

ULTRAFAB BRUSH SEALS

Comprehensive Sealing Solutions for Every Window and Door Application

OVERVIEW:

Ultrafab's pile weatherseals are crafted using advanced ultrasonic welding technology, ensuring a durable, unified product that won't deteriorate during fabrication or use. This process eliminates the risk of off-center pile that could bind, break, or stretch. Each pile type features "pile directors" that assist in maintaining the pile in a vertical position, reducing loss of functional height.

The solid polypropylene backing allows for effortless insertion into prefabricated extrusions, whether manually or using Ultrafab's proprietary insertion technology. With strict quality assurance and meticulous attention to detail, Ultrafab's products are uniform and consistent. As a result, manufacturers can rely on a secure seal that effectively blocks air and water while maintaining low operating forces.



TRI FIN®

DESCRIPTION: The TRI FIN weatherseal is a high-performance solution for all windows and doors, including patio doors, offering superior sealing and insulation. With three integrated fins, it reduces air and water infiltration, improves energy efficiency, and decreases outside noise by up to 25% compared to single-fin options. The adaptable design allows the outermost fins to be positioned among or outside the pile fibers to suit various needs. Available in ULTRA FIN® for durability or ULTRA SOFT FIN® for smooth, quiet operation, this weatherseal combines innovation and versatility for exceptional functionality in residential and commercial applications.



FIVE FIN™

DESCRIPTION: The FIVE FIN weatherseal is a durable and advanced solution for windows and doors offering exceptional performance in acoustical and high-traffic commercial applications. Five integrated fins provide superior sealing, reducing air and water infiltration while significantly minimizing noise. Available in ULTRA SOFT FIN® for low-friction, smooth operation, this weatherseal combines innovation and versatility to meet the demands of both residential and commercial settings.



ULTRA TECT®

DESCRIPTION: ULTRA TECT is a durable option for high traffic commercial and architectural applications, such as entrance doors and service windows. Offering a fully customizable solution to meet unique requirements beyond Ultrafab's standard product lines. This includes high density options, adjustments to backing widths, brush heights, and brush mixes, such as combining monofilament and yarn fibers, as well as precise modifications to dimensions and tolerances. Designed for specialized projects, these tailored features ensure optimal performance in diverse and demanding environments.



ULTRA PILE®

DESCRIPTION: ULTRA PILE is a versatile sealing solution composed of a durable backing and a brush-like pile that together form an effective barrier against insects and larger particles of debris. The backing provides stability while the pile fills gaps for optimal protection. Commonly used in screens, windows, and storm doors, its innovative design and adaptability make it a key feature in residential and commercial applications.



ULTRA FIN®

DESCRIPTION: ULTRA FIN is a clear finned pile weatherseal designed to enhance the performance of all types of windows and door systems. Its integrated fin minimizes air and water infiltration, helping to maintain indoor comfort and reduce energy loss. Additionally, it effectively reduces outside noise, contributing to a quieter living environment. ULTRA FIN combines durability, practicality, and efficient sealing to meet modern demands for comfort and functionality in residential or commercial spaces.



ULTRA SOFT FIN®

DESCRIPTION: ULTRA SOFT FIN is a non-woven finned weatherseal that enhances the functionality of windows and doors. This low-friction, non-woven fin ensures smooth and quiet operation. Available in multiple color options the integrated fin effectively reduces air and water infiltration while minimizing noise with performance equal to ULTRA FIN. Designed for durability and optimal performance, it provides energy efficiency and improved aesthetics making it a reliable choice for residential and commercial applications.



ULTRA PLUG®

DESCRIPTION: ULTRA PLUG is a versatile solution designed for unique window and door applications, where T-slots or kerf designs fall short. Offered with adhesive-backed options for easy installation. The row-oriented, rigid-backed versions are made with durability and customization in mind. Flex-backed versions specialize in irregular surfaces and have the ability to wrap corners, sealing multiple planes. For specialized needs, custom shapes and holes can be created using advanced techniques like steel dies and laser cutting. This ensures a precise fit around features such as protruding hardware.



Q SERIES

DESCRIPTION: Ultrafab's diamond or square base skirt weatherseals provide a modern, efficient alternative to metal-backed designs. These weatherseals ensure protection against air and water infiltration, improve energy efficiency, and adapt to various profiles for residential, commercial, and architectural applications. By eliminating metal backing, they reduce weight, simplify installation, and avoid corrosion issues, delivering a versatile and reliable solution for high-quality sealing systems.



ANGLE PILE

DESCRIPTION: The ANGLE PILE is a monofilament and/or fiber mixed pile weatherseal. It is a specialized solution for roll screens, bug seals, ventilating seals, and water management, combining monofilament strands and fiber pile for durability and performance. The monofilament locks securely into the metal or fiber screen grid, while the fiber pile holds the screen in place and enhances the insect barrier. Available in 45°, 60°, and 75° configurations, it ensures versatility and seamless integration into various systems, making it ideal for residential and commercial applications requiring airflow and water movement control.



ASTRAGALS

DESCRIPTION: Heavy-duty commercial door astragals are built for durability and easy installation on existing commercial doors. Made from mill-finished extruded aluminum with Q Series weatherseal featuring an integrated fin, they effectively seal gaps to reduce sound, water, debris, and air leaks. Designed for retrofitting, they include stainless steel screws and pre-punched spring tensioners for efficient and secure installation. This product is a reliable solution for enhancing door functionality and energy efficiency in commercial settings.



INSERTION EQUIPMENT

Ultrafab's insertion technology streamlines weatherstripping installation at either the point of fabrication with offline insertion, or extrusion with online insertion.

Online Insertion installs weatherstripping into vinyl profiles as they are being extruded. Custom tooling can be made to fit your specific profiles, and installation/training is provided by our in-house insertion specialists. Our newest Gen 3 tooling makes online insertion a simple process, reducing downtime and service calls.



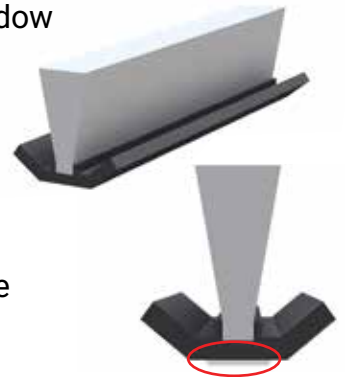
Offline Insertion can be done at the point of fabrication. Our Pile Insertion Machines (PIMs) automatically insert weatherstripping into aluminum or vinyl lineals at speeds of up to 6 feet per second—boosting productivity by up to 70% compared to manual insertion. Built for durability, the machine ensures safe, reliable operation with tamper-proof fasteners and full guarding. It's fully customizable for all extrusion shapes and automatically cuts to preprogrammed lengths.

All of our insertion equipment comes with on-site training and technical support, and qualifying customers can access equipment on loan.



PILE WEATHERSEAL OPTIONS

ULTRA PRO® - This U-shaped backing option is available across all product lines. Allowing for on-line insertion in extrusion and pultrusion applications, securing the weatherstrip in place to prevent fallout during window fabrication and eliminating the need for both staking and manual insertion. The backing size is customizable to accommodate different T-slot geometries.



Patent No. 8,769,876

ULTRA FILL® - ULTRA FILL is a semi-rigid material that is added to the bottom of the ULTRA PRO U shaped backing to increase friction once pile is inserted into a profile. This high friction material aggressively eliminates movement of the pile during window processing. This process meets the demands of deep T-slot configurations while ensuring zero pull from the end of the profile to eliminate waste during cutting operations.

GOLD SERIES™ - The Gold Series™ weatherseal is designed for extreme weather conditions, offering durability and high resistance to mold, mildew, and fungus. It allows the use of black, white or grey pile, previously unsuitable for demanding environments, and is available in ULTRA SOFT FIN® and ULTRA FIN® versions. With specially marked backing every 12 inches, it ensures complete protection for fenestration products against harsh elements like sunlight, coastal exposure, humidity, and snow.

ULTRA REACH® - A longer-reach finned weatherseals offers extended sealing capabilities for inconsistent nominal gaps, providing an effective barrier against air, water, and noise infiltration. Available in ULTRA FIN® for durability or ULTRA SOFT FIN® for smooth operation, these weatherseals ensure adaptability and enhanced performance in variable applications.



ULTRA LOC® - Ultrafab's backing option features alternating tabs on both sides to secure the backing in place, even when T-slots are slightly oversized. It comes in three versions: S7 with .015" tabs, S9 with .025" tabs, and S10 with .030" tabs, ensuring adaptability to different applications and tolerances.



ADHESIVE BACKED- For applications without T-slots or kerfs, Ultrafab offers adhesive-backed solutions, including standard PSA, foam padded PSA and VHB (Very High Bond) PSA. These adhesives ensure secure bonding and adaptable performance for various residential, commercial, and architectural needs.

EXTRUDED BASE MOUNTED- Ultrafab's pile weatherseal technology is ideal for kerfs, retention slots, recessed grooves, or non-standard T-slot applications, ensuring secure and effective sealing in unique retention areas. Using ultrasonic welding to attach the brush to an extruded base, it provides durability and reliable performance. Available across Ultrafab's entire weatherseal range, this solution addresses diverse challenges while enhancing functionality and energy efficiency in residential, commercial, and architectural projects.



ULTRASONIC VS LOOM BASED WEATHERSEAL COMPARISON

Ultrafab's ultrasonic welded pile weatherstrip offers many benefits over loom based weatherstrip. The extruded backing allows for tighter tolerances when specifying backing widths and thicknesses. The welding process ensures consistent centered pile that is supported by innovative pile directors, reducing loss of functional height and ensuring sealing capabilities over time. All pile products feature a spin finish coating preventing water absorption into the seal.

DETAILS AND FEATURES	ULTRAFAB'S ULTRASONIC PILE	LOOM BASED PILE
Backing Material	Solid extruded polypropylene	Polypropylene coating over woven textile
Fibers	Polypropylene	Polypropylene
Fiber Coating	Silicone - repels water	Not always silicone- may be neat oil, some products absorb water
Backing Widths	Very precise due to extrusion process deployed	Slit backing from large bands or webs and can vary
Pile Directors	Vertical polypropylene feature that results in legs left and right of pile fibers - reduces loss of functional height of pile over time	None, not feasible with loom process deployed
On Center Pile	Ultrasonic process deployed, extruded backing and pile directors results in consistent on center pile.	Can vary due to slitting of a large band or web of material into individual pile rows
Compression Set	Minimal loss of functional height due to high quality fibers used and pile directors	Can vary due to fiber quality and no pile directors
Weatherability and Color Hold	Excellent - Class A performance per FGIA standard in all colors. Passes four full cycles of UV weathering, condensation and heat	Inconsistent and can vary by color and manufacturer due to raw materials use in fibers and the quality of the additives used with polypropylene
Insertion into Profile	Excellent due to solid PP and pile directors	Can vary due to coated backing and centering of pile on backing and no pile directors so fibers not vertically orientated can create friction
Fiber Fallout	Rare due to ultrasonic welding process deployed	Can vary due to weaving process and pattern used on loom and success of the secondary coating process
Backing Options	Wide range available due to solid PP backing	Limited due to textile based backing

Note: All Ultrafab pile products meet an FGIA class A performance level under the Weatherseal 701-2023 standard

ULTRAFAB'S VALUE-ADDED TEST LAB SERVICE

Our test wall capability performs air resistance testing and simulates wind-driven rain. The wall is made from corrosion-resistant aluminum, stainless steel, and polycarbonate, and it can be used to test air leakage and water penetration in a product.



DESIGN ASSISTANCE

There is no standard sealing system that works for all applications. Ultrafab's Specialty Products Division provides innovative and timely solutions for a wide range of applications. We have on-site engineers and product development staff ready to help determine the exact solution for your needs.



ALSO FROM ULTRAFAB

Extruded Weatherseals

Comprehensive Sealing Solutions for Every Window and Door Application

ULTRA CELL® - These seals are made from a proprietary Microcellular Closed-Cell TPV Foam, providing excellent compression set resistance and minimizing both short-term and long-term loss of functional height. These seals offer superior durability & tear resistance, especially in harsh environments.



MULTI-HOLLOW BULB SEALS- Multi Hollow Bulb seals

feature a dual-bulb design with an inner bulb that is designed to engage when the part is at 25% compression. This unique design significantly reduces initial closing forces and with excellent long term compression set resistance due to the outer bulb being supported by the inner bulb.



UCX™ SEALS- UCx seals are designed with a TPV bulb and a coextruded polypropylene base. These seals are available in a wide variety of profiles, including T-slot and Kerf mount, with both single durometer TPV and PP options. UCx seals incorporate Ultra Glide®, a silicone additive blended into the TPE that reduces surface friction.

