

SIGN MAKING COLOURED FILM MATERIAL GUIDE

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William Smith

As part of William Smith Group 1832, we are one of the UK’s leading distributors of self-adhesive materials and associated accessories to the sign, graphics and building interiors industries.

We place high standards on everything we do. As a trade-only company, we understand our customers and respect their business.

THE RIGHT VINYL FOR YOU

Our sign making material guide is here to help you find the best material to suit your requirements. Choose from a wide range of 3M, Avery Dennison, Arlon, VION and R-Tape coloured films and application tapes.

Cast Films

Cast films have an enduring quality and a longer life making them perfect for long term applications. They are made from a premium grade of PVC which starts life as a liquid. This liquid is then poured into a drum and a layer is scraped onto a liner. This is then dried and cured, and coated with an adhesive followed by a backing liner. The original liner is then removed.

Cast films have no memory and are stable therefore will not shrink. The films are thinner and softer so are much easier to cut, weed and apply. They are suitable for irregular surfaces such as rivets and textures, making them the preferred option for longer term or extreme exterior applications.



Calendered Films

Calendered films start life as a solid so have to go through the calendaring process which involves adding plasticisers and stabilisers. It is then passed through rollers, called calenders, until the film reaches the required thickness. Finally the material is coated and a liner added, as the film is not flat to start with, in time it shrinks making it more suited to shorter term applications.

There are two types of calendered films:

Polymeric Calendered Films

- Suitable for longer exterior applications than monomeric films
- Not suitable for irregular surfaces
- Better grades of polymers added to reduce shrinkage

Monomeric Calendered Films

- Usually more rigid - therefore shrink leaving the adhesive exposed beneath
- They should only be used for short term applications

ONLINE ORDERING

View all colours and order online 24/7 at www.williamsmith.co.uk

OPENING HOURS

8am-6pm Monday to Friday with same day despatch available on orders received before 6pm.

PERSONABLE SERVICE

You will speak to a knowledgeable individual who will advise you about the right product. Not an automated system.

To order a colour swatch or request a sample call 01833 690305 or email info@williamsmith.co.uk

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MONOMERIC COLOURED FILMS - OPAQUE

 500 EVENT FILM

Ideal for short-term signage, graphics, promotional displays, point-of-sale and exhibition graphics. The monomeric calendered 70 micron films feature a permanent acrylic based adhesive. Available in a range of 47 gloss and 47 matt colours.

With great conversion properties for computerised sign-making, the film has excellent cutting properties and weeds easily. Ideal for event signs and graphics.

- Key Features:**
- Excellent range of gloss and matt colours
 - Exceptional cutting and weeding
 - Flat surfaces
 - Register guides on the liner imprint

Available sizes:
615mm x 50m
1230mm x 50m



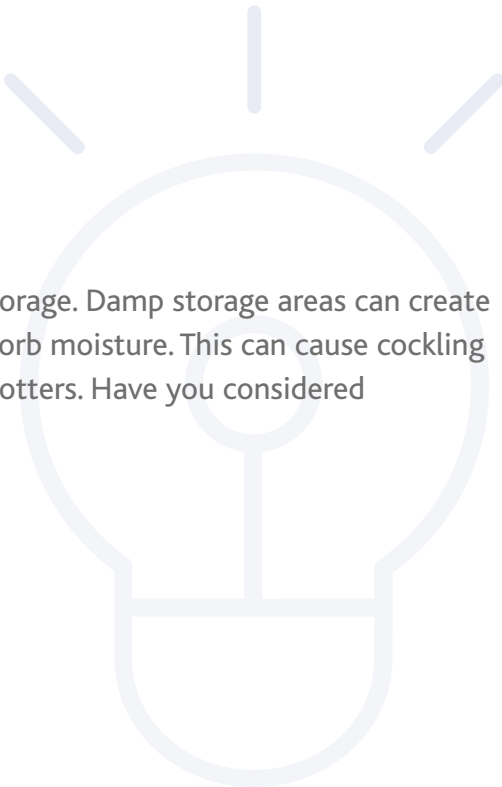
Application Temperature (Celsius)	+10°C minimum
Applications	Buildings, Displays, Opaque Signs, Vehicle Graphics, Windows
Film Type	Monomeric Calendered PVC
Max. Durability	2 years Metallics, 4 years Colours, 5 years Black/White
Surface Type	Acrylic Based
Adhesive Type	Pressure-sensitive, Water based
Adhesive Colour	White
Removability	Permanent
Surface Finish	Gloss and Matt
Thickness (film)	70 µm
Usage	Internal, External



HINTS & TIPS

Storage of Films

Dry warm conditions are a must for vinyl storage. Damp storage areas can create problems with paper liners as they may absorb moisture. This can cause cockling of the liner which could affect cutting on plotters. Have you considered a dehumidifier in winter?





INTERMEDIATE/APPLICATIONS



POLYMERIC COLOURED FILMS - OPAQUE

3M SCOTCHCAL GRAPHIC FILM SERIES 50

A 75 micron polymeric calendered film with a clear, permanent, pressure sensitive adhesive. Available in a range of 58 gloss and 2 matt colours. Suitable for application onto flat surfaces only. These 5-7 year films are suitable for a wide range of signage and marking applications.

- Key Features:**
- Choice of 60 colours
 - Clear, permanent, pressure sensitive adhesive
 - Flat surfaces
 - 5-7 year durability

Available sizes:
610mm x 50m
1220mm x 50m



Application Temperature (Celsius)	+8°C minimum
Applications	Buildings, Opaque Signs, Vehicle Graphics, Windows
Film Type	Polymeric Calendered
Max. Durability	5 years Colours, 7 years Black/White
Surface Type	Flat
Adhesive Type	Pressure-sensitive
Adhesive Colour	Clear
Removability	Permanent
Surface Finish	Gloss and Matt
Thickness (film)	75 µm
Usage	Internal, External

AVERY DENNISON 700 PREMIUM FILMS

5-8 year polymeric calendered PVC film, ideal for many medium-term indoor and outdoor applications. Ideal for use on directional signage, vehicle graphics, window graphics and promotional displays. Suitable for both flat and simple curved substrates, with excellent dimensional stability.

- Key Features:**
- Conformable and flexible
 - Attractive range with 100 colours including gloss, matt and metallic
 - Good opacity
 - 5-8 year durability

Available sizes:
610mm x 50m
1220mm x 50m



Application Temperature (Celsius)	+10°C minimum
Applications	Buildings, Displays, Opaque Signs, Vehicle Graphics, Windows
Film Type	Calendered Polymeric PVC
Max. Durability	5 years Metallics, 7 years Colours, 8 years Black/White
Surface Type	Flat, Simple Curves
Adhesive Type	Acrylic Based
Adhesive Colour	Clear
Removability	Permanent
Surface Finish	Gloss, Matt, Metallic
Thickness (film)	64 µm
Usage	Internal, External

 4500 SERIES

A polymeric calendered 80 micron translucent film designed for use on medium-life backlit illuminated signage. Available in an extensive colour range, the films are suitable for graphics for internally illuminated signs on both rigid and flexible substrates.

Key Features:

- Excellent colour uniformity in reflected and transmitted light
- Outstanding adhesion on a wide variety of substrates
- Great colour fastness
- Choice of 38 standard colours

Available sizes:
1230mm x 50m



Application Temperature (Celsius)	+ 10°C minimum
Applications	Illuminated Signs, Windows
Film Type	Polymeric Calendered
Max. Durability	5 years Metallic, 7 years colours, 7 years Black/White
Surface Type	Flat, Flexible Signfaces
Adhesive Type	Acrylic based
Adhesive Colour	Clear
Removability	Permanent
Surface Finish	Lustre
Thickness (film)	80 µm
Usage	Internal, External



3M SCOTCHCAL GRAPHIC FILM SERIES 80

A high performance cast 50 micron film with a clear, permanent, pressure sensitive adhesive. Available in a range of 82 gloss and 2 matt colours.

Suitable for application onto flat surfaces with or without rivets and simple curved surfaces. Custom colour matching is available.

- Key Features:**
- Choice of 84 colours
 - Clear, permanent, pressure sensitive adhesive
 - Suitable for flat and simple curves with or without rivets
 - Up to 8-10 years durability

Available sizes:
610mm x 50m
1220mm x 50m



Application Temperature (Celsius)	+8°C minimum
Applications	Buildings, Opaque Signs, Vehicle Graphics, Windows
Film Type	Cast
Max. Durability	5 years Transparent/Metallics, 8 years Colours, 10 years Black/White
Surface Type	Flat, Rivets, Simple Curves
Adhesive Type	Pressure-sensitive
Adhesive Colour	Clear
Removability	Permanent
Surface Finish	Gloss, Matt, Metallic
Thickness (film)	50 µm
Usage	Internal, External

AVERY DENNISON 777 CAST FILMS

An economical 8 year cast film ideal for coloured window graphics, signage, vehicle graphics and promotional displays. The films are conformable on compound curves, rivets and corrugations making the film ideal for a wide range of sign and graphic applications.

- Key Features:**
- Durable for up to 8 years
 - Extensive range of standard colours, including gloss matt and metallic
 - 60 micron
 - Competitively priced

Available sizes:
615mm x 50m
1230mm x 50m



Application Temperature (Celsius)	+10°C minimum
Applications	Buildings, Displays, Opaque Signs, Vehicle Graphics, Windows
Film Type	Cast
Max. Durability	5 years Metallics, 7 years Colours, 8 years Black/White
Surface Type	Flat, Simple Curves,Compound Curves, Rivets, Corrugations
Adhesive Type	Acrylic Based
Adhesive Colour	Clear
Removability	Permanent
Surface Finish	Gloss, Matt, Metallic
Thickness (film)	60 µm
Usage	Internal, External

3M SCOTCHCAL GRAPHIC FILM SERIES 100

A premium cast 50 micron film with a clear, permanent, pressure sensitive adhesive. Available in an extensive range of 170 gloss, matt and metallic colours.

Suitable for application onto flat and corrugated surfaces, with or without rivets, and to gentle compound curves. This film has an excellent lay flat performance on flatbed plotters. Custom colour matching is available.

- Key Features:**
- Choice of 170 colours
 - Clear, permanent, pressure sensitive adhesive
 - Flat and corrugated surfaces, with or without rivets, and gentle compound curves
 - 10-12 years durability

Available sizes:
610mm x 50m
1220mm x 50m



Application Temperature (Celsius)	+4°C minimum
Applications	Buildings, Opaque Signs, Vehicle Graphics, Windows
Film Type	Cast
Max. Durability	6 years Transparent/Metallics, 10 years Colours, 12 years Black/White
Surface Type	Flat, Rivets, Simple Curves
Adhesive Type	Pressure-sensitive
Adhesive Colour	Clear
Removability	Permanent
Surface Finish	Gloss, Matt, Metallic
Thickness (film)	50 µm
Usage	Internal, External

AVERY DENNISON 800 PREMIUM CAST FILMS

Premium quality cast vinyl for long-term sign-cut internal and external applications, available in an extensive colour range.

The face film allows for easy and accurate application of finished lettering and graphics to curved and corrugated surfaces. Suitable for vehicle graphics, directional signage, window graphics and retail signage. Colour Match available.

- Key Features:**
- Outstanding durability and outdoor performance
 - High gloss for superior appearance
 - Excellent conformability on curved and corrugated surfaces
 - Up to 10 years durability

Available sizes:
1230mm x 50m



Application Temperature (Celsius)	+10°C minimum
Applications	Signmaking, Vehicle Marking, Point of Sale, Opaque Signs
Film Type	Cast
Max. Durability	10 years
Surface Type	Curved and Corrugated Surfaces
Adhesive Type	Acrylic Based
Adhesive Colour	Clear
Removability	Permanent
Surface Finish	Gloss, Matt, Metallic
Thickness (film)	50 µm
Usage	Internal, External

AVERY DENNISON 900 SUPER CAST FILMS

An ultra-conformable supercast film for long-term sign-cut internal and external applications. Available in a wide range of colours in gloss, matt and metallic. Suitable for applications on heavily corrugated surfaces, both convex and concave curves.

Avery Dennison 900 Super Cast Films are recommended for use on vehicle graphics, architectural signage, police and emergency vehicle graphics, retail signage and window graphics. Colour Match available.

- Key Features:**
- Ultra-Conformable
 - Wide Choice of colours available
 - High gloss surface for superior appearance
 - Up to 12 years durability

Available sizes:
1230mm x 25m
1230mm x 50m



Application Temperature (Celsius)	+10°C minimum
Applications	Vehicle graphics, Architectural Signage, Police and Emergency Vehicle Graphics, Retail Signage and Window Graphics
Film Type	Cast
Max. Durability	12 years
Surface Type	Curved Surfaces, Rivets and Corrugated Surfaces
Adhesive Type	Acrylic Based
Adhesive Colour	Clear
Removability	Permanent
Surface Finish	Gloss, Matt, Metallic
Thickness (film)	50 µm
Usage	Internal, External

3M SCOTCHCAL TRANSLUCENT GRAPHIC FILM SERIES 3630

A premium, matt, cast 50 micron translucent film with clear, permanent, pressure sensitive adhesive. Available in 78 colours. Custom colour matching available.

Suitable for first and second surface application on plastic and glass substrates, to create internally-illuminated sign faces and window graphics. These films are designed to be thermoformable. Up to 10 years durability.

- Key Features:**
- Choice of 78 colours
 - For illuminated signs and window applications
 - Clear, permanent, pressure sensitive adhesive
 - Up to 10 year durability

Available sizes:
1220mm x 25m



Application Temperature (Celsius)	+16°C minimum
Applications	Illuminated Signs, Windows
Film Type	Cast
Max. Durability	10 years
Surface Type	Flat, Flexible Signfaces
Adhesive Type	Pressure-sensitive
Adhesive Colour	Clear
Removability	Permanent
Surface Finish	Matt
Thickness (film)	50 µm
Usage	Internal, External

AVERY DENNISON SIGNFLEX

Avery Dennison SignFlex is a specially developed opaque vinyl which has been designed to adhere to flexible substrates such as truck tarpaulins and banner materials.

Highly conformable, it benefits from strong adhesion, is UV resistant and can withstand adverse weather and temperature conditions. SignFlex can also be digitally printed using solvent, eco solvent, latex and UV curable inks.

- Key Features:**
- Cast-PVC
 - Available in six high gloss colours
 - Highly conformable
 - Up to 5 years durability

Available sizes:
1230mm x 50m



Application Temperature (Celsius)	+10°C minimum
Applications	Vehicles, Truck Tarpaulins
Film Type	Cast
Max. Durability	Up to 5 years
Surface Type	Flat
Removability	Removable
Surface Finish	Gloss
Thickness (film)	75 µm
Usage	External

3M SCOTCHCAL SERIES 3635

Premium cast light management films to achieve special effects for illuminated signs. Block Out 3635-20 and 3635-22B control lightflow. Diffuser 3635-30 (30%) and 3635-70 (60% light transmission) improve light diffusion and uniformity.

Day/Night 3635-91 creates the appearance of dark graphics during the day and white coloured graphics at night. Dual Colour 3635-210 and 3635-222 produce a colour/image special effect by day and a different colour by night when illuminated. LEF 3635-100 White Light Enhancement Film increases sign luminance by eliminating light hotspots.

- Key Features:**
- Block out, Diffuser, Day/Night, Light Enhancement and Dual Colour films
 - For special effects in illuminated signs
 - Clear, permanent, pressure sensitive adhesive
 - 5-10 year durability

Available sizes:
1220mm x 45.72m



Application Temperature (Celsius)	+16°C minimum
Applications	Illuminated Signs
Film Type	Cast
Max. Durability	10 years, 7 years 3635-210/222 Dual Colour and 3635-100 LEF
Surface Type	Flat
Adhesive Type	Pressure-sensitive
Adhesive Colour	Clear
Removability	Permanent
Surface Finish	Gloss, Matt
Thickness (film)	80-140 µm
Usage	Internal, External

3M ENVISION
TRANSLUCENT GRAPHIC
FILM SERIES 3730

A premium, matt, cast 50 micron translucent film with clear, permanent, pressure sensitive adhesive. 3M Envision translucent films optimize LED light.

They can provide the same level of brightness using fewer light sources, reducing material and maintenance costs. They can provide more light transmission for vibrant, rich colour. Available in 25 colours.

- Key Features:
- Choice of 25 colours
 - For LED illuminated signs
 - Clear, permanent, pressure sensitive adhesive
 - Up to 10 year durability

Available sizes:
1220mm x 45.72m



Application Temperature (Celsius)	+16°C minimum
Applications	Illuminated Signs, Windows
Film Type	Cast
Max. Durability	10 years
Surface Type	Flat, Flexible Signfaces
Adhesive Type	Pressure-sensitive
Adhesive Colour	Clear
Removability	Permanent
Surface Finish	Matt
Thickness (film)	50 µm
Usage	Internal, External

AVERY DENNISON 5500 SERIES

Specially designed for internally illuminated advertising, on both rigid and flexible substrates. Avery Dennison 5500 50 micron translucent cast films offer exceptional colour uniformity for both reflected and transmitted light situations.

- Key Features:
- Choice of 65 colours
 - Permanent transparent acrylic based adhesive
 - Thermoformable
 - Up to 10 year durability

Available sizes:
1230mm x 25m



Application Temperature (Celsius)	+10°C minimum
Applications	Illuminated Signs, Windows, Signmaking
Film Type	Cast
Max. Durability	6 years Metallic, 8 years Colours, 10 years Black/White
Surface Type	Flat, Curved, Flexible Substrates
Adhesive Type	Acrylic
Adhesive Colour	Clear
Removability	Permanent
Surface Finish	Lustre
Thickness (film)	50 µm
Usage	Internal, External

3M ENVISION DIFFUSER
FILM

A range of premium, matt, cast diffuser films with clear, permanent, pressure sensitive adhesive to control brightness and light distribution. It is designed to work with LED light sources.

- Key Features:
- Diffuser films for use with LED illuminated signs
 - Control brightness and light distribution within light boxes without hotspots
 - Create custom lighting effects for backlit applications
 - Up to 9 year durability

Available sizes:
1220mm x 45.72m



Application Temperature (Celsius)	+16°C minimum
Applications	Illuminated Signs
Film Type	Cast
Max. Durability	9 years
Surface Type	Flat, Flexible Signfaces
Adhesive Type	Pressure-sensitive
Adhesive Colour	Clear
Removability	Permanent
Surface Finish	Matt
Thickness (film)	50 µm
Usage	Internal, External

AVERY DENNISON 5600 LD SERIES

Designed to meet the challenges of LED illuminated signage, Avery Dennison 5600 LD Translucent Film series provide a simple single film solution - eliminating LED "hot spots" without the cost and complexity of additional diffuser film or pigmented acrylic sheet

- Key Features:
- Lower complexity and cost, using a single film
 - Eliminates hot spots without additional diffuser film
 - Vibrant, uniform signage
 - For LED illuminated signage
 - Up to 10 year durability

Available sizes:
1230mm x 50m



Application Temperature (Celsius)	+10°C minimum
Applications	Illuminated Signs, Windows
Film Type	Cast
Max. Durability	10 years
Surface Type	Flat, Flexible Signfaces
Adhesive Type	Acrylic Based
Adhesive Colour	Clear
Removability	Permanent
Surface Finish	Lustre
Thickness (film)	50-70 µm
Usage	Internal, External



5100 DIFFUSER FILM

Premium quality cast vinyl films designed for use as a light diffuser for internally illuminated signs and graphics. The films can be applied onto flexible and rigid substrates with flat and simple curved surfaces.

- Key Features:
- Excellent colour fastness and durability
 - Permanent, clear, acrylic based adhesive
 - Eliminates the issue of hotspots
 - Up to 5 year exterior durability

Available sizes:
1220mm x 25m



Application Temperature (Celsius)	+10°C minimum
Applications	Illuminated Signs, Windows
Film Type	Cast
Max. Durability	5 years
Surface Type	Flat, Simple Curves
Adhesive Type	Acrylic Based
Adhesive Colour	Clear
Removability	Permanent
Surface Finish	Lustre
Thickness (film)	50 µm
Usage	Internal, External



5300 BLOCKOUT FILM

Avery Dennison 5300 blockout films are premium quality cast films, specially designed for graphics involving internally illuminated light box applications. These films are designed to provide complete light blocking characteristics and are suitable for internal and external use.

- Key Features:
- Offers the choice of a white or black face film
 - Suitable for flat and slightly curved surfaces
 - Excellent performance as second surface media
 - For internally illuminated signs

Available sizes:
1220mm x 25m



Application Temperature (Celsius)	+10°C minimum
Applications	Illuminated Signs, Windows
Film Type	Cast
Max. Durability	5 years
Surface Type	Flat, Simple Curves
Adhesive Type	Acrylic Based
Adhesive Colour	Clear
Removability	Permanent
Surface Finish	Lustre
Thickness (film)	100 µm
Usage	Internal, External



3M PRE-MASKING TAPE

Paper Application Tape

SCPM-19 tape with a low-tack adhesive that is specially formulated to assist the application of unprinted large format graphics to substrates.



Key Features:

- Low tack
- Paper tapes
- Removable

Available Sizes:

- 1220mm x 91.44m
- 1372mm x 91.44m

3M PRE-SPACING TAPE

Paper Application Tape

SCPS-100 high tack application tape suitable for use with printed graphics or for cut text using 3M 100 Series.



Key Features:

- High tack
- Paper tapes
- Removable

Available Sizes:

- 1220mm x 91.44m

r.tape PREMIUM PAPER

Premium Paper Application Tape

ApliTape 4885 is a heavyweight paper pre-spacing tape with an extra high tack rubber adhesive. 4885 is designed for difficult-to-transfer graphics applications, such as thermal die cut graphics and highly textured window graphics films.



Key Features:

- Heavyweight paper pre-spacing tape
- Low tack rubber adhesive
- Designed for difficult to transfer graphic applications

Available Sizes:

- 1520mm x 100m

r.tape APLITAPE

Standard Paper Application Tape

Transfers medium and large sized plotter cut graphics. Ideal for general purpose sign applications. Available in both standard and heavyweight paper grades with a rubber adhesive. Available in a variety of tack levels.



Key Features:

- Tears cleanly, no stringy adhesive residue
- No adhesive build-up on stored graphics
- Wet or dry applications
- Removes easily following application

Available Sizes:

- 1220mm x 91.4m

r.tape CONFORM

Premium Paper Application Tape

Conform Paper Application Tape with Release Liner Adhesion, Conform sticks to slick release liners, so tapes do not “dog ear” and stick together. Graphics stay neater and cleaner, even when they are rolled. Ideal for general purpose sign applications, Conform series application tapes are available in heavyweight paper grades, in a variety of tack levels from low to high.



Key Features:

- Added RLA Release Liner Adhesion
- Lay flat with no tunnelling or edge curling
- Tears cleanly with no stringy adhesive residue
- No adhesion build on stored graphics
- Wet or dry applications

Available Sizes:

- 1520mm x 100m
- 1220mm x 91.4m

VION. PAPER TAPE

Standard Paper Application Tape

A range of paper tapes suitable for transferring small to large self-adhesive letters, logos and graphics.

With low tensile elongation and high wet strength, the tapes are designed to lay flat and adhere to the liner so that they do not wrinkle or curl. Available in VTP50 medium tack and VTP75 high tack standard grade paper tapes.



Key Features:

- Medium and high tack tapes
- Rubber adhesive provides excellent adhesion
- Carrier paper provides excellent stability and does not curl
- Easy rewinding

Available Sizes:

- 1220mm x 91.4m

VION. TRANSPARENT TAPE

Transparent Application Tape

A range of transparent tapes suitable for transferring self-adhesive letters, logos and graphics. Polypropylene based tapes with exceptional clarity and easy unwind properties. Available in VTC52 transparent medium tack and VTC72 transparent high tack embossed options.



Key Features:

- Medium and high tack tapes
- Embossed version allows tearing in both directions
- Easily removed with no adhesive residue
- Excellent lay-flat to resist curling

Available Sizes:

- 1220mm x 91.4m



William Smith

01833 690305

info@williamsmith.co.uk

www.williamsmith.co.uk

 @WilliamSmith1832

 @william_smith_1832

 William Smith Group 1832

