

V²lab

Powered by Value Vinyls

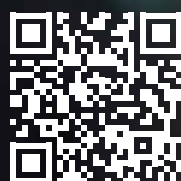


V² LAB:
INNOVATION STARTS HERE



877-716-6651 • INFO@VALUEVINYL.COM • VALUEVINYL.COM

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SETTING THE STANDARD

At V² Lab, we take quality seriously. Our advanced in-house laboratory is equipped to perform 16 unique tests, ensuring every product we deliver exceeds industry standards. From Grab Tear to Color Grading, our testing guarantees materials that are durable, reliable, and tailored to your needs.

But we don't stop there. V² Lab is also a hub for product development—a place where creativity meets engineering precision. Whether improving existing materials or creating new ones from the ground up, our team is driven by a passion for innovation. The result? Custom solutions that give you a competitive edge.

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UNIQUE TESTS PERFORMED



At V² Lab, we don't just test products—we create them. From industrial tarps and athletic surfaces to tensile structures and specialty textiles, every product is engineered to withstand the toughest real-world conditions for that application or industry. Our testing ensures these materials deliver on strength, durability, and reliability. Additionally, we have the capability to send products to third-party testing facilities to ensure compliance with industry standards and customer-specific requirements.



TONGUE TEAR
Testing is performed for both the warp and weft directions and results are averaged to determine directional tear strength



GRAB TENSILE
The fabric is pulled from opposing ends, measuring breaking force. This test also assesses elongation—how far the fabric stretches prior to failure. By simulating real-world stress at tight corners or fasteners, we ensure the material maintains its overall integrity even under uneven loads.



TRAPEZOID TEAR
Measures the strength of the base fabric diagonally in a biaxial configuration while being held under constant tension. This is a critical test for fabrics held in a curved application, such as structural fabrics.



STRIP TENSILE
A strip of material is pulled apart in both warp and weft directions until it fails. This is used to evaluate the fabric's tensile properties along a uniform cross-section. This provides deeper insight into overall strength, elongation, and consistency across the material.



COEFFICIENT OF FRICTION
Establishes how well a material slides on or grips to another surface. This allows us to confirm the specialized performance matches the intended application.



CHEMICAL RESISTANCE
We expose the fabric to an array of industrial solvents, acidic or alkaline solutions, and strong cleaning agents to evaluate changes in color, coating adhesion, and structural integrity.



COLOR GRADING
Ensures vibrant, long-lasting colors that resist fading and discoloration, preserving both the material's appearance and the clarity of any printed ink. The AATCC Grey Scale is used to assess shade change due to UV degradation.



THICKNESS
Materials with inadequate or inconsistent thickness may be prone to tearing, puncturing, or degrading faster when exposed to stress or environmental factors. Testing ensures that the product will last and perform reliably over time.



ABRASION RESISTANCE
Without abrasion testing, materials risk premature degradation, reducing their lifespan and performance in critical applications. This test ensures that vinyl products remain durable, reliable, and visually appealing, even under continuous wear.



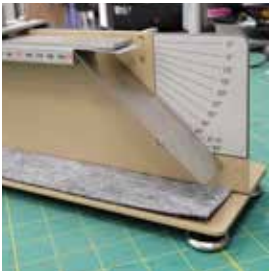
UV RESISTANCE
Tests for color loss due to UV degradation by exposing material to accelerated weathering using xenon light, heat, and sporadic moisture for 1,000 hours.



GLOSSINESS
Measures the sheen/gloss of a material's surface at 20°, 60°, and 85° with reflective values ranging from 0-100.



COATING RATIO
We measure coverage on both the fabric face and back to confirm proper coating thickness. Some fabrics use an even distribution for balanced durability and strength while others have heavier top layers for added protection against weather or abrasion.



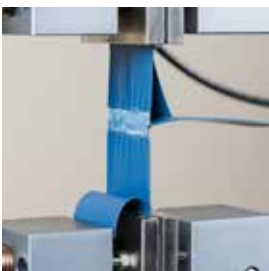
FLEXIBILITY
Our flexibility test gauges how the fabric bends or folds without cracking, delaminating, or losing strength. This step verifies that each product can handle the stresses of transportation, installation, and regular use without compromising reliability.



PUNCTURE
Simulates real-world impacts using a ball or screwdriver to measure resistance of vinyl fabrics to piercing forces, ensuring durability and preventing material failure under stress.



WEIGHT
Is determined with our precision scale to review fabric weight for consistency.



ADHESION
Ensures strong bonding between layers and coatings to prevent peeling, cracking, or delamination. This critical test guarantees durability, environmental resistance, and long-term performance for vinyl products in demanding applications.

COMPLETE TESTING FOR FULL TEXTILE PERFORMANCE

From fire resistance to hydrostatic resistance, every test we perform is designed to push vinyl materials to their limits. From ensuring long-term durability to optimizing specific applications, each test guarantees our vinyl textiles meet the highest industry standards.

