

Styrok®



What is Lime-ROK?

Lime-ROK is a lightweight, prefabricated engineered limestone wall panel. It's a high-performing and cost-effective alternative to smooth-cut Indiana limestone that will add value and elegance to your project.



Advantages of Lime-ROK Over Natural Limestone

Higher Impact Resistance

Lime-ROK is made of glassfibre reinforced concrete (GFRC). GFRC has a higher compressive and flexural strength than conventional concrete and natural stone. To confirm this, we conducted an impact test on both Lime-ROK and an 8" thick limestone block. Lime-ROK performed better.

Lower Cost

Lime-ROK is about half the cost of Indiana limestone cladding and the cost advantage increases when larger panels are used. Why? Because Lime-ROK is a man-made product so it doesn't cost us more to make a larger panel. With natural limestone, the larger the slab, the higher the price.

Highly Moisture Resistant

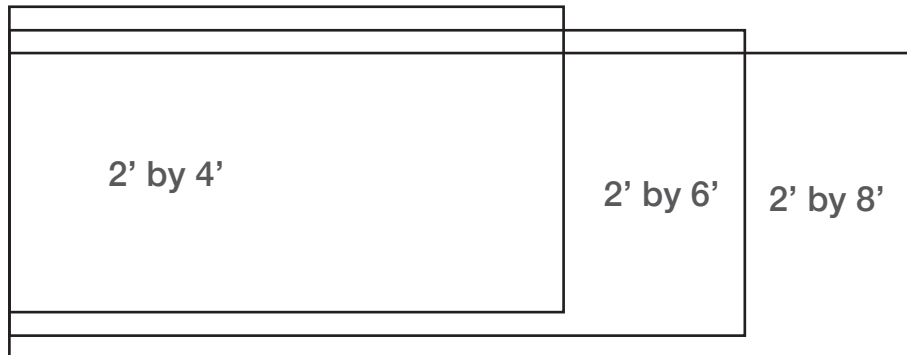
Lime-ROK's lamina is made primarily of GFRC and contains a nano-penetrating sealer. Compared to natural limestone, it has a lower moisture absorption rate and offers better protection from stains.

Lightweight

The natural limestone blocks used for cladding generally weigh between 40-50 lbs per square foot. By contrast, Lime-ROK weighs only 3 lbs per square foot, so no structural support or mechanical fastening is required.



Sizes



*Custom sizes available

Finishes

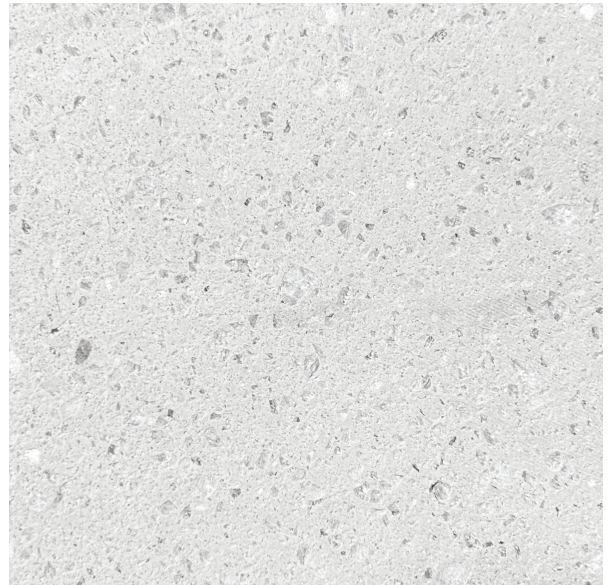
Natural Limestone



A subtle blend of warm and earthy tones with a polished surface

(like natural, smooth-cut Indiana limestone)

White Marble



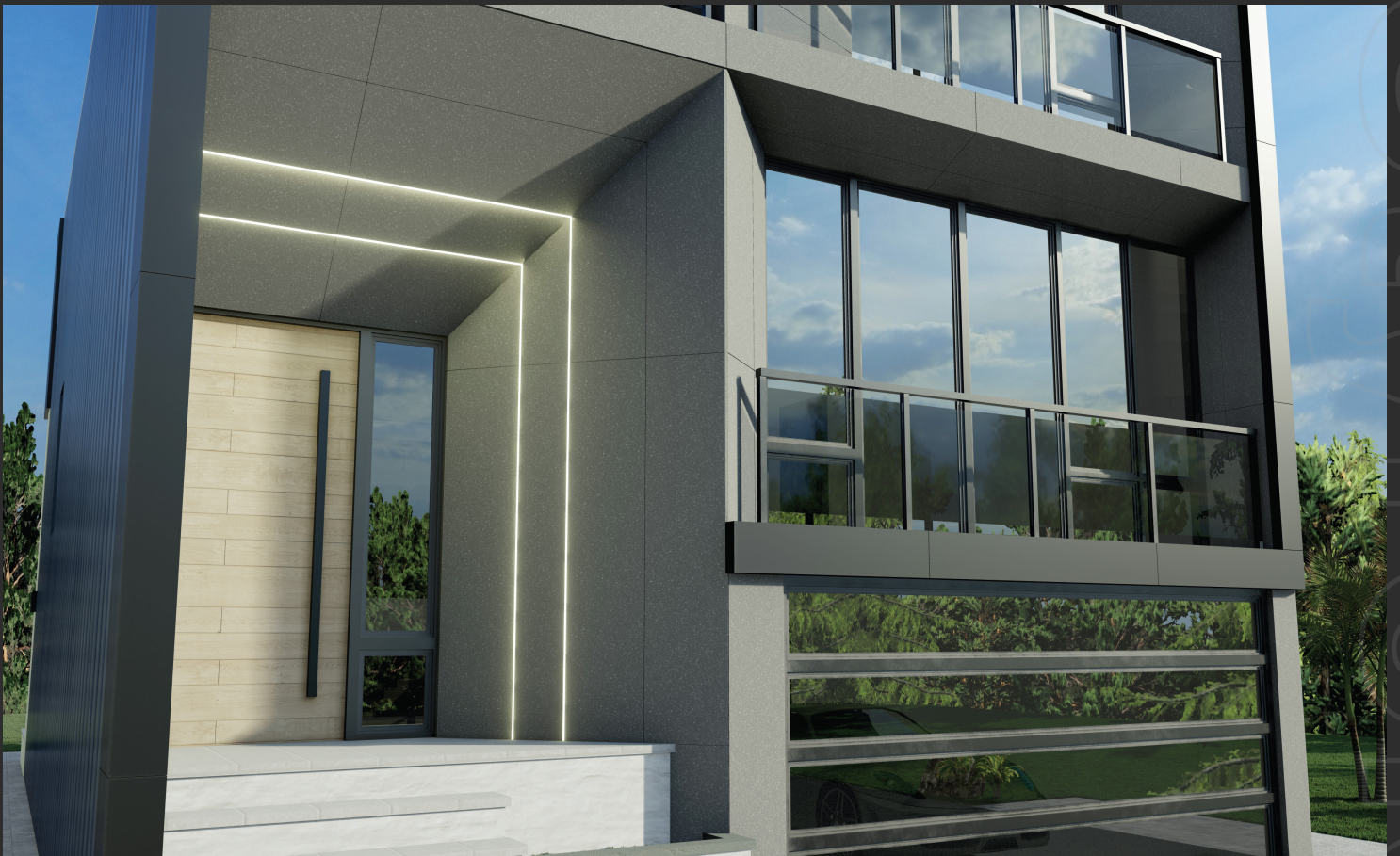
Bright and luminous white with a hint of sparkle and a polished surface

(like smooth-cut marble)

Styles | Modern

A modern aesthetic embraces clean lines and minimalism, favouring simplicity over ornate embellishments.





Styles | Transitional

A fusion of classical and modern styles. Transitional design features a refined elegance combined with a touch of simplicity.





Styles | Traditional

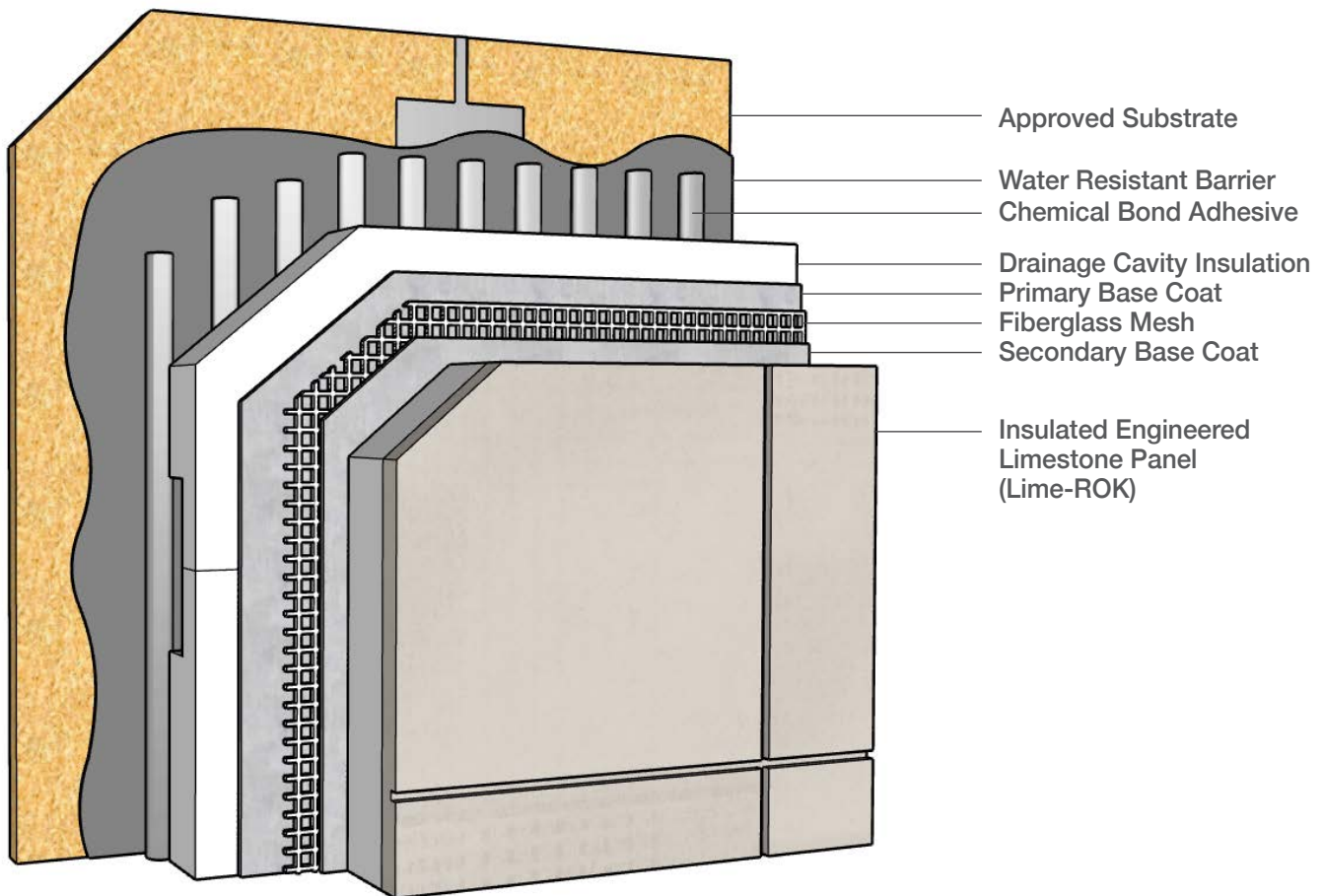
Classic proportions and symmetry create a sense of balance while intricate detailing adds a sense of grandeur and sophistication.





How it's Installed

For existing construction, Lime-ROK can be installed directly over existing masonry (provided that the substrate is in good condition). For new construction (or where the substrate is not in good condition), Lime-ROK is installed over a EIFS wall assembly, replacing the finish coat (see diagram below). In both cases, Lime-ROK is adhered to the wall using an exterior-grade polymerized wall adhesive. No mechanical fastening or structural support is required.





Lime-ROK is installed in a similar manner to limestone cladding:

- (1) cut to size;
- (2) install in a desired pattern;
- (3) grout the joints.

Styrok leveling clips are used to prevent panel lippage. Similar to limestone or precast panels, pattern layout and joint location are key aesthetic elements that must be carefully considered.

Lime-ROK

Technical Data Sheet

Manufacturer

Styrok Inc.
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Product Description

Lime-ROK Insulated Engineered Limestone Wall Panels are pre-finished insulated exterior wall panels consisting of a type 2 expanded polystyrene insulation board and a factory applied $\frac{3}{8}$ " thick engineered limestone facing made of glass fibre reinforced concrete. They feature a smooth natural stone-like finish. LIME-ROKs are installed using a non-proprietary exterior grade polymerized adhesive. No mechanical fastening is required.

Basic Uses

Lime-ROKs provide highly efficient insulation and a durable decorative finish in a one-step process. The insulation is intended for use above grade, exposed to a height not to exceed three stories.

Lime-ROKs are appropriate for new and retrofit low-rise residential or commercial wall applications. Their one-step process makes installation easy, in any weather, with moderately skilled labour.

Sizes

Panel Size

2' x 4' (610mm x 1220mm)
2' x 6' (610mm x 1829mm)
2' x 8' (610mm x 2438mm)

Thickness

Foam: 1"
Whole Panel: 1 $\frac{3}{8}$ "

Technical Data

APPLICABLE STANDARDS:

- ASTM C518 - Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
- ASTM D1621 - Standard Test Method for Compressive Properties of Rigid Cellular Plastics

- ASTM E96 - Standard Test Method for Water Vapour Transmission of Materials
- ASTM D2842 - Standard Test Method for Water Absorption of Rigid Cellular Plastics
- ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials
- CAN/ULC 701-11 - Standard for Thermal Insulation, Polystyrene Board and Pipe Covering (Type 2).
- CAN/ULC 716.1:2019 - Standard for Exterior Insulation and Finish Systems (EIFS) - Materials and Systems

Physical Properties

Lime-ROK panels exhibit physical properties as indicated in Table 1 when tested as represented.

Table 1

Physical Properties of LIME-ROK Wall Panels	
Property and Test Method	Value
Thermal Resistance per inch (25.4mm), ASTM C518 @75°F (24°F) mean temp., F ft ² .hr/Btu (m ² K/W), R-Value (RSI), min*	4.2 (0.74)
Foam Compressive Strength, ASTM D1621 @ 10% strain, psi (kPa), min	20 (152)
Water Absorption, ASTM D2842, % by volume, max	3.0
Water Vapour Permeance, ASTM E96, perm (ng/Pa.s.m ²), max	3.20 (183)
Foam Surface Burning Characteristics, ASTM E84, FSI (SDI)	≤25 (≤450)

Fire Protection

Lime-ROK wall panels are combustible; protect from open sources of ignition such as flames and other sources of combustion.

Additional Technical Tests

Tensile Bond Strength of Mortar Facing (i.e. Freeze/Thaw) - ASTM C666-15

- Pass: Remained intact after 100 freeze and thaw cycles. No cracking, spalling or other deleterious effects observed.

Impact Resistance - CAN/ULC 716.1:2019

- Pass: No perforations observed at 10 Nm

Water Absorption of Mortar Facing - CAN/ULC 716.1:2019

- Pass: 5% water absorption

Salt Spray Resistance - ASTM B117

- Pass: No cracking or flaking observed.

Handling & Storage

Until Lime-ROKs are adhered to a wall, they should be handled with care to avoid cracking. Do not step on or throw panels.

Panels can be stored by stacking one on top of another foam to foam and concrete to concrete.

Installation

Lime-ROKs can be installed over new or existing construction using a non-proprietary exterior grade polymerized adhesive. They are installed over an EIFS wall assembly. No mechanical fastening or structural support is required. For detailed installation instructions, visit our website.

Maintenance

Lime-ROKs are made of moisture resistant GFRC and sealed with a nano penetrating sealer. As a result, they do not require any further finishing on site and will not absorb dirt or moisture. If any dirt accumulates on their surface, they can be safely power washed.

Warranty

Warranty available. Please contact us for more information.

Technical Services

Styrok Inc. can provide technical information to help address questions regarding Lime-ROK's. Call 905.760.0770.





Styrok.

Contact

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