

WHY GEALAN

ENGINEERED IN GERMANY · MANUFACTURED IN THE USA

Why GEALAN windows outperform many of the products on the market — by engineering, not marketing.

THE MATERIAL

“uPVC” and “vinyl” are the same polymer — not the same product

The base material is identical PVC. The difference is engineering, not chemistry.

TYPICAL US VINYL

2–3 hollow chambers, thin walls, minimal reinforcement, hung operation — built to a price point.

GEALAN UPVC

Multiple chambers, steel reinforcement, fusion-welded corners, tilt-turn / inswing & outswing doors / sliding doors — built to a performance spec.

ALUMINUM

Strength and slim sightlines — but conducts heat roughly 1,000× more than PVC (≈ 237 vs. ≈ 0.17 W/m·K).



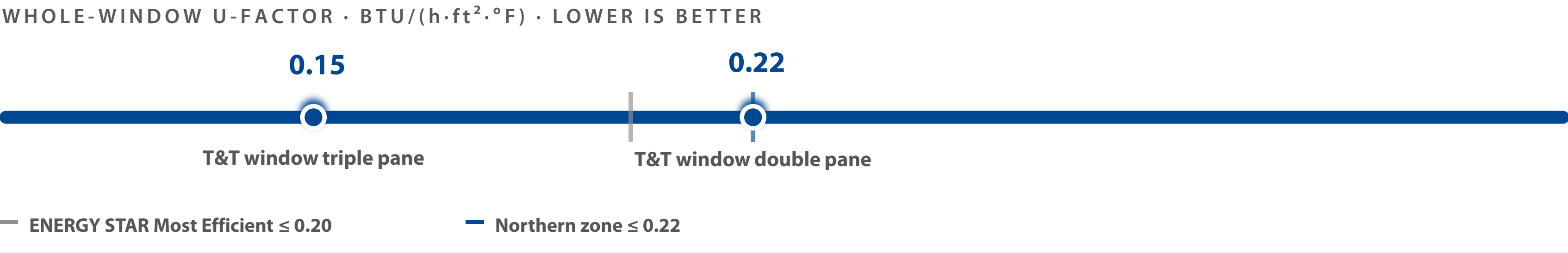
GEALAN vs. typical vinyl vs. aluminum

	GEALAN uPVC	Typical US vinyl	Aluminum (thermally broken)
U-factor — triple	Up to 0.15	~0.18–0.20 (premium only)	~0.30s (best-in-class)
U-factor — double	Up to 0.22	~0.27–0.30	~0.45–0.65 typical
Frame chambers	6	2–3	thermal break only
Reinforcement	Steel	Minimal / none	Inherent (metal)
Corner joints	Fusion-welded	Welded (quality varies)	Mechanical / screwed
Operation	Tilt-turn, fixed	Single / double-hung, slider	Varies
Structural rating	up to CW-PG105 or AW-PG70	typ. R / LC-PG15–PG35	High (LC–CW)
Acoustic (STC)	up to 47	~26–32	~28–35

U-factors in BTU/(h·ft²·°F); lower is better. GEALAN's double-pane (0.22) already beats typical vinyl double-pane and meets ENERGY STAR's toughest zone — before stepping up to triple. Competitor figures are typical-market, not best-available.

Clears ENERGY STAR’s toughest zone — with room to spare

ENERGY STAR 7.0 set the Northern-zone limit at $U \leq 0.22$ ($SHGC \geq 0.17$). The “Most Efficient” tier — the one earning the federal tax credit — requires $U \leq 0.20$ and $SHGC \leq 0.25$.



0.15 BTU/(h·ft²·°F)

TILT & TURN
WINDOW

0.15 BTU/(h·ft²·°F)

INSWING/OUTSWING
DOOR

0.17 BTU/(h·ft²·°F)

GEALAN-SMOOVIO®
SLIDING DOOR

0.18 BTU/(h·ft²·°F)

LIFT & SLIDE
SLIDING DOOR

STRUCTURAL

Reinforced uPVC that meets Architectural Window requirements

**AW-
PG70**

**CW-
PG105**

Standard steel reinforcement is the structural backbone: it lets uPVC span large openings and resist high design pressures that typical vinyl can't reach.

AW-class structural performance — at a price below aluminum.



AIR & WATER TIGHTNESS

Sealed with gaskets, not brushes

GEALAN-LINEAR® system seal with continuous EPDM rubber gaskets, not brush or pile weatherstrip. Brushes leak air and water; compressed rubber doesn't.

01

Exterior gasket

First weather seal against wind-driven rain.

02

Center gasket

Pressure-equalized drainage zone between in and out.

03

Interior gasket

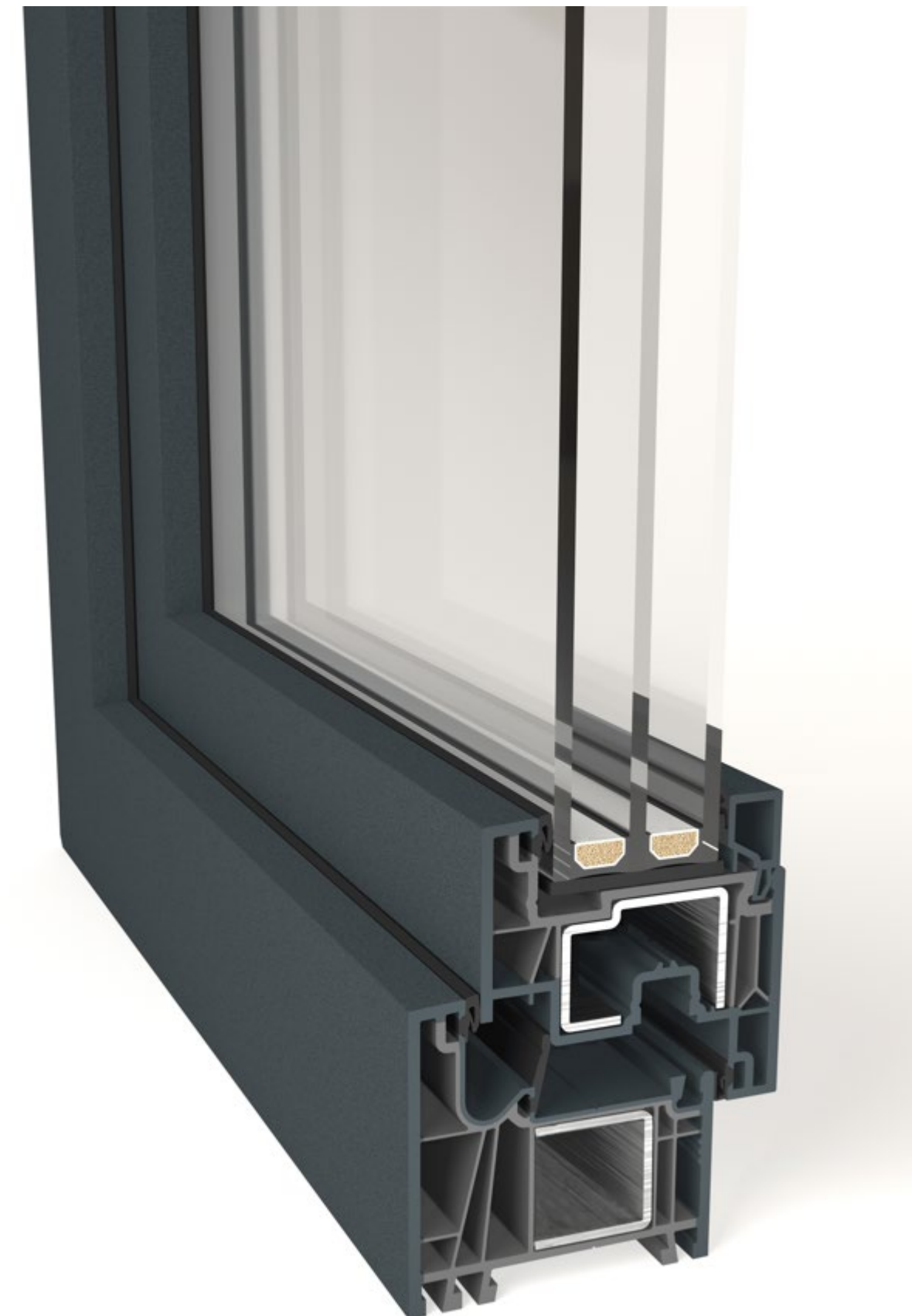
Inner air-tightness seal for comfort and condensation.

0.05

AIR INFILTRATION · CFM/FT²

15.04

WATER RESISTANCE · PSF



ACOUSTIC PERFORMANCE

Genuine noise control

Up to 47_{STC} **Up to 37_{OITC}**

Typical US vinyl double-hung lands around **STC 26–32**. The 6-chamber profile plus full-perimeter gasket compression damps both airborne and low-frequency traffic noise.



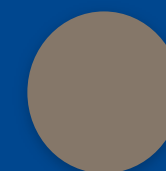
The aluminum look, the uPVC performance

In the US, aluminum reads sleek; vinyl reads bulky and cheap. GEALAN breaks that — slim sightlines, large glass area, and dark matte acrylcolor and foil finishes deliver the aluminum aesthetic with premium uPVC numbers behind it.

FIVE COLORS SOCKED IN USA



White



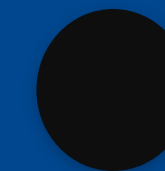
Sandstone



Anthracite Grey



Dark Bronze



Black Smooth

SLIDING SYSTEMS

Tilt & Slide **GEALAN-SMOOVIO®** and Lift & Slide — built big, built flexible

GEALAN-SMOOVIO® Up to **157"** wide (OX/XO), **196"** wide (OXXO), up to 96" tall.
CW-PG50.

LIFT & SLIDE S9000 frame up to **255"** wide and 108" tall;
sash up to 118" wide.



How far GEALAN goes — versus the market

	GEALAN reinforced uPVC	Typical market product
Windows — single fixed element	up to 137" × 137" · ≈75 ft²	~60" × 80" vinyl; larger spans need aluminum
Windows — operable (Tilt & Turn)	up to ~26 ft² per sash	~12–15 ft² hung / casement
Inswing / Outswing doors	up to 8'0" (96") tall	~6'8" (80") standard
Sliding — GEALAN-SMOOVIO®	up to 13.1' × 8' (157" × 96")	~6' × 6'8" vinyl patio slider
Sliding — Lift & Slide	up to 21.4' × 9' (255" × 108")	Aluminum-only territory

Large-format openings normally associated with aluminum — delivered in reinforced uPVC.

THE POSITION

Reinforced uPVC: AW performance, below aluminum cost

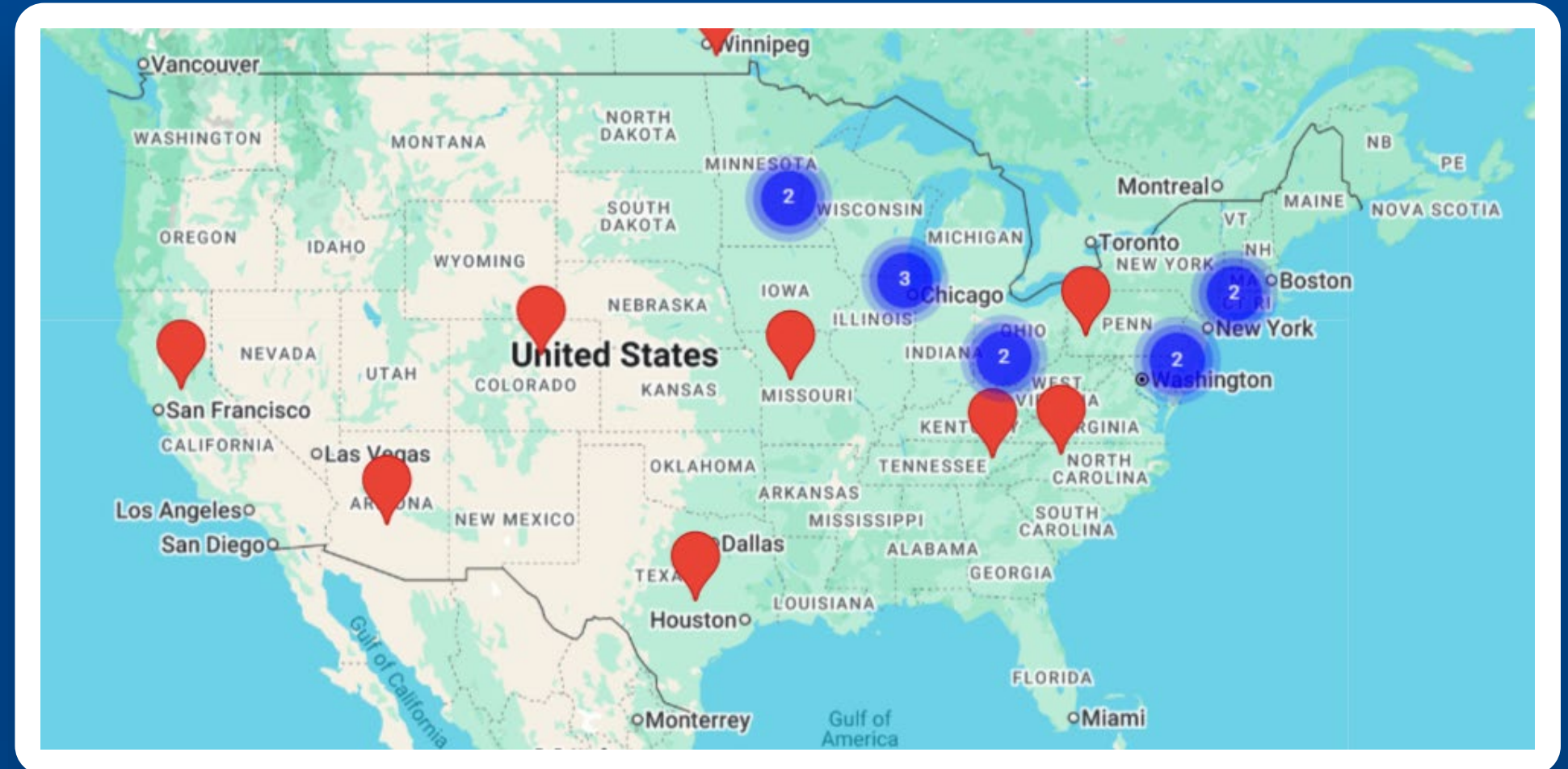
- 01** Outperforms typical vinyl on thermal, structural, acoustic and sealing — by engineering, not marketing.
- 02** Meets Architectural Window (AW) structural requirements with standard steel reinforcement.
- 03** Matches or beats thermally broken aluminum on thermal performance — without the price premium or its corrosion and condensation exposure.
- 04** One profile family: windows, inswing doors and large sliding systems — Passive House to commercial.

Engineered in Germany · Manufactured in the USA

WHERE WE BUILD

Engineered in Germany. Manufactured in the USA.

Window and door systems fabricated across a nationwide network of U.S. locations.



U.S. manufacturing footprint