STA21	2-1/8"	Fragmented lengths up to 23-5/8"	1-1/2"	7/8"	2" to 4"	4" to 10"
STA35	3-5/8"		1-1/4"	1"	2" to 4"	4" to 10"
STA57	5-7/8"		1-1/8"	1-1/4"	2" to 4"	4" to 10"
<b>Coastal</b>						
COA21**	2-1/8"	Fragmented lengths up to 23-5/8"	1-1/2"	7/8"	2" to 4"	4" to 10"
COA35**	3-5/8"		1-1/4"	1"	2" to 4"	4" to 10"
COA62**	6-1/8"		1-1/8"	1-1/4"	2" to 4"	4" to 10"
<b>Midtown 2-1/8" Size</b>						
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"	4" to 10"
<b>Midtown 3-5/8" Size</b>						
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"	4" to 10"
<b>Midtown 5-7/8" Size</b>						
MID57**	5-7/8"	Fragmented lengths up to 23-5/8"	1-1/8"	7/8" 1" 1-1/8" 1-1/4"	2" to 4"	4" 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 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.

Stretcher material is available in either 100 square foot skids or 5 square foot boxes, containing all available sizes to achieve the bond. Corner pieces are available in boxes of 5 linear corner feet (approx. 3.5 square feet), containing all available sizes.

**Thin-Clad Adair® Limestone Tile Units** are available in a variety of standard sizes:

CODE	HEIGHT	LENGTH	BED
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/ft<sup>2</sup> for adhered veneer units, the thickness of the **Thin-Clad Adair® Limestone Tile Units** is limited to a maximum of 3/4".

Additional custom Adair® shapes and sizes are available, up to a maximum dimension of 35-5/8" in any direction and 5 square feet in total face area. 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 Adair® Ashlar Limestone** is available in a variety of standard sizes:

HEIGHT	LENGTH	BED	CORNER RETURN LENGTH
1-1/4"	Fragmented lengths	5/8" to 1-1/4"	2" to 4"
2-1/4"	up to 23-5/8"	5/8" to 1-1/4"	2" to 4"
3-1/2"	Fragmented lengths up to 12"	5/8" to 1-1/4"	2" to 4"

Shipped 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.

Stretcher material is available in either 100 square foot skids or 5 square foot boxes, containing all available sizes to achieve bond. Corner pieces are available in boxes of 5 linear corner feet (approx. 3.5 square feet), containing all available sizes.

**TOLERANCES** Thin-Clad Adhered Masonry Veneer 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 Building Stone:**

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

**Thin-Clad Adair® Limestone Tile 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 Adair® Limestone:**

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

Units shall exhibit a texture approximately equal to the approved sample when viewed under diffused daylight illumination at a distance of 20 feet. 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. 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 Adhered Calcium Silicate Units are not intended for use in flooring or paving applications. 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. For information about installing masonry at grade refer to the Arriscraft "At-Grade Design Ideas" brochure.

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.

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).

**COLOURS** Thin-Clad ARRIS-tile Renaissance® Units are available from our Fort Valley, Georgia manufacturing facility in the following standard colours:

COLOUR		FINISH		
		Standard		Custom (no corners)
		Smooth	Rocked	Satin
Monochromatic	Champagne	•	•	•
	Limestone	•	•	•
	Suede	•	•	•
Monochromatic Range	Café	•	•	•
	Graphite	•	•	•
Striated	Ginger	•	•	
	Oak Ridge	•	•	
Striated Range	Garnet	•	•	•
	Magnolia	•	•	
	Merlot	•	•	•
	Montecito	•	•	•
	Sunset	•	•	•

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

Custom colours are also available on a minimum order basis. Contact your local Arriscraft representative or dealer for additional information.



**Thin-Clad Building Stone** is available in the following standard colours:

COLOUR		FINISH	
		Split	Sawn
Cambridge, ON Stack / Midtown	Blackcomb	•	
	Byward	•	
	Granville	•	
	Inglewood	•	
	Ville-Marie	•	
	Yorkville	•	
Fort Valley, GA Stack	Ash	•	•
	Beach	•	•
	Cappuccino	•	•
	Desert Sand	•	•
	Ice	•	•
	Matrix	•	•
	Storm	•	•
	Tabasco	•	•
Fort Valley, GA Coastal	Amalfi	•	•
	Baja	•	•
	Black Sands	•	•
	Cape Cod	•	•
	White Cliff	•	•
Fort Valley, GA Midtown	Biscayne	•	•
	Broadway	•	•
	Lombard	•	•
	Newbury	•	•
	Peachtree	•	•

Different colours may be blended in a wall. For more information on common colour blends contact Arriscraft. Custom colours are also available on a minimum order basis.

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

**Thin-Clad Adair® Limestone Tile Units** are available in the following standard colours: Blue-Grey Fleuri, Blue-Grey Veined, Sepia Fleuri, Sepia Veined.

**Thin-Clad Adair® Ashlar Limestone** is a random blend of colours and patterns; Sepia and Blue-Grey, blended with a random combination of Veined, Fleuri, and Cross Veined patterns.

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

**FINISHES** The standard finishes for **Thin-Clad ARRIS-tile Renaissance® Units** 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 uniform fine-grained finish similar to sandblasted.

The standard finishes for **Thin-Clad Building Stone** include:

- Split 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** include:

- Medium-Dressed finish: a surface dressed with a mechanical honing head in a rubbing motion to remove the saw marks.
- 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.
- Split 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.

**Thin-Clad Adair® Ashlar Limestone** is available with a split finish. Some units may have split fronts and backs.

Consultants should review samples prior to selecting a particular colour 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 <sup>3</sup>
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 <sup>-6</sup> /°F

Independent test reports available upon request.

#### INSTALLATION

**DELIVERY** Thin-Clad Adhered Masonry Veneer 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.

**STORAGE** Store Thin-Clad Adhered Masonry Veneer Units in a manner designed to prevent damage and staining of units. Stack units on timbers or platforms at least 3" above grade. Place polyethylene or other plastic film between wood and other finished surfaces of units when stored for extended periods of time. Stored units should be covered if exposed to extreme weather conditions.

Do not use de-icing compounds to remove ice from masonry veneer surfaces.

**INSTALLATION** Thin-Clad Adhered Masonry Veneer 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 (ASHRAE 90.1/IECC), and barrier wall system installations. Construct all Thin-Clad Adhered Masonry Veneer 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 Adhered Masonry Veneer Units. Design 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.
- ProGUARD DP® Insulated Concrete Board Panels over wood or steel stud (18-gauge minimum; 16-gauge preferred) framing and exterior sheathing.\*
- 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 Adhered Masonry Veneer 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 Adhered Masonry Veneer 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 Adhered Masonry Veneer 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 units in any direction should be consistent to the following thicknesses:

**ARRIS-tile Renaissance® Units: 3/8"**

**Stack: dry stack (tight joint)**

**Coastal: 3/8"**

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

**Adair® Limestone Tile Units: 3/8"**

**Thin-Clad Adair® Limestone: dry stack (tight joint)**

Stack, Coastal, and Thin-Clad Adair® Limestone are installed using a bond pattern, described as a percentage ratio, from the smallest to the largest sized units: 30:55:15 Bond.

Wall configuration is to be designed and constructed conforming to LATICRETE® MVIS™ installation instructions, including, but not limited to:

#### **Bonding Mortars:**

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

#### **Pointing Mortars**

- LATICRETE® MVIS™ Pointing Mortar

#### **Waterproofing Elements**

- LATICRETE® MVIS™ Air & Water Barrier
- LATICRETE® LATAPOXY® Waterproof Flashing Mortar
- LATICRETE® LATASIL™

When properly installed utilizing the MVIS™ system, LATICRETE® provides a system warranty. Elimination or substitution of any materials may negate the system warranty.

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. Mortar 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 for this application.

Inclusion of LATICRETE® MVIS™ Air & Water Barrier is recommended for exterior applications. For interior applications, LATICRETE® MVIS™ Air & Water Barrier is not necessarily required. LATICRETE® MVIS™ Air & Water Barrier is an ABAA-approved air barrier. LATICRETE® MVIS™ Air & Water Barrier is a low-perm (0.157 perm) waterproofing and may not be applicable in all cases. ProGUARD DP® Water Armor AWB is a high-perm (30 perm) waterproofing, and in combination with Water Armor LF, may be required in certain cases depending on the required perm rating for the waterproofing and where it is located in the wall.

LATICRETE® MVIS™ Pointing Mortar should be applied using a grout bag or grout gun to fill the joints between the Thin-Clad Adhered Masonry Veneer 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 Adhered Masonry Veneer Units.

LATICRETE® LATASIL™ is a silicone sealant 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 Adhered Masonry Veneer 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**

Clean Thin-Clad Adhered Masonry Veneer Units in accordance with the cleaning guidelines in Thin-Clad•CARE. Various proprietary masonry cleaning detergents and acid-based cleaning systems may alter the colour of Thin-Clad Adhered Masonry Veneer 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. Refer to ARRISCRAFT•NOTE (Vol. II, No. 2) Cleaning Masonry for further information.

Arriscraft does not recommend the application of water repellent or graffiti-proofing sealers to its thin-clad masonry veneer products.

## **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](http://www.arriscraft.com).

Arriscraft also makes available samples for colour and finish, coursing charts and copies of test reports upon request.

