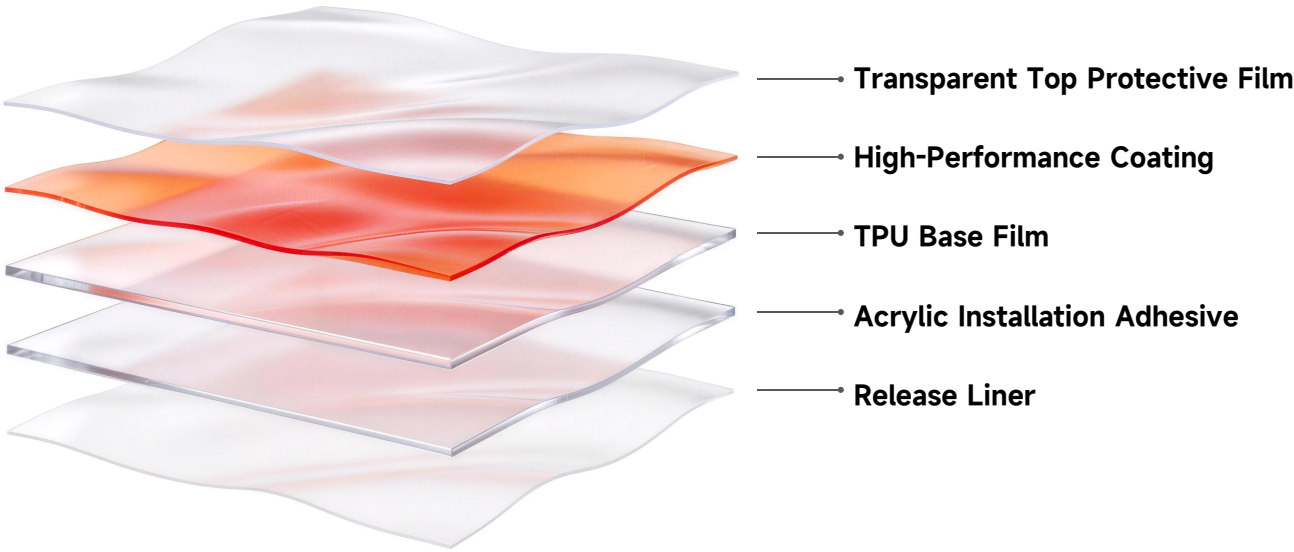


PRODUCT DESCRIPTION

Crafted from premium USA-sourced Covestro raw materials, BRETWHES Paint Protection Film seamlessly unites pristine optical clarity with extraordinary resilience. At its core lies a high-performance TPU architecture engineered for dynamic elasticity and structural strength—an invisible armor that effortlessly absorbs daily road hazards, from flying gravel to subtle parking-lot abrasions.

Elevating this protective shield is BRETWHES's proprietary nano-modified coating, designed to impart a deep, glass-like gloss while actively repelling environmental contaminants through advanced hydrophobic technology. Beneath this exquisite luster, a sophisticated thermosensitive resin polymer continuously monitors the surface, seamlessly healing minor scratches and imperfections to ensure your vehicle retains an enduring, showroom-quality finish.



APPEARANCE PERFORMANCE		
Inspection Items	TEST REQUIREMENTS	TEST METHOD
Wrinkles, bubbles, frosting, cracking	Not visible to the naked eye	Visual inspection
Point defects ^a	Diameter ≥ 3 mm	Not allowed
	2 mm ≤ Diameter < 3 mm	Allowed quantity: ≤3.0×S ^b
	1 mm ≤ Diameter < 2 mm	Allowed quantity: ≤8.0×S ^b
	0.6 mm ≤ Diameter < 1 mm	Allowed quantity: ≤10.0×S ^b
	Diameter < 0.6 mm	Dense accumulation is not allowed ^c
Scratches	0.2mm < Width ≤ 0.5mm and Length ≤ 80mm	Allowed quantity: ≤5.0×S ^b , with scratch spacing ≥100 mm
	Width > 0.5 mm or Length > 80 mm	Not allowed
Line defects ^d	Length > 3 mm or Width > 0.6 mm	Not allowed
	Length ≤ 3 mm	Allowed quantity: ≤3.0×S ^b

a Point defects refer to visible imperfections on the protective film, including spots, crystal points, impurities, pitting, foreign particles, and dents.

b S represents the film area in square meters (m²), rounded to two decimal places.

c Dense accumulation refers to more than 20 point defects within a circular area of 300 mm in diameter.

d Linear defects refer to imperfections such as indentations and flow marks.

PHYSICAL PROPERTIES

INSPECTION ITEMS	EM5	UNIT	TEST METHOD
Total Film Thickness	199	μm	GB/T 6672-2001
Gloss	145	GU	QC/T 1171-2022
Tensile Strength	24	MPa	QC/T 1171-2022
Elongation at Break	360	%	QC/T 1171-2022
100% Modulus	7.5	MPa	GB/T 1040.1
Tear Strength	75	KN/m	QC/T 1171-2022
Coating Elongation at Break	120	%	GB/T 1040.1
Peel Strength at 20 min	17	N/25mm	QC/T 1171-2022
Peel Strength at 24 h	20	N/25mm	QC/T 1171-2022
QUV ΔE	0.3	NA	ASTM G154-16Cycle11000h
Gravel impact Resistance	Pass	NA	QC/T 1171-2022
Self-Healing Performance	Self-healing	NA	QC/T 1171-2022
Scratch Resistance	Pass	NA	QC/T 1171-2022
Abrasion Resistance	Pass	NA	QC/T 1171-2022
Organic Solvent Resistance	Pass	NA	QC/T 1171-2022
Water Spot Resistance	Pass	NA	QC/T 1171-2022
Stain Resistance	Pass	NA	QC/T 1171-2022
Damp Heat Aging Resistance	Pass	NA	QC/T 1171-2022

PRODUCT PACKAGING & STORAGE

BRETWHES paint protection film should be stored in its original packaging with the supplied protective materials. Sealed storage is recommended. Store horizontally with stacking not exceeding 6 layers. Avoid direct sunlight and direct contact with heat sources.

Storage conditions: temperature: 10°C - 32°C, relative humidity: 40% - 60% RH

MAINTENANCE

1、For daily car washing, it is recommended to use a soft clean sponge or dedicated car wash towel with neutral detergent. When using a high-pressure washer, avoid prolonged spraying along the film edges. (Do not wipe the film surface with alcohol-containing, strong acid or alkaline solutions.)

2、After installation, avoid applying solvent-containing paint care treatments such as waxing, glazing and coating as much as possible. If necessary, these should be performed under the guidance of a professional installation shop. Do not apply adhesive labels directly onto the film or use suction cups on its surface.

3、Avoid parking near exhaust outlets, construction sites, under trees, or near air conditioning drainage outlets. If corrosive contaminants such as oil fumes, tar, paint, cement, tree sap or air conditioning water remain on the film surface, clean them with a soft cloth and soapy water, or wipe with a clean soft cloth dampened with 99% isopropyl alcohol. Visit a professional installer promptly for thorough cleaning and inspection.