

# ArmorHue™

## TECHNICAL DATA SHEET (TDS)

### Product Series: Premium PET Metallic & Color-Change Vinyl Wrap

**Description:** ArmorHue™ Premium PET Vinyl Wrap is an elite-tier polymeric vehicle restyling film designed specifically for professional wrap shops, installers, and high-end automotive studios. Utilizing a high-density siliconized PET release liner instead of traditional paper, this film eliminates manufacturing-induced orange peel, providing a true paint-like reflection and exceptional surface gloss depth.

## 1. Product Structure / Layer Breakdown

The film consists of four engineered composite layers:

- **Surface Protective Cap:** Ultra-thin polyester layer to prevent scratching during transit (must be removed before post-heating).
- **Film Base:** Premium polymeric calendered PVC matrix embedded with optical-grade metallic flakes.
- **Adhesive Layer:** Low-initial-tack, solvent-based acrylic pressure-sensitive adhesive with microscopic air-release channels.
- **Release Liner:** 120g premium high-gloss PET liner ensuring absolute smoothness of the adhesive backing.

## 2. Physical & Mechanical Properties

Property / Parameter	Value / Specification Data
Film Thickness (Without Adhesive)	3.5 mil (88 microns) ± 5%
Total Thickness (With Adhesive)	4.5 mil (114 microns) ± 5%
Adhesive Type	Solvent-based Acrylic, Low Initial Tack, Repositionable
Initial Tack / Peel Adhesion	~1.6 N/25mm (Tested on Stainless Steel, 20 mins)
Ultimate Adhesion (24 Hours)	~14.5 N/25mm (Tested on Stainless Steel)
Air-Release Technology	Invisible Micro-Channel Structure (Hexagonal Grid)
Tensile Strength (MD)	≥ 24 MPa (Test Method: ASTM D882)
Elongation Rate at Break (MD)	≥ 140% (Optimal stretch performance without discoloration)
Dimensional Stability / Shrinkage	< 0.15 mm (After 70°C exposure for 48 hours)

### 3. Application & Installation Guidelines

Installation Step	Professional Protocol Requirement
Recommended Format	A4 Sample (Color Matching)   5M Test Roll   1.52m x 15M / 18M Full Roll
Surface Preparation	Isopropyl Alcohol (IPA) / water mix clean. Panels must be 100% free of wax, ceramic coatings, and structural contaminants.
Method	Strictly <b>Dry Application</b> only. Do not use wet slip solutions.
Temperature Range	Optimal environment: +16°C to +25°C (+61°F to +77°F).
Post-Heating Requirement	Critical for memory-killing. Fix all recessed areas, edges, and overlaps at <b>90°C to 95°C (194°F to 203°F)</b> using a digital heat gun.

### 4. Storage & Commercial Warranty

**Storage:** Always store rolls upright on core plugs in a clean, dry environment at +15°C to +23°C (+59°F to +73°F). Keep out of direct sunlight.

**Warranty Policy:** ArmorHue™ provides a 3-year commercial material warranty covering severe fading, unprovoked cracking, and delamination. Warranty review strictly requires order history, batch/roll ID tracking label, professional installation records, and high-definition macro photos/videos of the defect before film removal.

**Disclaimer:** This Technical Data Sheet (TDS) serves as an official document for installer evaluation. Values listed are based on laboratory testing data and do not guarantee performance under extreme, unrecommended environmental conditions or improper installation methods.