Long-lasting Protection for Interior and Exterior Architectural Applications

DuPont™ Tedlar® PVF Film - Over 50 Years of Proven Performance
DuPont Innovative Materials Provide New Solutions for Architecture Surface Protection

DuPont™ Tedlar® polyvinyl fluoride (PVF) film has been used in numerous commercial applications for over 50 years.

Tedlar® PVF film provides cost-effective long-lasting aesthetic protection that is easy to clean and safe for architectural applications. Even in the harshest environment, DuPont™ Tedlar® film demonstrates long-term durability. When laminated onto different substrate materials, DuPont™ Tedlar® film prevents the facade of buildings from fading, cracking or corroding thus extending the lifetime of building appearances. DuPont™ Tedlar® film can also help to reduce maintenance costs because it is easy to clean and stain resistant. In addition to great stain resistance, the chemical stability of Tedlar® allows the strongest cleaning agents to be used without damaging the film.

Long-term Protection
• Excellent weatherability
• Corrosion and chemical resistant
• Durable
• Keeps buildings looking new

Aesthetics
• Maintains color for years
• Available in a variety of gloss levels
• Smooth and fine texture
• Excellent formability

Easy to Clean
• Dirt shedding and stain resistant
• Easy to clean due to chemical inertness
• Cost reduction due to less maintenance

Safe for Important Environments
• Non-flammable
• Does not promote bacterial growth
• Non-reactive and inert

+50 YEARS

DuPont™ Tedlar® polyvinyl fluoride (PVF) film has been used in numerous commercial applications for over 50 years.
Long-term Protection

With excellent weatherability, corrosion, chemical resistance, and long lasting color, DuPont™ Tedlar® film keeps architecture appearance looking new for years.

Case 1: Virtually no color change observed

Case 2: No rusting and color changes observed in joints

Aesthetics

Low color differences
For the same batch of DuPont™ Tedlar® film, the color difference is ΔE=0.3; for different batches it is ΔE=0.5.

Consistent surface finish, available in a variety of gloss levels
Prevents uneven thickness caused by factors in processing such as spraying, roller painting, etc. The finished surface is consistent.

Low gloss finish prevents glare
With a matte finish on the surface the visual effect is the same from all angles therefore preventing glare.

Color difference ΔE=3.2–4.2
No bubbling or stripping.

Easy to Clean

DuPont™ Tedlar® film is stain resistant and able to withstand all types of dirt, such as bird droppings, watermarks, paint, cooking fumes, grease, dust, and acid rain, etc.

DuPont™ Tedlar® is chemically inert. A wide variety of cleaners can be used to remove stains such as pitch, tar, asphalt, grease, paint and sealant, etc.

With its smooth surface, the dirt on DuPont™ Tedlar® film can easily be washed away by rainwater; therefore, maintenance costs can be reduced.

Safe for Important Environments

Excellent Fire Resistance
DuPont™ Tedlar® metal laminate complies with GB8624-2006 A2-52 standard and has been certified as a nonflammable material. In Japan, DuPont™ Tedlar® metal laminates has also been certified as a nonflammable material (NM0710, NM1553). Tedlar® coated laminates have passed Federal Aviation Administration (FAA) heat and smoke standards and have been used in aircrafts for decades.

High-Level of Cleanliness
DuPont™ Tedlar® film does not support the growth of bacteria. It is especially suitable for places that require a high-level of cleanliness, such as hospitals, hotels and restaurants.
Excellent Performance is Proven by Various Lab Tests

Excellent weatherability and resistance to aging
- Accelerated aging and UV exposure test

As test results show, compared with the surface protection coatings such as acrylic and PVDF, DuPont™ Tedlar® film can better resist UV and acid rain, prevent dust buildup, as well as keep its thickness, color and gloss for a longer time, thus maintaining the building’s original appearance for longer.

Excellent resistance to corrosion
- Salt spray test with 1T bending for 2,000 hours
- Salt spray test for 1,000 hours with 5% saline solution

First the DuPont™ Tedlar® laminated steel sheet and the 70% PVDF steel sheet were bent by 180° 1T, and then the salt spray test was carried out for 2,000 hours. The results show that PVDF coating is corroded severely, while DuPont™ Tedlar® film undergoes no changes.

The Eriksen test was carried out on the DuPont™ Tedlar® laminated steel sheet, the 70% PVDF steel sheet, and the acrylic steel sheet, followed by a salt spray test for 1,000 hours. The results show that the latter two steel sheets have very clear corrosion marks, while the steel sheet with DuPont™ Tedlar® film stops intact as before, indicating the DuPont™ Tedlar® film has excellent corrosion resistance.

Strong resistance against abrasion and bending
- Abrasion resistance (falling sand abrasion test)
- 1T bending test (amplification by 43 times)

Falling sand abrasion tests (ASTM D964) were conducted using 25-micron PVDF coating, 100-micron multilayer hot melt coating, and DuPont™ Tedlar® film. The results show the abrasion resistance of 38-micron DuPont™ Tedlar® film is identical to that of 100-micron multilayer hot melt coating; or 25-micron PVDF thermoplastic composite coating film.

180° 1T bending test shows that the PVDF-coated steel sheet cracked, while the DuPont™ Tedlar® laminated steel plate shows no cracks.
- DuPont™ Tedlar® film elongation: up to 100%
- Outstanding processability
**DuPont™ Tedlar® Film in Architecture**

**Metal Lamination**

DuPont™ Tedlar® film can be laminated onto various metal substrates including galvanized steel, stainless steel, aluminum and aluminum-plastic composition. The metal laminations can be used in a number of industrial applications including exterior cladding, roofing, interior decoration of buildings, and industrial plants.

**Structure of Metal Lamination**

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**DuPont™ Tedlar® Film in Lamination Process**

- Removable protective film
- DuPont™ Tedlar® film
- Adhesive
- Metal substrate
- Backside treatment

With the recommended adhesive (e.g., DuPont Adhesive 48070), DuPont™ Tedlar® film can be laminated to various substrates.

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**Sound Barrier**

Sound barrier bags made from DuPont™ Tedlar® film cover noise absorption materials (e.g., glass wool) to withstand rain and outdoor moisture. DuPont™ Tedlar® film can be applied to outdoor sound barriers to dissipate highway noise and in stadiums for better acoustics.

**Structure of DuPont™ Tedlar® film-based Sound Barrier**

- DuPont™ Tedlar® film
- Glass wool

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**Membrane Fabric Materials**

DuPont™ Tedlar® film can be laminated with various coated fabrics to form membrane fabric structures at much lower construction costs than steel. With excellent weatherability and dirt-shedding properties, membrane fabric is a cost-effective material for buildings like stadiums, convention centers, commercial facilities and transportation hubs.

**Composition of Membrane Fabric Materials**

- DuPont™ Tedlar® film
- Outer coating
- Base cloth
- Inner coating
- UV reflection

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**Protection for Outdoor Advertisement and Signage**

DuPont™ Tedlar® transparent film has excellent UV resistance making it a cost-effective choice as a protective film for outdoor ads, logos, and signage. It is easy to clean, graffiti resistant and helps maintain the signs' original appearance for years.

**Composition of Signage in DuPont™ Tedlar® film**

- DuPont™ Tedlar®
- Adhesive
- Substrate
DuPont™ Tedlar® Film Application Cases

**Metal Laminates Applications**

**Commercial Buildings**
1. Office Building (Japan)
2. Hangzhou Airport Tunnel Command Center (China)
3. Office Building (Japan)
4. DuPont China R&D Center (China)

**Public Buildings**
1. Samsan World Gymnasium in Incheon (Korea)
2. Interior decoration of Tokyo Metro Subway (Japan)
3. Exterior decoration of highway (Japan)
4. Abira Shinkansen Railway Station (Japan)

**Industrial Buildings**
1. Okinawa Power Station (Japan)
2. Huanghuihui Thermal Power Plant (China)
3. Clare County Power Plant (Ireland)

**Membrane Fabric Structure Applications**
1. PPG Woodruff Arts Center in Georgia (US)
2. Tennis Court of Chaoyang Park in Beijing (China)
3. Ford's Theater (US)

**Sound Barrier Applications**
1. Sound-proof Decoration of Second Keihan Highway (Japan)
2. Acoustic screen for expressways (Japan)
3. Shenzhen Swimming Pool (China)