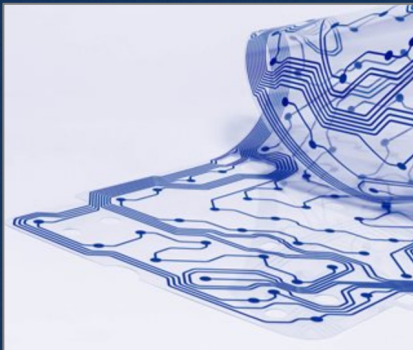


Plastic Materials for Printing and Graphics



Material Options for Printing and Graphics

- Acrylic
- Aluminum composite material (ACM)
- Expanded PVC
- Foam board
- HDPE
- High impact polystyrene (HIS)
- KYDEX® Thermoplastics
- LDPE
- PETG
- Polycarbonate sheet
- Polycarbonate film
- Polyester film
- Polypropylene
- PVC (rigid)
- Tapes
- Transfer adhesives
- Vinyl

Grades Available for...

- Better ink adhesion
- UV resistance
- Scratch resistance
- Chemical resistance
- Flammability ratings
- Light diffusion
- Outdoor use
- Flexibility (thin gauge sheet)



Typical Applications

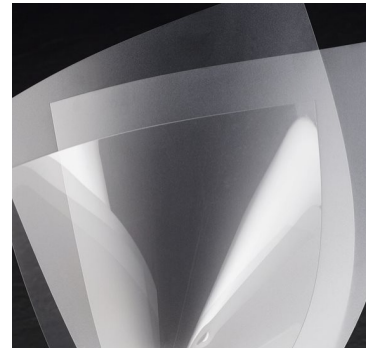
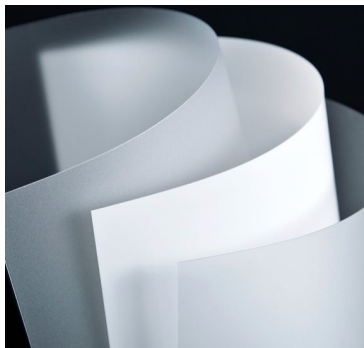
- Backlit signs, menu boards, and POP displays
- Flexible circuits
- Graphic overlays
- Interior signage and wayfinding
- Membrane switches and control panels
- Nameplates and labels
- Wall panels and partitions
- Outdoor signage
- Printed advertising

Film

Film is... plastic sheet that is 0.030" or thinner and typically extruded into rolls - available in either a converted roll form or cut into sheets

Film Types

- Polycarbonate and Polycarbonate Blends
- Light Management Polycarbonate
- Polyester



Polycarbonate & Polycarbonate Blend Films

- **Makrofol®** - standard polycarbonate film
- **Bayfol®** - blend films made from polycarbonate and other thermoplastics
 - Bayfol® UV506 7-2 has outstanding UV resistance for exterior applications

A variety of grades and textures are available to meet application requirements.

Availability		
Standard Thicknesses	Standard Master Roll Widths	Stock Sheet Sizes
.005", .007", .010" .015", .020", .030"	36.5" 48.5"	24.5" x 48.5"

Polycarbonate & Blend Film Applications

- Nameplates and labels
- Graphic overlays
- Membrane switches and control panels
- Backlit signs and menu boards



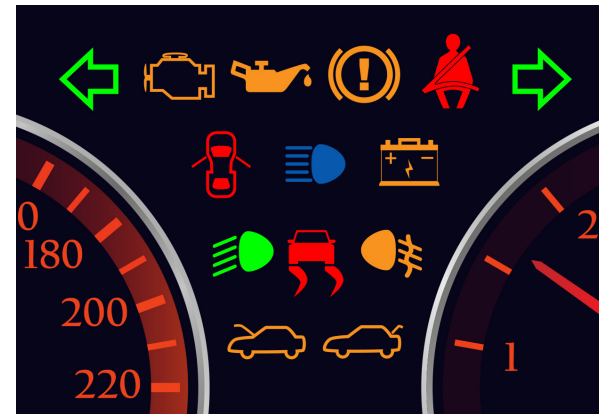
Light Management (LM) Polycarbonate Films

- **Makrofol® LM Polycarbonate Films** – are manufactured with a light scattering agent and surface texture designed to hide “hot spots” generated by LED’s (light emitting diodes)
- **3 Light Transmitting Grades Available** - stocked in 0.012” thickness

Grade	Light Transmission	Description
LM 309	86%	Good hiding of LED hot spots while allowing more light transmission
LM 905	81%	Good hiding of LED hot spots while allowing more light transmission
LM 228	73%	Better job of hiding LED hot spots than 309 or 905 with less light transmission

Makrofol® LM Polycarbonate Film Applications

- Architectural lighting
- Backlit displays
- Automotive instrument panels with LED's



Polyester Films (Skyrol®)

Applications

- Labels
- Flexible packaging
- Membrane touch switches (MTS)
- Nameplates
- Control panels



Availability	
Standard Thicknesses	Standard Master Roll Widths
.001", .002", .003", .004" .005", .007", .010", .014"	50" - 60"

Acrylic (*OPTIX*®)

Performance Characteristics

- Strong, stiff, and optically clear
- Easy to fabricate, machine, thermoform, and solvent bond
- Good dimensional stability and weathering

Applications

- Indoor and outdoor signs
- POP displays and exhibits
- LED light diffusion
- Brochure holders
- Shelves and retail fixtures
- Frames and display cases



Polycarbonate (*TUFFAK*®)

Performance Characteristics

- Outstanding impact resistance
- Good optical clarity
- Strong and stiff
- Easy to fabricate, machine, and thermoform
- Good electrical insulation
- Easy to bond with solvent cements

Applications

- Indoor and outdoor signs
- POP displays and graphic holders
- LED light diffusion



PETG (VIVAK®)

Performance Characteristics

- Outstanding deep draw thermoforming
- Good impact resistance
- Chemical resistant
- Easy to fabricate and machine
- Good clarity

Applications

- Signs
- Sign and graphic holders
- POP displays and store fixtures
- Product and tabletop displays



KYDEX® Thermoplastic Sheet

Performance Characteristics

- Easy to thermoform deep draw parts
- High impact resistance to breakage
- Good strength and stiffness
- Easy to fabricate
- Consistent color throughout sheet hides scratches and wear

Applications

- Kiosks, exhibits, display bases
- Counters, workstations, kickplates
- Flat laminated panels of all types
- Furniture components, shelving, cabinetry



High Impact Polystyrene

Performance Characteristics

- High impact strength
- Good machinability
- Easy to glue, paint, and print
- Outstanding thermoforming characteristics

Applications

- POP displays and fixtures
- Printed graphics
- Shelves
- Kiosks



Expanded PVC (Celtec[®], SINTRA[®])

Performance Characteristics

- Rigid, lightweight but durable
- Easy to machine, fabricate, die-cut, and thermoform
- Moisture resistant
- Accepts inks, paints, and pressure sensitive adhesives

Applications

- Printable – digital and screen
- Signage, POP displays, shelves, fixtures
- Exhibits, kiosks, display boards
- Photo mounting
- Wood replacement



Aluminum Composite Materials (ACM) (*DIBOND*®)

Performance Characteristics

- Rigid, yet lightweight
- Easy to fabricate, machine, and bond
- Good dimensional stability

Applications

- Indoor and outdoor signs
- POP displays, exhibits, and kiosks
- Framing and mounting
- Digital and screen printing
- Sets and props



Fluted Polypropylene Board

Performance Characteristics

- Lightweight, rigid, durable
- Chemical, mildew, moisture, and stain resistant
- Good impact resistance
- Easy to fabricate
- Corona treated grades for ink adhesion
- Low cost

Applications

- Screen printing
- Retail, real estate, and political signs
- Printed advertising graphics
- POP displays
- Packaging and tote boxes for delicate items



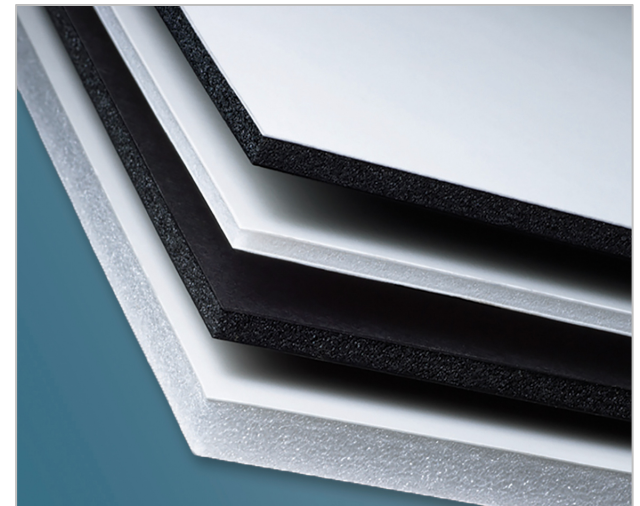
Foam Boards (*FOME-COR*®, *GATORFOAM*®)

Performance Characteristics

- Rigid, yet lightweight
- Readily accepts inks and paints
- Easy to fabricate, knife cut, emboss, and die cut (*FOME-COR*®)
- Saw cut and routed (*GATORFOAM*®)
- Easy to bond

Applications

- POP displays, exhibits, and kiosks
- Framing and mounting
- Interior signage – short-term application life
- Digital and screen printing
- Sets and props



Curbell Services

- Converting capabilities
- Fabrication and machining services
- Highly trained technical experts



**Thank you for your attention. Contact us for more information
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