

Technical Data Sheet

Vunyx Films Master Pro

Presenting Onyx Coating's most advanced automotive enhancement, Vunyx Films Master Pro. More than just a protective barrier for factory paint, this marvel boasts our novel Stain Resistant Technology, ensuring vehicles consistently exhibit a mirror-like, dazzling finish. Imagine less time on maintenance and more on the open road.

Custom-tailored for unparalleled business efficiency and superior results, our innovative features include:

- **Adaptive Design:** Our film's superior flexibility ensures easy adaptability around challenging areas like edges, bumpers, and mirrors. This means fewer seams and simpler applications.
- **Precision Liner:** A distinct liner highlights cut lines, ensuring precise applications, which translates to cost savings and minimized wastage.
- **Water-Repellent Essence:** Save on those regular car washes and enjoy a perpetually clean vehicle with our film's inherent hydrophobic properties.
- **Elevated Aesthetics:** Transform vehicles into sheer luxury, boasting a brilliant and radiant gloss.
- **Self-Repair Tech:** Our state-of-the-art polymer tech ensures minor scrapes and scratches become a worry of the past.
- **Assured Protection:** Our limited warranty stands testament to our faith in Vunyx Films Master Pro, offering robust defense against common wear and tear factors. (please refer to the limited warranty terms and conditions).

- **Resale Value Amplified:** Keep the vehicle's original charm intact, ensuring a favorable market price when it's time to upgrade.
- **Dual-Action Topcoat:** This unique topcoat offers a two-fold defense: it actively repels stains while also boasting a natural water-resistance, ensuring your vehicle stays pristine against bird residues, insect marks, and various on-road environmental challenges.

Features Your Customers Will Adore:

- **Easy Application:** The film's design ensures even first-time users find the application process smooth.
- **Enhanced UV Protection:** Shield the car's paint from the harsh rays of the sun (prevent 85% of UV rays), preventing fading and maintaining its vibrant color.
- **Cost Savings:** Long-term protection means fewer visits to repair shops and reduced maintenance costs over the vehicle's lifetime.
- **Peace of Mind:** With Vunyx Films Master Pro on the guard, customers can rest easy knowing their investment is securely protected against most external threats.

	TEST ITEM	TEST METHOD	NOMINAL VALUE
PHYSICAL PROPERTIES	Cap Sheet	Micrometer	1.5 mil (40 microns)
	TPU thickness	Micrometer	6 mil (150 microns)
	Product thickness (TC+TPU+PSA)	Micrometer	8 mil (200 microns)
	Tensile stress at break	ASTM D882	> 2,200 lbs/in ² (>15 MPa)
	Elongation at break (%)	ASTM D882	> 250%
	Break strength	ASTM D882	> 45 lbs/in (83N/cm)
GLOSS	Gloss	Adhered to paint panel. 60° gloss per ASTM D523	92 GU
ADHESION	Initial dry peel adhesion	Dry adhered to paint panel, 20 min at 72°F (22°C)	1,290 g/in (5 N/cm)
	Initial wet peel adhesion	Dry adhered to paint panel, 20 min at 72°F (22°C)	1,340 g/in (5 N/cm)
	After heat age peel adhesion	Adhered to paint panel, 3 min at 248°F (120°C)	2,700 g/in (10 N/cm)
	Adhered state shrinkage	Adhered to paint panel for 48hrs at 176°F (80°C)	< 0.2%
AGING TEST	Heat aging	Adhered to paint panel, 176°F (80°C) for 16 days	Pass, NDE
	Accelerated weathering	ASTM G155 Cycle 7,3,000 hrs	Pass, NDE
IMPACT RESISTANCE	Chip resistance	SAE J400 (Gravelometer)	Pass, NDE
CHEMICAL RESISTANCE	Soap & water	Samples submerged in chemical for 24 hrs followed by visual inspection	Pass, NDE
	Isopropyl alcohol		Pass, NDE
	Mild acid (pH 9+)		Pass, NDE
	Windshield washer fluid		Pass, NDE
	Unleaded gasoline	Samples submerged in chemical for 30 minutes followed by visual inspection in 24 hrs	Pass, NDE
	Motor oil		Pass, NDE
STAIN RESISTANCE	Sharpie marker	Samples were marked with permanent black sharpie marker and marker removed easily with water after 24 hours.	No Visual Residue
SELF HEALING	Brass Brush (Lincoln Electric KH582)	Samples were scratched in a circular motion with a brass brush, then visually inspected @15 second intervals until scratches were no longer visible	< 1 minute, no visible scratches
		Samples were scratched in a circular motion with a brass brush, then exposed to mild heat and visual inspected	No Visible Scratches

HC = Hard Coat, TPU = Thermal Plastic Polyurethane, PSA = Pressure Sensitive Adhesive

Adhesion: 180o peel on Instron tensile tester

NDE: No Detrimental Effect

NOTE: all values are nominal values and should not be used for specification purposes

SHELF LIFE:

Onyx Coating GmbH recommends using Vunyx Master Pro within one year from date of purchase.

Optimum storage conditions for Vunyx Master Pro are 40°F (4°C) to 90°F (32°C), and 40% to 60% relative humidity.