

WINDOW AND DOOR REPLACEMENT

# Ultrex<sup>®</sup> Fiberglass Advantage

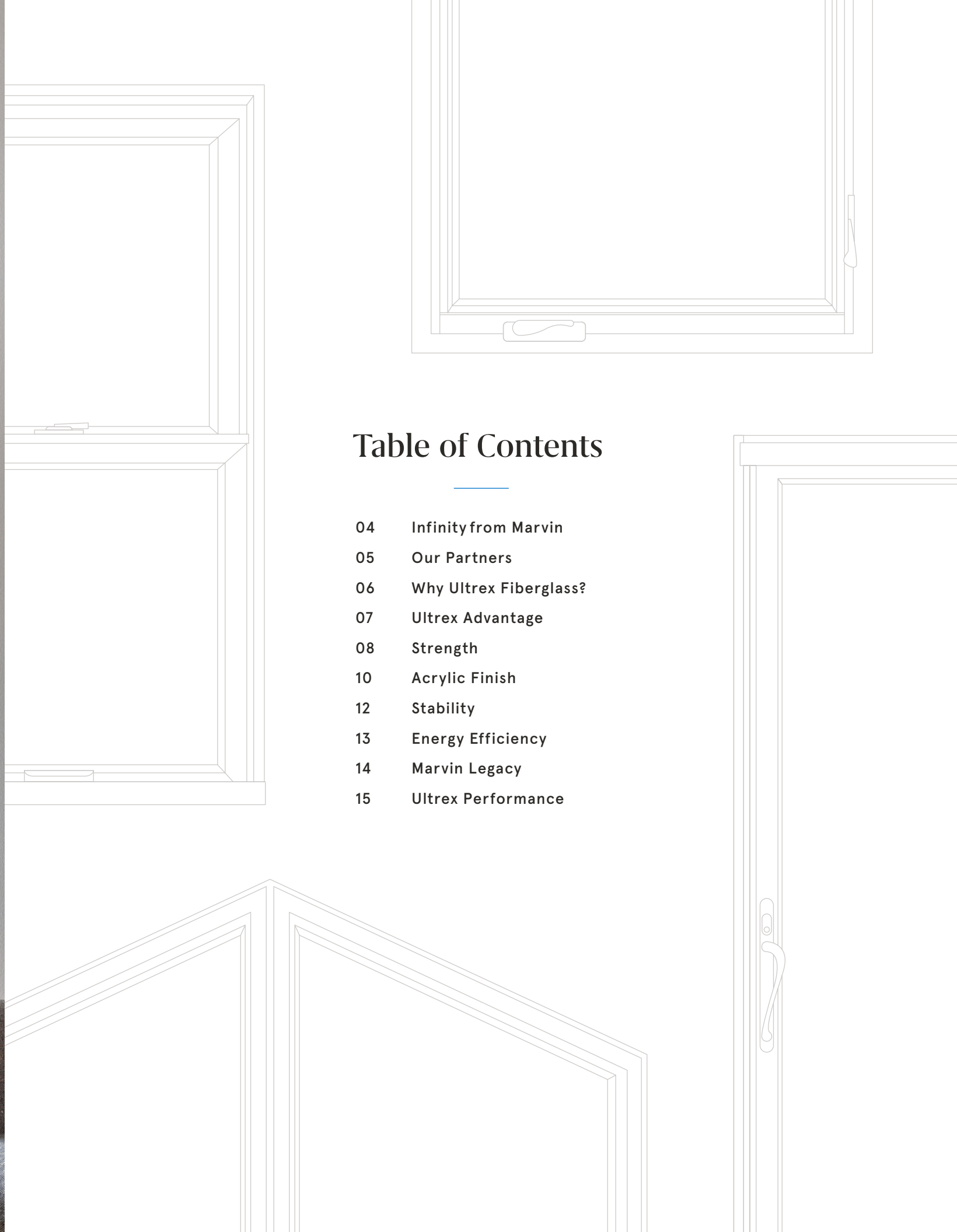
INFINITY<sup>®</sup>

from MARVIN

REPLACEMENT WINDOWS

*Built for life<sup>®</sup>*





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Infinity is Built for Life.®

OUR PARTNERS

## We only partner with local experts



### Hand selected

Infinity from Marvin hand-selects our independent retail partners for their decades of experience and service in your local community.



### Family values

Our partners are family-run enterprises that give back to your community. Their future business depends on your satisfaction.



### Expert guidance

Infinity's partners understand your unique local codes, climate considerations and installation needs.

“Infinity from Marvin is focused on providing you with a complete window replacement experience that always exceeds your expectations.”

We deliver on this promise by building Infinity windows and doors with Ultrex fiberglass so they outperform and outlast the competition to endure the test of time. We back your purchase with a Limited Lifetime Warranty<sup>1</sup> for ultimate peace of mind — because some decisions, like replacing your windows, should only be made once.”



Dan Marvin  
President — Infinity from Marvin

1. For full details on our Limited Lifetime Warranty, visit [infinitywindows.com](https://infinitywindows.com).





# Why Ultrex fiberglass?

We use fiberglass for our replacement windows and doors because it outlasts and outperforms other options. At Infinity we go even further with Ultrex – our proprietary fiberglass material that offers unsurpassed durability and timeless style.



**Infinity is Built for Life®**  
Fiberglass windows have a longer useful life expectancy than vinyl.<sup>1</sup>

- 01 Raw fiberglass strands**  
We start with thin strands of strong glass cables and saturate them with specifically compounded resins.
- 02 Pultruded fiberglass**  
We pull the strands through a heated die and cut them with diamond-edged blades to form Ultrex.
- 03 Proprietary acrylic finish**  
And top Ultrex off with our proprietary acrylic finish that is smoother and 3x thicker than the competition.

1. "Life cycle assessment of windows for the North American residential market: Case study" by the University of British Columbia. Scandinavian Journal of Forest Research, 2008.

## Material Comparison

### Ultrex vs. Vinyl Windows

Vinyl can warp and shift under everyday conditions – potentially making vinyl windows difficult to open and close and affecting their all-around performance. Ultrex resists swelling and warping so Infinity windows and doors will continue to easily open and close.

### Ultrex vs. Wood Windows

Wood windows offer classic beauty that, depending on the environment, can require maintenance and care. Ultrex captures the beauty of wood – without the maintenance.

### Ultrex vs. Fibrex® (vinyl/wood composites)

Vinyl/wood composites like Fibrex are 60% vinyl infused with wood fibers and struggle from the same durability and performance issues as their vinyl counterparts.

## ULTREX ADVANTAGE

# Infinity from Marvin uses Ultrex fiberglass — because the material you choose for your windows matters.



### Stands up to the pressure

Ultrex is 8x stronger than vinyl and has a low thermal expansion rate. It is heat resistant, non-corrosive and has low conductivity. The strength of Ultrex translates into exceptional stability, long-term ease of operation, low maintenance and superior performance.



### A finish that lasts

Infinity's proprietary acrylic finish is 3x thicker than the competition. No sanding, scraping or painting required. Our finish resists scratching and denting, and performs so well that we offer dark colors without fear of UV degradation or fading.



### A fit that never quits

Ultrex's low thermal expansion rate means that our windows and doors stay tight and true even after extreme temperature swings. By expanding and contracting at nearly the same rate as glass, Infinity windows made with Ultrex are more resistant to leaks and seal failures.



### An investment that pays

Ultrex's low thermal conductivity and superior performance combined with a selection of energy-efficient glazing options can help save money on your energy bills<sup>1</sup>.

1. Savings reflects installing ENERGY STAR certified products compared to non-certified when replacing single pane windows based on the average savings among homes in modeled cities. Actual savings will vary by product type, location, method of installation, individual home characteristics, local climate and conditions, utility rates and other factors. [https://www.energystar.gov/products/building\\_products/residential\\_windows\\_doors\\_and\\_skylights/benefits](https://www.energystar.gov/products/building_products/residential_windows_doors_and_skylights/benefits)



STRENGTH

## Stands up to the pressure

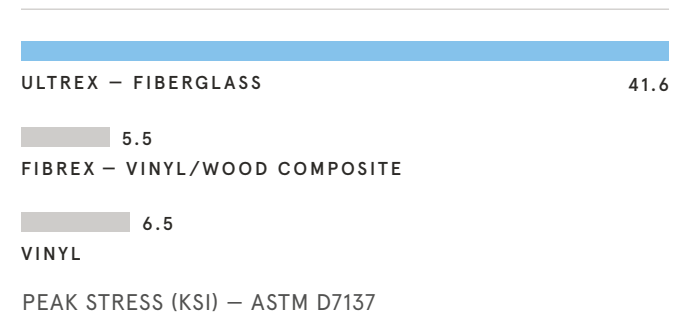
Compared to other materials, Ultrex is the strongest window framing material in the replacement industry. This means Ultrex resists bending and flexing under any conditions. That's confidence Fibrex® and vinyl simply can't match.

**8x**  
Ultrex is 8x stronger than vinyl.

**3x**  
Ultrex is 3x stronger than Fibrex.

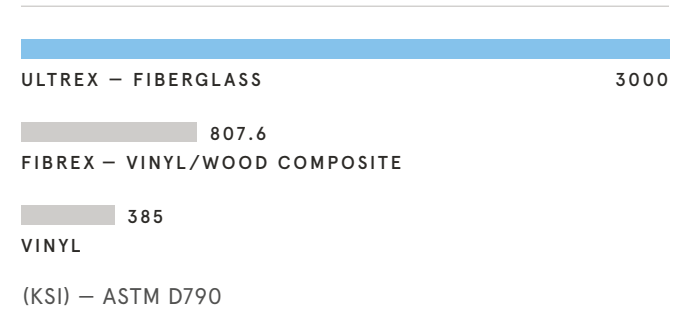
### Resists breaking under pressure

Stress-tested to the point of failure to avoid your stress being tested to anywhere near those levels.



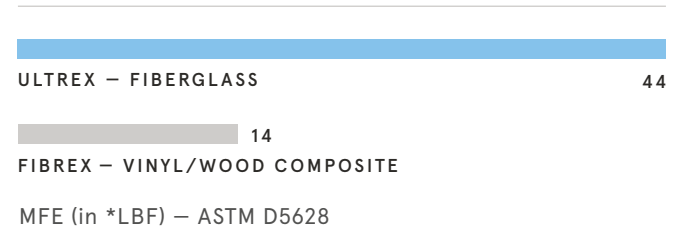
### Ultrex is 8x stronger than vinyl

Ultrex offers superior bend and flex resistance to protect the integrity of your home.



### Impact resistant

Ultrex fiberglass is built tough to take the hits – like wind, rain, hail, branches and even a direct hit from a baseball.

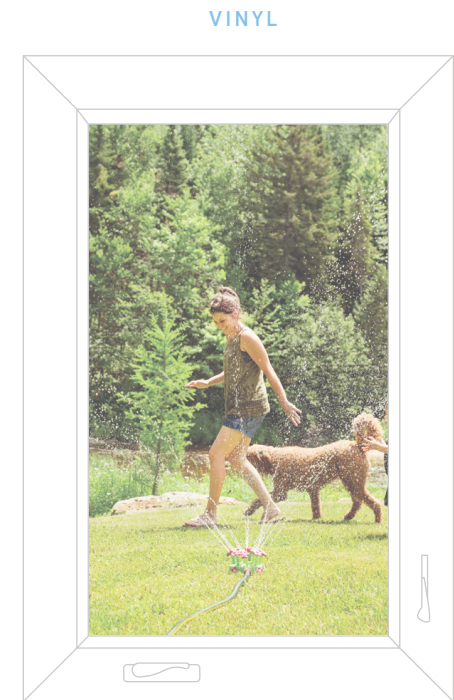


STRENGTH

## More view for your money

Because Ultrex is so strong, we actually use less of it in Infinity window frames. That means you get more daylight and greater views outside coming through your window, without bulky materials obstructing your view. And we pay attention to the details that matter – like our clean, non-welded, corners that let you make the most of your beautiful view.

**34,000**  
One square inch of our state-of-the-art Ultrex fiberglass can support 34,000 lbs.



## Why does strength matter?

- 01 Stronger material is highly impact resistant and able to handle whatever life throws at it.
- 02 Stronger windows bend and flex less. This helps maintain the seals and window operation, year after year.
- 03 Stronger material weathers better against everyday wear and stands the test of time.
- 04 Stronger material allows us to reduce the frame thickness for a bigger, more beautiful view.



**48,000**  
 48,000 hours of sun  
 can't fade the superior  
 finish of Ultrex  
 fiberglass. <sup>1</sup>

**What is an AAMA-verified finish?**  
 Infinity's Ultrex fiberglass finish is verified to the American Architectural Manufacturers Association (AAMA) 624 specification, making our finish best in class among fiberglass products. Achieving AAMA 624 verification means that our Ultrex finish has passed rigorous tests that simulate the harsh conditions a finish can encounter throughout the life of the window or door.

<sup>1</sup>. Average sunlight exposure per 10 years.

ACRYLIC FINISH

## A finish that lasts

### Industry's best fiberglass finish

Our proprietary Ultrex finish is the best in the industry – the first and only to have achieved AAMA 624 verification. Our finish performs so well that we offer dark colors without fear of UV degradation or fading.

### Beauty that lasts

Infinity's proprietary, high-performance, co-extruded finishing process is unlike anything else in the industry. Our thick, even acrylic finish is free of pinholes, striations and imperfections and will resist scratches, fading and chalking to retain its original beauty.

### A finish that resists fading

Want long-term color retention in a variety of styles? Ultrex uses an acrylic finish that is paintable, fade-resistant and virtually maintenance-free. With a finish that's 3x thicker than competitive options, Ultrex resists chipping, denting or peeling.



## Why does a superior finish matter?

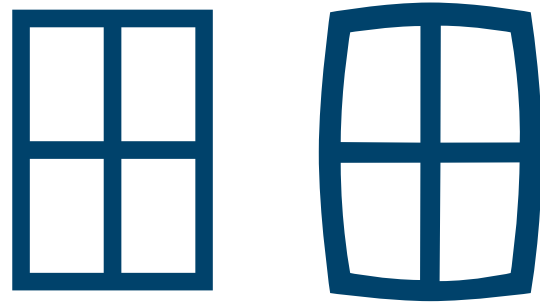
- 01 Our proprietary Ultrex finish resists scratches, chalking and fading even in dark colors.
- 02 100% paintable to match any home without impacting the protective properties of Ultrex.
- 03 Virtually maintenance-free – no sanding, scraping or painting.

STABILITY

## A fit that never quits

Constant expansion and contraction can gradually break down windows and doors, causing leaky seals, poor operation and loss of structural integrity.

Ultrex fiberglass expands at virtually the same rate as glass, so our windows stay tight and true. This makes Infinity windows resistant to leaks, seal failures and stress cracks that can compromise energy efficiency and long-term performance.



ULTREX STAYS TRUE

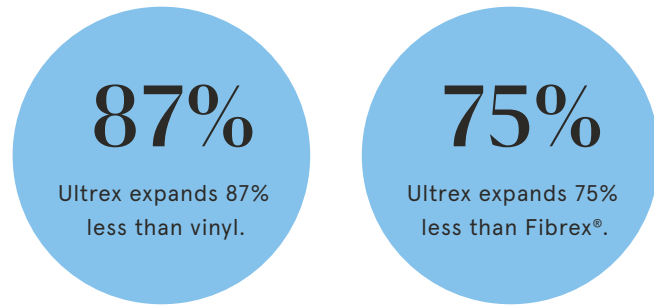
VINYL CAN EXPAND

### Ultrex can take the heat

Ultrex is a **thermoset** material that is cured and hardened into a shape, like concrete. This curing process is an irreversible chemical reaction, which means doors and windows made of Ultrex will not melt or lose their true shape, even when exposed to extreme temperatures of up to 285° F. It also means they perform in all types of weather.

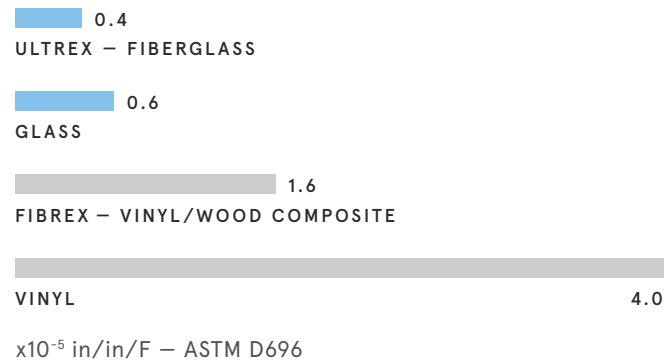
### Tight corners

Heat and cold can take their toll on vinyl and vinyl/wood composites, causing welded corners to fail. Windows and doors constructed with Ultrex maintain tightly mitered corners throughout changing temperatures.



### Ultrex is stable like the glass in your window

Vinyl expands at a much higher rate than glass which may compromise your window's performance.



### Vinyl can't take the heat

Vinyl and vinyl/wood composites are **thermoplastic** materials, which means they have the potential to change shape when they are exposed to extreme temperatures. Starting at temperatures of 163° F, vinyl could soften, melt, sag and deform. In the cold, vinyl could become brittle and break.



ULTREX MITERED CORNERS



VINYL WELDED CORNERS

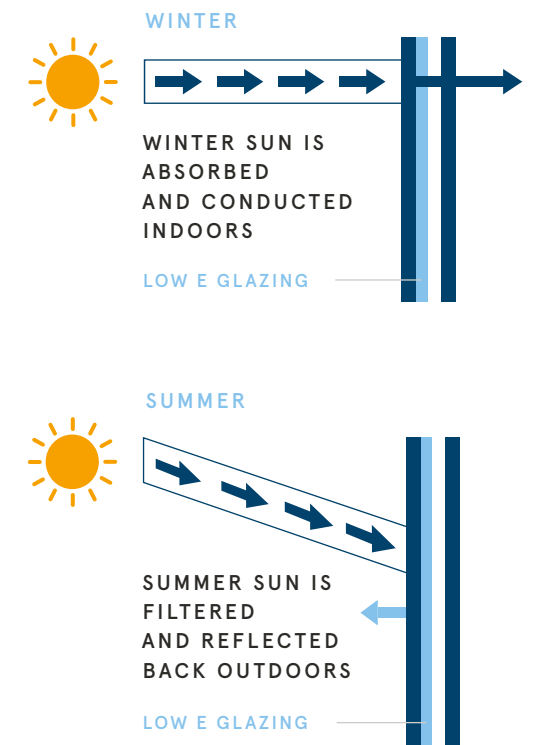
ENERGY EFFICIENCY

## An investment that pays

### Thermal conductivity

Windows and doors with low conductivity reduce heat loss in homes, which translates to lower energy bills. Ultrex is 5,000x less conductive than aluminum, so homes retain more heat in the winter and stay cooler in the summer.

Infinity dual-pane windows made from Ultrex with Low E glass coatings can reduce window heat loss in winter and heat gain in summer. Infinity products are ENERGY STAR® qualified.<sup>1</sup> Choose our ENERGY STAR certified windows and doors to save on energy bills when replacing single pane windows.<sup>2</sup>



Infinity windows and doors combine the low conductivity and superior performance attributes of Ultrex with a selection of energy-efficient glazing options to deliver ENERGY STAR certified solutions and beyond.

1. ENERGY STAR at [energystar.gov](http://energystar.gov)  
 2. Savings reflects installing ENERGY STAR certified products compared to non-certified when replacing single pane windows based on the average savings among homes in modeled cities. Actual savings will vary by product type, location, method of installation, individual home characteristics, local climate and conditions, utility rates, and other factors. [http://www.energystar.gov/products/building\\_products/residential\\_windows\\_doors\\_and\\_skylights/benefits](http://www.energystar.gov/products/building_products/residential_windows_doors_and_skylights/benefits)

## Why does energy efficiency matter?

01

Ultrex's low expansion rate allows Infinity windows and doors to resist seal failures that can compromise energy efficiency.

02

Ultrex helps keep heat inside during cooler weather and block the sun's rays during warmer weather.

03

Ultrex combined with Low E glazing options can help reduce energy bills.

# Ultrex Performance

The characteristics that separate Ultrex from other windows and doors truly make it Built for Life®. That's why we build Infinity windows and doors with Ultrex.

## Infinity. Living up to the Marvin legacy.

Marvin is proud to have provided customers across the U.S. with quality windows and doors for over 100 years. But we're not content to rest upon our heritage. We created Infinity from Marvin to provide customers with a new way to shop for replacement windows – centered on providing our customers ease, confidence and a quality experience every step of the way.



	VINYL	VINYL/WOOD COMPOSITE (FIBREX®)	ULTREX FIBERGLASS
THERMOPLASTIC/THERMOSET	THERMOPLASTIC	THERMOPLASTIC	THERMOSET
REINFORCEMENT	NONE	WOOD FIBER	GLASS FIBER
HEAT DEFLECTION TEMPERATURE	163° F	173° F	285° F
TENSILE STRENGTH	6.5 ksi	5.5 ksi	41.6 ksi
FLEXURAL MODULUS	385 ksi	807.6 ksi	3000 ksi
CTE (X10 <sup>-5</sup> in/in/F)	4.0	1.6	0.4
SURFACE FINISH	PVC	PVC, POLYESTER URETHANE, ACRYLICS	ACRYLIC (AAMA VERIFIED)
COATING HARDNESS	NA/SUBSTRATE	B (HARDNESS) 15.00 (BARCOL)	H (HARDNESS) 35.03 (BARCOL)
THERMAL CONDUCTIVITY <sup>1</sup>	.10	.13	.12
IMPACT RESISTANCE	NA	14 MFE (in * lb <sub>f</sub> )	44 MFE (in * lb <sub>f</sub> )

**References:** Stork Technimet/Testing Corporation: #0602-15293, #0512-14889, #0704-19702, #TCT006638P. Precision Measurements and Instruments Corporation: #13043-DS. Tecton: #ESP010521P. "Test Results for Fibrex and Ultrex". Plastics Engineering Handbook of the Society of Plastics Industry, Inc. Fifth Edition. Andersen Fibrex Manual: "A High Performance, High Value Biofiber Polymer Composite Technology". Renewal by Andersen: "Fibrex Material: A Better Alternative, A Better Window".

1. Highest rate of thermal conductivity shown. Test results range from .10-.13 for vinyl/wood composite (Fibrex) and .09-.12 for Ultrex.



# Still curious about Ultrex? We can help.

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Choosing the right replacement window and door material for your home can seem challenging, but we think the benefits of Ultrex® will make your decision easier. We know replacing your windows is an investment of your time and money, and our local independent partners are ready to help. Thank you for considering Infinity from Marvin for your home.

Call 1-888-206-1332 for the Infinity from Marvin local independent partner nearest you. In Canada, call 1-800-263-6161. Or visit us at [infinitywindows.com](https://infinitywindows.com).

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**INFINITY**®  
from **MARVIN**  
REPLACEMENT WINDOWS  
*Built for life*®