

SIGMAGraF[®] UVJet[™] TM

Product Data Sheet

Polyester film is tougher and more durable than polycarbonate and PVC films. The SIGMAGraF UVJet range of hard coated Polyester films extends the functionality of polyester into areas demanding flexibility, chemical resistance and abrasion resistance with excellent receptivity to a wide range UV cured digital inks and solvent screen printing inks.

Product Range:

SIGMAGraF UVJet TM, 150µ

- Micro-fine textured matt finish
- Other gauges may be available on request

PRODUCT DESCRIPTION

SIGMAGraF UVJet is a high quality, hard coated polyester film, consisting of the base polyester and chemically bonded UV-cured hard surface coating. It is available in sheets and rolls.

PRODUCT APPLICATIONS

SIGMAGraF UVJet is designed for use in the following markets:

- Hoardings, boarding's, signage & interiors
- Visually demanding and durable display graphics
- In-store decoration, cladding and POP displays
- Fascias, nameplates, industrial & design applications
- Indoor signage in high-traffic areas
- Industrial & design applications
- Exhibition and Displays
- Building & architectural
- Retail
- Schools, hospitals, corporate
- Equipment manufacture

Major Benefits

- Resistant to chemicals, solvents & household cleaners
- Resistant to scratches, abrasion and impacts
- Resistant to graffiti
- Consistent surface finish
- Durable and lightweight
- Outstanding clarity for graphic and colour definition
- Global market leading technology

PRODUCT PERFORMANCE

Chemical Properties

Property	TM	Test Method
Chemical resistance	Resistant to: Alcohols Dilute acids Dilute alkalis Esters Hydrocarbons Ketones Household cleaning agents	DIN 42 115
Coefficient of hygroscopic expansion ¹	MD 8×10^{-6} (per 1% RH)	DuPont Teijin Films Method ¹ Between 40-80% RH
	TD 7×10^{-6} (per 1% RH)	
Moisture Vapour Transmission (MVTR) ¹	3.57g/m ² /24hrs	RTM 607
Oxygen Transmission Rate ¹	8.2ml/m ² /24hrs	RTM608

* For more information refer to SIGMAGraF solvent resistance sheet

¹Data derived from DuPont Teijin Films literature. The SIGMAGraF coating slightly enhances most properties.

Optical Properties

Property	TM	Test Method
Gardner Haze	55% \pm 5%	ASTM D1003-77 ¹
Gloss Level (60°)	7% \pm 1.5%	ASTM D2457-70 ¹
Texture Profile Ra Rtm	1.6 μ \pm 0.2 μ 8 μ \pm 2 μ	MacDermid Autotype Method ²
Total Luminous Transmission	92% \pm 2%	ASTM D1003-77 ¹
Yellowness Index	<3	ASTM E313
UV Absorption	1.3-1.4	MacDermid Autotype Method ²

¹Adapted to MacDermid Autotype Method. ²See Test Method Manual

Physical Properties

Property	TM	Test Method
Density ¹	1.39 g/cm ³	ASTM D1505
Thickness	150 μ \pm 10%	MacDermid Autotype Method ²
	200 μ \pm 10%	

¹Data derived from DuPont Teijin Films literature. ²See Test Method Manual

Thermal Properties

Property	TM	Test Method
Coefficient of thermal expansion ¹	0.002%/°C	DuPont Teijin Films Method
Coefficient of humidity expansion ¹	0.009% per %RH	DuPont Teijin Films Method
Dimensional Stability	0.2% MD @ 120°C maximum shrinkage	MacDermid Autotype Method ²
Max use temperature Low Humidity (<10% RH) High Humidity (10-95%RH)	85°C <60°C	
Min use temperature	-40°C	MacDermid Autotype Method ²

¹Data derived from DuPont Teijin Films literature. ²See Test Method Manual

WORKING INSTRUCTIONS

- Handle film at edge to avoid marking
- Reverse / flip your image before printing
- Do not stack or roll until image is completely cured / dry
- Always run a print test to ensure optimum performance when using new media
- See SIGMAGraF instructions insert for comprehensive printing and cutting guidelines.

Printing and Processing Guidelines

SIGMAGraF Film: Sub surface print i.e. print on the underside

Film winding: SIGMAGraF is wound print receptive side in; therefore the hard-coat side is on the outside of the roll

UV curing ink jet ink lay-down settings - for guidance only.

Specific trials need to be undertaken to determine best settings for printer, ink and substrate combination.

- SIGMAGraF UVJet - for lamination to another film substrate e.g. FootPrint white adhesive 100% ink lay-down.
- SIGMAGraF UVJet - as a Back-Lit film 300% ink lay-down.

Please Note: UV curing inks can take between 12 - 48 hours to reach maximum cure; hence maximum adhesion to the SIGMAGraF film.

HAZARDS & WARNINGS

None associated with this product.

FIRE PRECAUTIONS

Polyester films will burn with difficulty. Extinguisher method: foam, water, CO₂ or PCF.

FIRST AID

No chemical related injury is anticipated from the use of this product.

ENVIRONMENTAL & DISPOSAL

EC Regulation 594/91 classifies ozone depleting substances into a number of different groups, I-VI. This range of products do 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.

EU Directives 2003/11/EC; 2002/95/EC; 2002/525/EC; 2006/122/EC (ROHS)

Restriction on use of Pentabromodiphenyl ether CAS 32534-81-9
Octabromodiphenyl ether CAS 32536-52-0
Polybrominated biphenyls
Polybrominated diphenylether
Lead, Mercury, Cadmium, Chromium VI
Perfluorooctanesulphonate, Perfluorooctanic acid & related compounds

In relation to the above directive, this range of products does not contain polybrominated biphenyl & diphenyl ethers, brominated compounds, perfluorooctane derivatives or any flame retardant agents. MacDermid Autotype products are also free of the heavy metals specified in the above Directives (lead, mercury, cadmium, chromium VI).

EU Directive 2002/96/EC (WEEE) relates to the Disposal and Recycling of Waste Electronic and Electrical Equipment. MacDermid Autotype products are compliant with this directive and do not contain any materials identified in Directives 2003/11/EC & 2002/53/EC (also 2037/2000). MacDermid Autotype Limited has no responsibility for the compliance of finished equipment, which will contain materials from other suppliers.

This range of products comprises films with a chemically treated surface which renders them difficult to recycle in appropriate material recovery schemes. The product contains no substances listed on the EC Black or Grey lists and may be safely disposed of in a landfill or by authorized incineration.

STORAGE

Store in original packaging, in a cool, dry place, away from direct sunlight / UV light source.

PACKAGING

Sheets: 100 sheets per pack, sealed in black plastic and packed in MacDermid Autotype Limited logo board box

Rolls: Standard roll length 50m, Maximum width 122cm

Revision 0709R1

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