

Autostat WT

Product Data Sheet

Heat stabilised polyester film has low residual shrinkage at elevated temperatures. This is essential when tight registration tolerances need to be maintained during multiple printing operations.

PRODUCT DESCRIPTION

The Autostat WT is a white, high quality stabilised polyester film, available in sheets and rolls.

Product Range:

Autostat WT3 Opaque white satin finish, adhesion treated, 75 micron

Autostat WT5 Opaque white satin finish, adhesion treated, 125 micron

PRODUCT APPLICATIONS

Autostat WT can be used as a general printing substrate where a white background is required e.g. labels, insert graphics. As top circuitry layers, Autostat WT backs up colours on the graphics overlay increasing their opacity whilst totally hiding the circuitry underneath. The white colour also acts as an excellent reflector for surface mount LED's.

PRODUCT PERFORMANCE

Thermal	Autostat WT	Test Method
Dimensional stability		
WT3	MD ≤0.5% max, TD ±0.1% max	MacDermid Autotype Method ¹ 150 °C/30 minutes
WT5	MD ≤0.2% max, TD ±0.08% max + indicates expansion - indicates shrinkage	

¹ See Test Method Manual

TD (transverse direction) shrinkage at 150 °C for 30 minutes

TD shrinkage is much lower than MD shrinkage and may even be completely absent. When the film does not shrink at all a small positive expansion may take place.

INK ADHESION

The adhesion treatment used on the WT grades uses the industry standard chemistry. This treatment enhances adhesion of UV curable dielectric ink, but may not be fully compatible with certain conductive silver inks. We recommend full internal testing.



CHEMICAL PROPERTIES

Property	Autostat WT	Test Method
Moisture vapour transmission rate (MVTR) ¹	2.3g/m ² /24 hours (WT5)	ASTM F372-73
Oxygen transmission rate ¹	6.5ml/m ² /24 hours (WT5)	ASTM D1434-82 @ 25°C, 77% RH

¹ Data is derived from the base manufacturer's literature

ELECTRICAL PROPERTIES

Property	Autostat WT	Test Method
Surface Resistivity ¹		ASTM D257-83 at 55% RH
	WT3 WT5	10 ¹⁴ >10 ¹⁴
Dielectric Constant ¹		ASTM D150-81 23°C 50 Hz
	WT3 WT5	3.3 2.6

¹ Data is derived from the base manufacturer's literature

MECHANICAL PROPERTIES

Property	Autostat WT	Test Method
Elongation at break ¹		ISO 527-1-2 23°C 50% R.H ASTM D882-83
	WT3 WT5	90% (TD) 150% (MD) 120% (TD and MD)
Tensile strength at break ¹		ISO 527-1-2 23°C 50% R.H ASTM D882A
	WT3 WT5	150 N/mm ² MD, 190 N/mm ² TD 150 N/mm ² MD, 180 N/mm ² TD

¹ Data is derived from the base manufacturer's literature

OPTICAL PROPERTIES

Property	Autostat WT	Test Method
Total luminous transmission ¹		ASTM D1003
	WT3 WT5	12±2 % 6±2 %
Yellowness index ²		ASTM-D 1925-63T (reflection mode)
	WT3 WT5	-3.2 -3.4
CIE *Lab L ¹		ASTM E313-79
	WT3 WT5	96 97
Gloss at 60° angle ²		ASTM D2457-03
	WT3 WT5	45 67

¹ Data is derived from the base manufacturer's literature

² Typical figures from laboratory measurements



PHYSICAL PROPERTIES

Property	Autostat WT	Test Method
Density ¹	1.40 – 1.48g/cm ³	Based on ASTM-D 1505-79
Maximum processing temperature	150 °C	
Thicknesses	Nominal ± 5%	

¹Data is typical of polyester films and is derived from the base manufacturer's literature

MISCELLANEOUS

Property	Autostat WT	Test Method
Roll properties: Skew	<0.1% (10mm in 10m)	

LEGISLATIVE DIRECTIVES

This product does not knowingly contain any phthalates, or substances listed in the European End-of-Life Vehicles (ELV), Restriction of the use of certain Hazardous Substances in electrical and electronic equipment (RoHS) or Waste Electrical and Electronic Equipment (WEEE) Directives.

EC Regulation 594/91 classifies ozone depleting substances into a number of different groups, I-VI. Autostat WT does NOT contain any substance classified in groups I-VI nor have any of the substances been used by MacDermid Autotype during manufacture. For details of the content of each of the groups, please see separate ozone depleting substances document

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