

PVC Market Terminology

Abrasion resistance	A function of tear strength, friction co-efficient, resilience, heat dissipation and other properties. Generally, copolyester elastomers are superior to flexible materials, such as vinyl, and some rigid plastics.
Air oven aging	A procedure to determine the influence of elevated temperature on the physical properties of various polymers.
Banbury	The name of the inventor of an internal mixer. See Internal Mixer.
Blow molding	A method of fabrication in which a heated parison is forced into the shape of a mold cavity by internal gas pressure.
Brittle point values	Temperature at which 50 percent of specimens fail/pass.
Cast film	A film made by depositing a layer of plastic, either molten, in solution or in a dispersion onto a surface, solidifying and removing the film from the surface.
Cold molding	A process of compression molding in which the molding is formed at room temperature and subsequently baked at elevated temperatures.
Dry blend	A dry compound prepared without fluxing or the addition of solvent (also called powder blend).
Durometer	An instrument for measuring the indentation hardness of rubber.
Elongation	<p>The extension of a uniform section of a specimen expressed as percent of the original length.</p> $\text{Elongation \%} = \frac{(\text{final length} - \text{original length})}{\text{original length}} \times 100$
Extruder	Machine designed to force a plastic or plastic mix through an orifice, which is often shaped to the geometry of the desired product.
Extrusion	A process in which heated or unheated plastic is forced through a shaping orifice in one continuously formed shape, as with film, sheet, rod or tubing.
Exudation	A delayed phase separation of incompatible material. Also called bleeding, spewing or sweating.
Fish eye	Small globular mass that has not blended completely into the surrounding material.
Fluid aging	A procedure to compare the ability of plastic and plastic-like compositions to withstand the effect of liquids.

Gehman values	T-10,000, T-45,000, T-135,000 - Temperature for which the relative torsional modulus is 10,000, 45,000, 135,000. The relative torsional modulus at any temperature is the ratio of the modulus at that temperature to the modulus at 23°C.
Gel point	The stage at which liquid begins to exhibit pseudoelastic properties.
Glass transition	The reversible change in an amorphous polymer or in amorphous regions of a partially crystalline polymer from a viscous or rubbery condition to a hard and relatively brittle one.
Hardness	The resistance to indentation as measured under specified conditions.
Internal mixer	A machine with a closed cavity in which a specially shaped rotor (or rotors) masticates the plastic to incorporate and disperse compounding materials into the plastic.
Modulus	(Or Tensile Stress at a given Elongation) The stress required to stretch the uniform cross-section of a test specimen to a given elongation. Represents functional strength of compound. Plasticizers reduce modulus.
Molding presses	<p>Compression: A molding process in which the material is placed directly in a mold cavity and compressed to shape by closure of the mold.</p> <p>Injection: The process of forming a material by forcing it from an external heated chamber through a runner system and gate into the cavity of a closed mold by means of a pressure gradient that is independent of the mold clamping force.</p>
Monomer	A low molecular weight substance consisting of molecules capable of reacting with like or unlike molecules to form a polymer.
Plastic	A material that contains as an essential ingredient one or more organic polymeric substances of large molecular weight, is a solid in its finished state and, at some stage in its manufacture or processing, it becomes a finished article.
Plastisol	A liquid suspension of a finely divided polyvinyl chloride (PVC) polymer or copolymer in a plasticizer.
Resin	A solid or pseudosolid organic material often of high molecular weight that exhibits a tendency to flow when subjected to stress. Usually has a softening or melting range and usually fractures conchoidally.
Rigid plastic	For purposes of general classification of plastic that has a modulus of elasticity either in flexure or in tension greater than 700 M Pa (or 100,000 psi).
Tear strength	The maximum force required to tear a specified specimen; the force acting substantially parallel to the major axis of the test specimen.

Tensile strength

The maximum tensile stress applied during stretching of a specimen to rupture or ultimate tensile. Plasticizers reduce tensile strength.

Tensile ultimate

The maximum tensile stress applied during stretching of a specimen to rupture. Also known as tensile strength.

Thermoplastic

A plastic that repeatedly can be softened by heating and hardened by cooling through a temperature range characteristic of the plastic and that in the softened state can be shaped by flow into articles by molding or extrusion.