



Tedlar® Clear Overlaminates for Graphics and Signage



Tedlar® Offers:



Best-in-class outdoor durability of clear overlaminate films



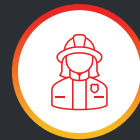
Protection from UV light and moisture for >12 years, even in the harshest sub-tropical environments



Dirt-shedding and easy clean graphics, graffiti is easily removed without damage



Resistance to the growth of mold and mildew in moist environments



Simple application and safe for use in indoor and outdoor environments

World-class durability outdoors



Preserve and protect branding in challenging outdoor environments.

Outdoor environments are particularly harsh on printed materials. Colorful inks fade when exposed to oxygen, moisture, and UV light. Transparent overlaminates are designed to extend the lifetime of the print by providing a moisture and oxygen barrier that also blocks UV light. Most transparent overlaminates lose their UV protection, transparency, and strength when left outdoors for several years, turning yellow and brittle.

The answer to those challenges is Tedlar®.

Tedlar® clear films have been tested and proven to last:

20+ years in temperate climates

12+ years in vertical applications in sub-tropical climates

Tedlar® PVF film is specifically designed for premium durability in demanding environments, and is incredibly durable and resistant to moisture and sun damage. The transparent overlaminate films are specifically designed to maintain their mechanical properties and resist color change, keeping the surface free from yellowing or mudcracking.



Testing in South Florida

Tedlar® free-standing films and laminates were set facing south at a 45° angle to receive maximum exposure to the elements. After 6 years, the films are still at full strength with outstanding UV blocking, transparency, low color change, and high mechanical property retention. Printed laminates on PVC also look outstanding, with minimal color change in printed and non-printed areas and no mudcracking even under a microscope.

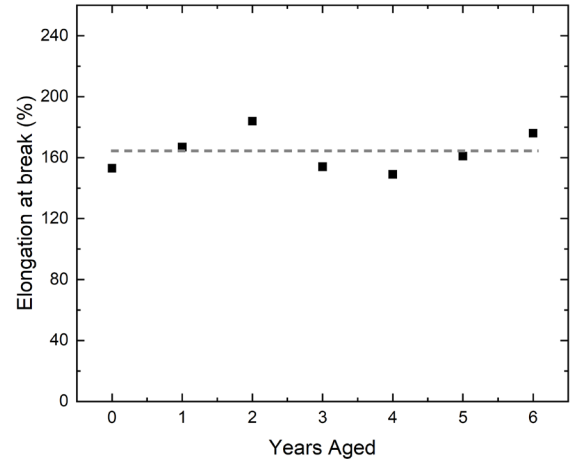
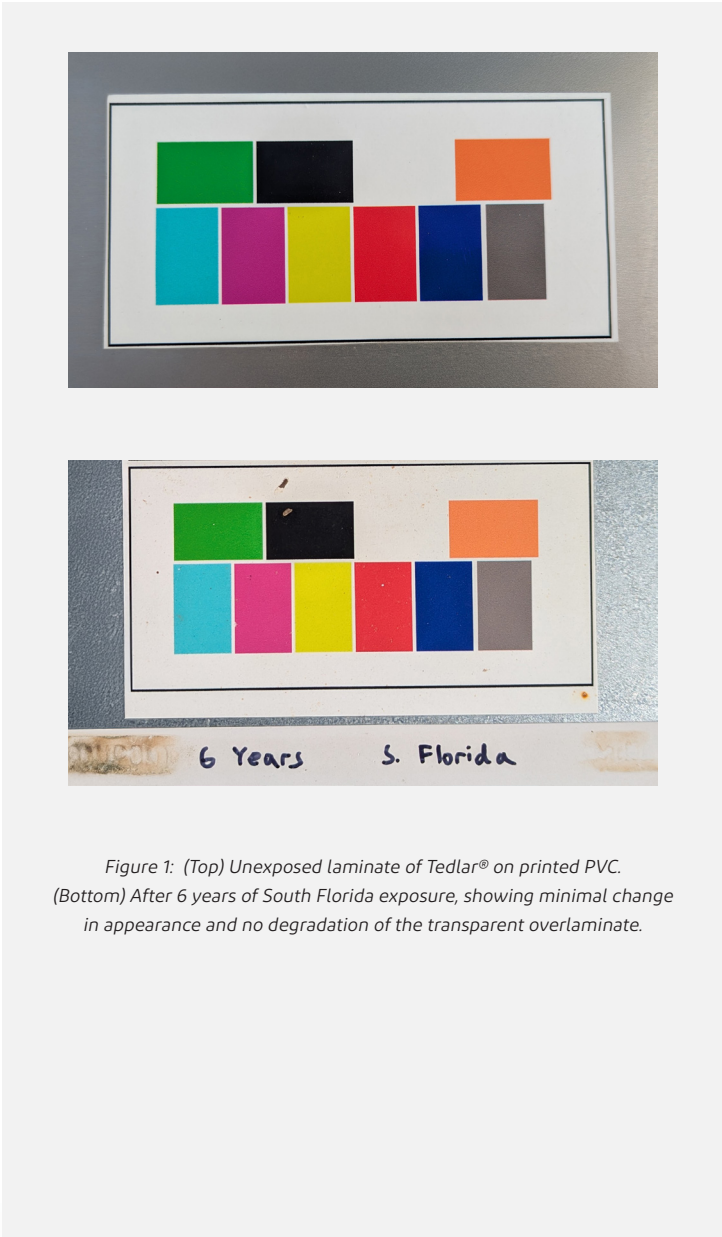


Figure 2: Mechanical properties are consistent even after 6 years of aging in south Florida

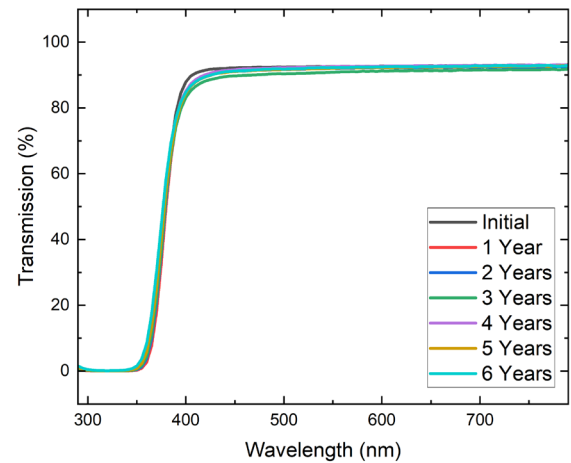


Figure 3: Light transmission spectrum for transparent Tedlar® film, showing consistent good transmission of visible light even after 6 years in South Florida.

	Elongation at Break	Color Change	Optical Transmission
Before Aging	165%	—	94.5%
6 Years S. Florida	166%	1.43 ΔE ₉₄	93.9%

Table 1: The optical and mechanical properties of the Tedlar® transparent overlamine film are not affected after 6 years of South Florida exposure as a free-standing film.

Keeping it Clean.

Laminates made with Tedlar® clear overlaminate film stay clean, so graphics look new for longer. The fluoropolymer film is dirt-shedding, and does not promote the growth of mold or mildew.

Additionally, since the films are extremely chemically resistant, they are easy to clean with a wide variety of detergents and solvents without any risk of damaging the film or the graphic beneath. Typical outdoor contaminants, such as dirt or bird droppings, are easily removed with water and a cloth. Graffiti can be easily removed without any residue or ghosting left behind. Competitor materials may be stained with common graffiti instruments such as permanent marker, but Tedlar® remains pristine after cleaning with solvent.

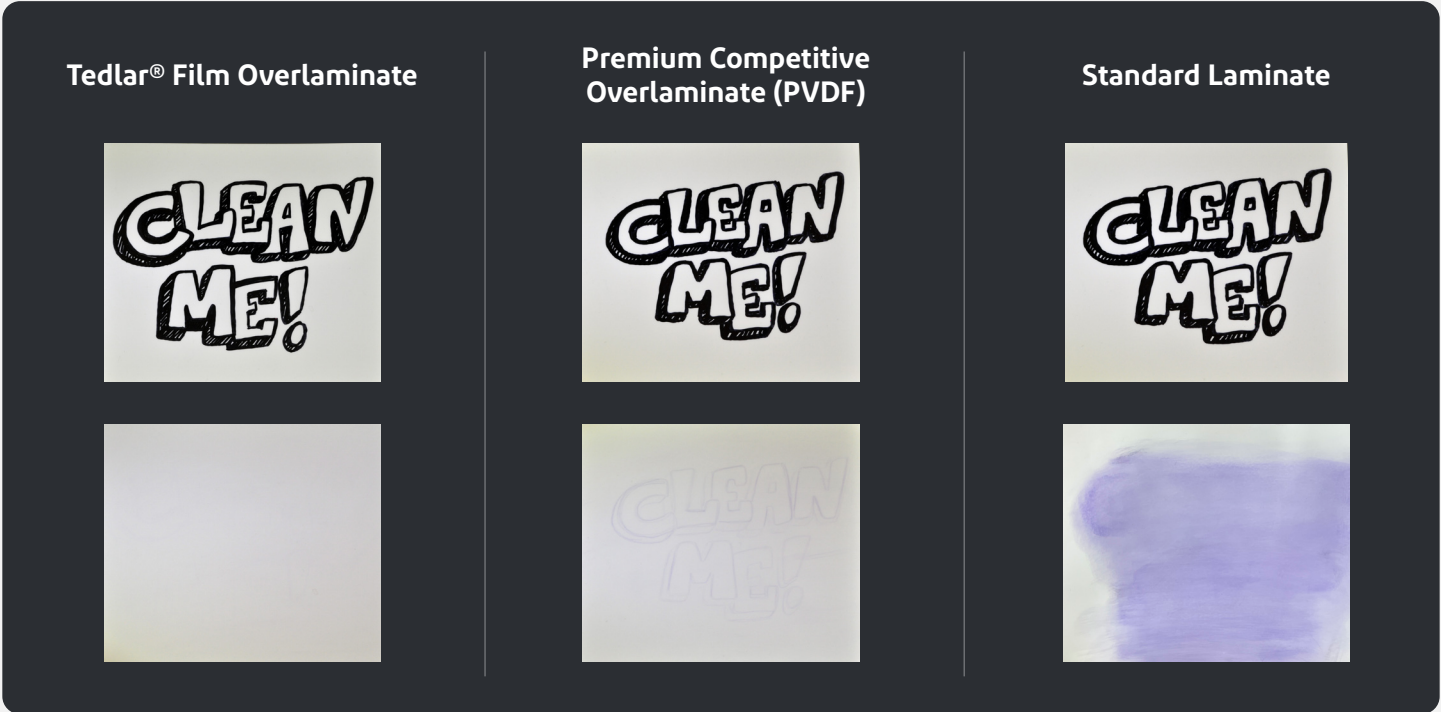
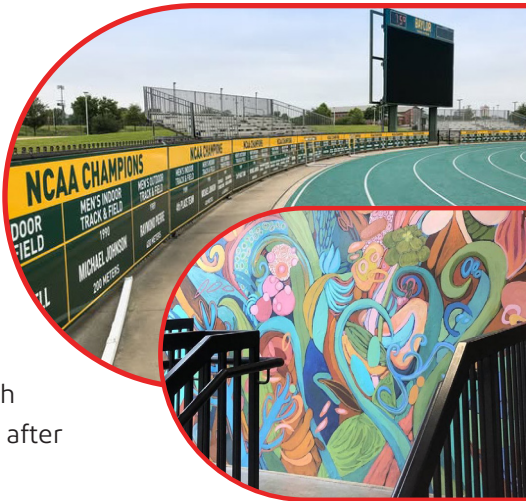
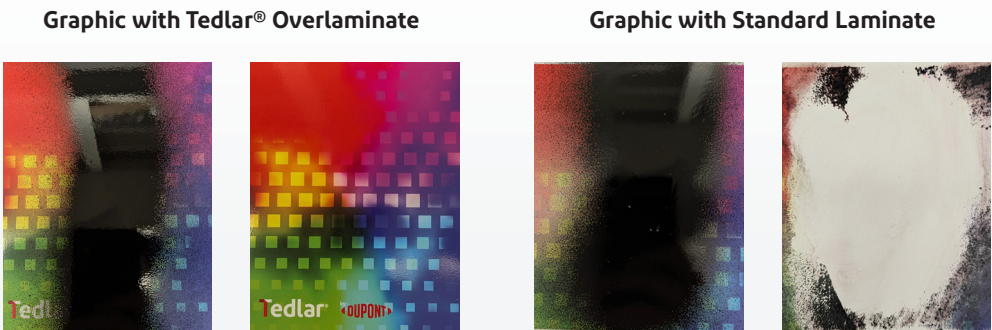


Figure 4: Laminates protected by Tedlar® and PVDF overlaminates, as well as a standard laminate, were written on with permanent marker. The marker was allowed to dry, then removed with solvent. Tedlar® panel shows no ghosting or ink penetration into the film, while PVDF film was permanently stained by the marker, even after rubbing with extra solvent. The standard laminate was destroyed.



(Samples on left made with GF 108 Satin Clear Anti-Graffiti Laminate)

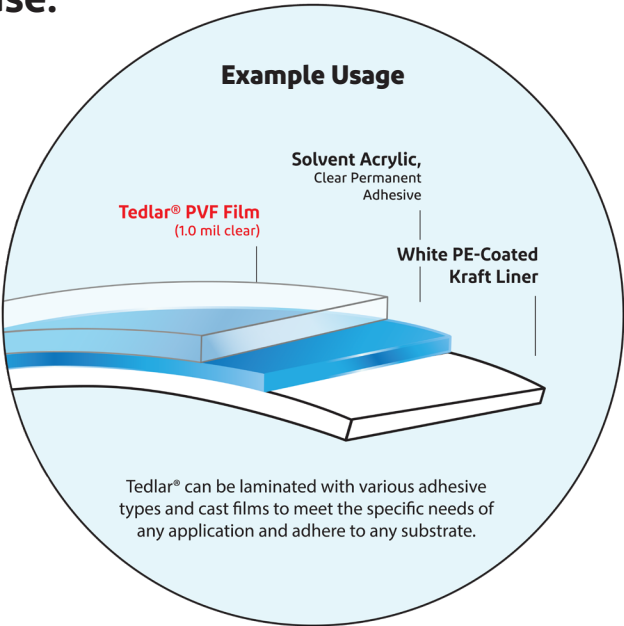
Figure 5: Graphic with Tedlar® overlaminate and unprotected graphic with standard laminate were tagged with black enamel spray paint. Tedlar® is easy to clean off with Goo-Gone or MEK and a paper towel and is not damaged. The standard laminate graphic was completely removed with cleaning.

Best-in-class protection is easy and safe to use.

Tedlar® overlaminate films are specially treated on the surface to make them easy to adhere, and have been successfully used with a range of adhesives for decades. The flexibility of the films also means that laminates can be formed and shaped, enabling a variety of textures and application areas.



Tedlar® films have also been used in demanding interior applications, such as aircraft, rail, and wallcovering, where outstanding flame, smoke, and air quality are required.



Physical properties of Tedlar® clear overlaminate films

Property	Value*	Method
Thickness	25 µm	Micrometer
Optical Transmission	93 %	ASTM D1003
Cutoff Wavelength	361 nm	UV-VIS
Haze	<14 %	ASTM D1003
Color (b*)	0.31	Colorimeter
60° Gloss	67	ASTM D523

*Nominal values

