MacDermid Autotype
A Platform Specialty Products company

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 WT5	 MD ≤0.5% max, TD ±0.1% max MD ≤0.2% max, TD ±0.08% max + indicates expansion - indicates shrinkage	 MacDermid Autotype Method [1] 150°C/30 minutes

[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.

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CHEMICAL PROPERTIES

Property	Autostat WT	Test Method
Moisture vapour transmission rate (MVTR) [1]	2.3g/m²/24 hours (WT5)	ASTM F372-73
Oxygen transmission rate[1]	6.5ml/m²/24 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] WT3 WT5	 10^{14} $>10^{14}$	ASTM D257-83 at 55% RH
Dielectric Constant[1] WT3 WT5	 3.3 2.6	ASTM D150-81 23°C 50 Hz

[1] Data is derived from the base manufacturer's literature

MECHANICAL PROPERTIES

Property	Autostat WT	Test Method
Elongation at break [1] WT3 WT5	 90% (TD) 150% (MD) 120% (TD and MD)	 ISO 527-1-2 23°C 50% R.H ASTM D882-83
Tensile strength at break[1] WT3 WT5	 150 N/mm² MD, 190 N/mm² TD 150 N/mm² MD, 180 N/mm² TD	 ISO 527-1-2 23°C 50% R.H ASTM D882A

[1] Data is derived from the base manufacturer's literature

OPTICAL PROPERTIES

Property	Autostat WT	Test Method
Total luminous transmission[1] WT3 WT5	 12±2 % 6±2 %	ASTM D1003
Yellowness index[2] WT3 WT5	 -3.2 -3.4	ASTM-D 1925-63T (reflection mode)
CIE *Lab L[1] WT3 WT5	 96 97	ASTM E313-79
Gloss at 60^0 angle [2] WT3 WT5	 45 67	ASTM D2457-03

[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%	

[1] Data 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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