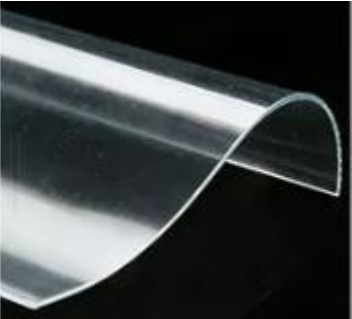

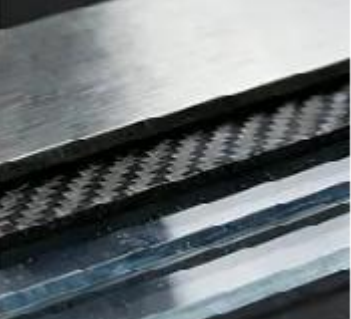


Comparative Specification of PVC, Composite, and Reinforced PVC Materials

Item	PVC (Polyvinyl Chloride)	Composite (e.g., EVA+PE Lamination)	Reinforced PVC
<p>Picture</p>			
<p>Structural Description</p>	<p>Primarily made from PVC resin blended with plasticizers, stabilizers, etc., processed via plastification, calendaring, or blow molding. Uniform texture, can be flexible or rigid.</p>	<p>Typically refers to a multi-layer co-extruded or laminated structure (e.g., an EVA foam core bonded to a PE protective surface layer). Combines the advantages of each layer.</p>	<p>A sandwich structure where a standard PVC formulation is physically reinforced with a high-strength polyester mesh or fabric embedded during manufacturing.</p>
<p>Thickness Range</p>	<p>0.10mm - 2.00mm (Common range)</p>	<p>0.50mm - 3.00mm (Total thickness, varies with layers)</p>	<p>0.30mm - 1.50mm (Total thickness: base + reinforcement)</p>
<p>Durability</p>	<p>Fair. Long-term use may lead to hardening or embrittlement due to plasticizer migration.</p>	<p>Good. The multi-layer construction provides cushioning and support, offering better fatigue resistance than standard PVC.</p>	<p>Excellent. The reinforcing mesh significantly improves tear and tensile strength, offering the best longevity.</p>

Puncture Resistance	Moderate. Limited by material properties; depends on thickness and hardness.	Good. The elastic intermediate layer (e.g., EVA) helps disperse puncture stress.	Excellent. The reinforcing network effectively prevents puncture tears from propagating.
UV Resistance (Weatherability)	Poor. Requires sufficient UV stabilizers for outdoor use; otherwise prone to yellowing and degradation.	Fair to Good. The PE surface layer typically offers good UV protection for the overall structure.	Good to Excellent. Enhanced by specialized outdoor formulations and the reinforcing structure, offering superior resistance to UV degradation.
Typical Applications	Indoor products, short-term outdoor items, stationery, light-duty packaging, low-intensity inflatables.	Sports mats, protective covers for fitness equipment, mid-range luggage panels, consumer goods requiring cushioning.	Outdoor inflatable boats/SUPs, heavy-duty bounce castles, industrial air pads, long-term outdoor canopies, professional equipment requiring high reliability.
Cost Level	Low (Most economical, mature raw materials and processes)	Medium (Varies based on composite complexity and materials)	Medium to High (Raw material and manufacturing costs exceed standard PVC)
Compliance Standards (Common)	REACH (Focus on restricted substances like phthalates)	REACH	REACH
	CPSIA (Lead content, etc.)	CPSIA	CPSIA (If for children's products)
	EN71-3 (Migration of certain elements)	EN71 (As applicable)	EN71 (As applicable)
	ASTM F963 (Toy Safety)	Relevant ASTM product standards	Relevant ASTM performance test standards (e.g., for tear strength, weatherability)

Notes & Disclaimers:

- 1.The data in this table provides a general overview of material properties. The performance of a specific product may vary based on formulation, manufacturing process, thickness, and supplier.
- 2.Compliance: All materials intended for specific markets (e.g., EU, USA, China) must fully comply with all current regulatory requirements of that market. The standards listed are common examples and do not constitute complete compliance advice.
- 3.Material Selection Recommendation: Final material choice should be based on a comprehensive assessment of the product's end-use environment, lifespan requirements, safety regulations, and cost budget.
- 4.Test Reports: For critical applications, it is recommended to obtain authoritative third-party compliance and performance test reports from the material supplier for the target market.