APPI Film Knowledge Base



April 2018 Version 1

Common Terminology

O2TR: The steady rate at which oxygen can permeate a film. Typically stated for film thicknesses in terms of cubic centimeters / 100 sq. in. of material over a 24-hour period at a pressure of 1 atmosphere.

WVTR: The steady rate at which water vapor can permeate a film. Typically stated for film thicknesses in terms of grams / 100 sq. in. of material over a 24-hour period at a pressure of 1 atmosphere.

Secant Modulus: Describes the relative stiffness of the material, with a higher number indicating a stiffer material.

Dart Impact: The impact failure weight in grams at which a falling dart induces failure of a film sample under test.

Elmendorf Tear Strength: The resistance of the material to tearing in either the Machine Direction (MD) or the Transverse Direction (TD) from a notch cut into the material.

Tensile at Break: The tensile strength of the material at the point of failure.

MD: Machine Direction – The direction a material is moving as it is being fed into a machine.

TD: Transverse Direction – The direction 90 degrees off-axis from the Machine Direction.

Gloss: A measurement of the reflectivity of a material at a specific angle.

Haze: A measurement of the interference transmission of light through a film; the higher the percentage, the lower the visual clarity.

EVOH: Ethylene Vinyl Alcohol - a copolymer that provides a very effective barrier against oxygen, nitrogen, carbon dioxide, & helium.

LDPE/HDPE: - Low-Density Polyethylene & High-Density Polyethylene - thermoplastic compounds that are non-reactive at room temperature; widely used in the manufacture of containers.

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