

LEXAN™ POLYCARBONATE FILM

PRODUCT PORTFOLIO



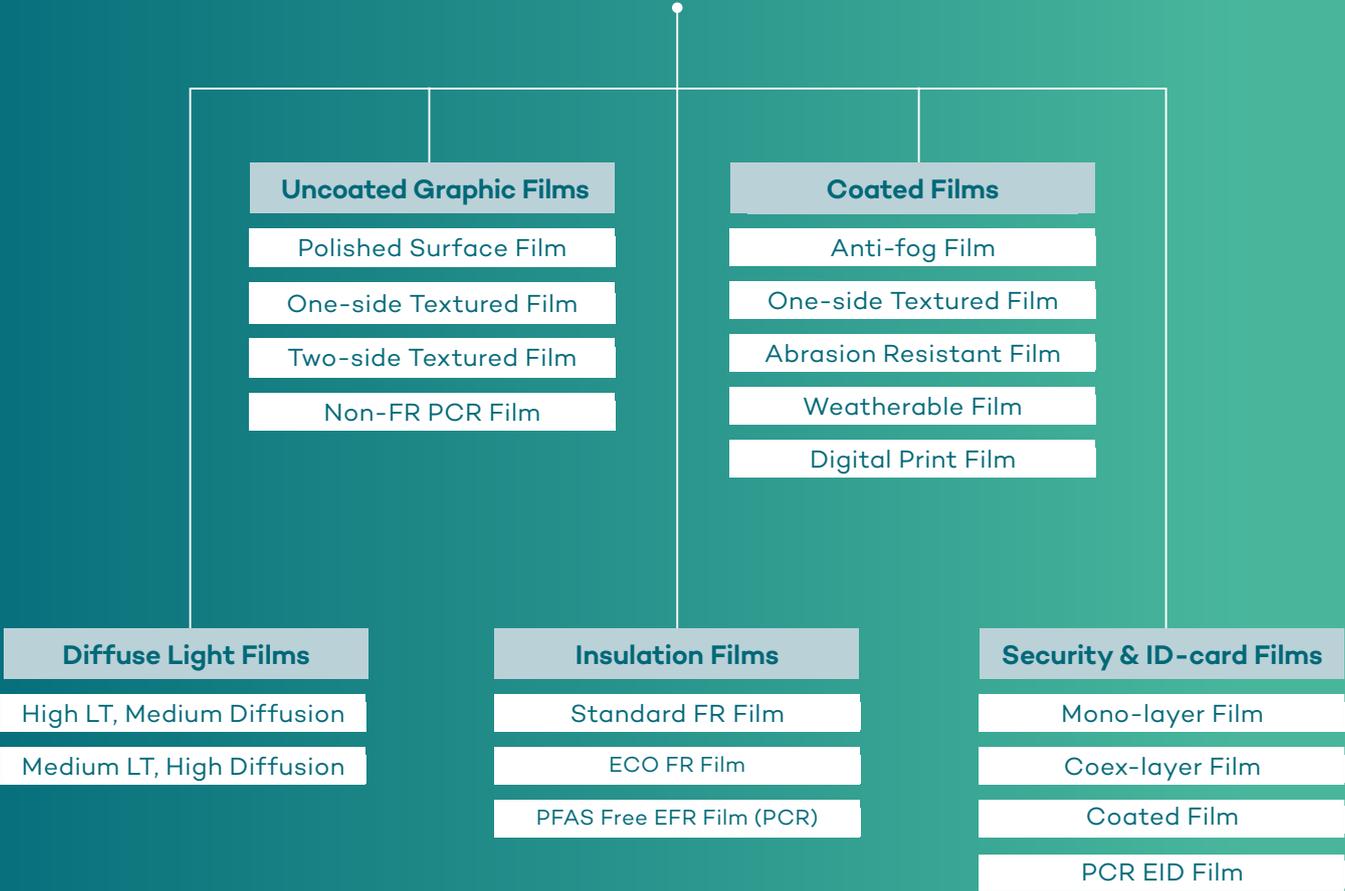
LEXAN™ FILM

POLYVANTIS

POLYVANTIS' Film & Sheet business offers high quality, engineered thermoplastic films across a wide variety of industries, ranging from graphics and consumer electronics to automotive.

Our LEXAN™ Polycarbonate film portfolio is backed by advanced technical support and application development services around the world to meet our customers' global specification needs with local supply.

LEXAN™ FILM PORTFOLIO





CONSTANTLY ADDING VALUE: PROVIDING MORE THAN JUST HIGH QUALITY PRODUCTS

The LEXAN™ Film offering reflects POLYVANTIS' reputation as a leader in thermoplastic films for over 50 years, its ongoing investment in R&D, and its commitment to meeting customers' ever-evolving needs.

From graphics and consumer electronics to automotive applications and more, LEXAN films are made from a proprietary blend of high-quality, high-performance raw materials, offering the best solution for thermoplastic films available today.

- aim to reduce system costs
- create innovative designs
- increase functionality
- sustainable products

All our film products are RoHs and REACH certified and UL certifications can be found under the UL global database.

UNCOATED FILMS

For the graphics segment, a range of tailor-made LEXAN™ graphic film products helps deliver top quality performance and virtually unlimited versatility. These films are characterized by outstanding optical clarity, mechanical strength, consistent printability and ease of processing. Available in a wide choice of standard and high performance grades, these products offer a variety of surface finishes and textures.



POLISHED FILM

LEXAN polished films offer 86% to 92% light transmission across all gauges. Some of these films are available in custom colors and various masking types are available, to meet specific customer requirements.

APPLICATIONS

- In-mold decoration applications for automotive interiors, appliances and consumer electronics
- LED/LCD display windows
- Medical packaging

KEY BENEFITS

- True color reproduction
- Excellent depth effect with no loss of vividness in second-surface printing
- FDA / USP Class VI compliance (LEXAN 8040 film)
- Chemical resistance and weathering (ITR-PC Film)
- Easy formability
- Increased pencil hardness

Grade Names	Key features	Gauge Availability
LEXAN 8010(Q) Film	- Standard clear polish/polish - True color reproduction	100-750 µm 4 - 30 mil
LEXAN 8010(Q)SHT Film (Sheeted)	- Clear polished sheeted film - Q-type for best optical quality & stress control	500-1200 µm 20 - 40 mil
LEXAN 8030 Film	- Blocking UV-A and UV-B wavelengths - Improved gauge control	175-375 µm 3 - 15 mil
LEXAN 8040 Film	- True color reproduction - High heat resistance - FDA approved, clear polish/polish	175-750 µm 7 - 30 mil
LEXAN 6060 Film	- 2H pencil hardness (externally certified - SGS)	175-250 µm 7 - 10 mil
LEXAN 6070(T) Film	- Improved pencil hardness - Excellent optical clarity - Improved design flexibility - Light weight	175-250 µm 7-10 mil
ITR-PC 11010 Film (formerly known as SLX)	- UV resistant, polish/polish film - Chemical resistance - Retention of high color and gloss	250 µm 10 mil

TEXTURED FILM

The range of textured LEXAN™ films offers broad design flexibility and aesthetic appeal. Either one-side or two-side textured products can be used to design 2D and 3D applications with nearly square corners, straight sides, narrow-width lines and flat plateaus. Key features of the films include outstanding dimensional stability and ductility.



APPLICATIONS

- Lighting and display applications
- Automotive dashboard and interior applications
- Consumer electronics

KEY BENEFITS

- Specialty textures enabling:
 - Light diffusion and no “hot-spots” in back-lit applications
 - Scratch and wear resistance
 - Brushed metallic look
- Outstanding formability facilitating large-scale production using IMD
- Excellent printability without pre-treatment
- Excellent clean edge die-cut ability



Grade Names	Surface Property	Gauge Availability
Uncoated LEXAN Graphic Film grades – Textured on one surface		
8A35	Polished/Velvet	100-500 µm 4-20 mil
8A13F	Polish/ Fine matte	175-250 µm 7-10 mil
8A13E	Polish/ Matte ideal for tight graphic registration	75-500 µm 3-20 mil
8A37	Polish/ Brushed	250-750 µm 10-30 mil
8A73	Polish/ Matte light diffuser	250-500 µm 10-20 mil
Uncoated LEXAN Graphic Film grades – Textured on both surfaces		
8B35 (E)	Matte/Velvet	75-500 µm 3-20 mil
8B35F	Fine matte/Velvet	175-750 µm 7-30 mil
8B36	Matte/Suede	250-500 µm 20-30 mil
8B38	Very fine matte/Velvet	250-750 µm 10-30 mil
Uncoated ITR-PC Film (formerly known as SLX)		
11A13	Polish/Matte	100-500 µm 4-20 mil
11B35	Matte/Velvet	100-500 µm 4-20 mil

Texture Guide	
Matte/Fine matte	Good printing surface. Not as smooth but offers increased scratch resistance compared to polished grade. It offers wet-out-window capability for automotive display applications.
Matte Light diffuser	Hides filaments and eliminates ‘hot spots’ in back-lit applications. The preferred finish for ‘dead front’ graphics. Offers reduced surface reflection and gloss.
Velvet	Hides scratches, fingerprints and marring for heavy-use applications. Also acts as a diffuser for “windowed” or back-lit applications.
Suede	Excellent in very heavy-wear applications. Resists abrasion while maintaining its attractive appearance.
Brushed	Unique brushed texture provides metallic appearance



NON FR POST-CONSUMER -RECYCLE (PCR)

LEXAN™ Non-FR PCR PC films are made of 30% to 80% PCR resins, which can deliver 25~ 50% more reduction in carbon footprint depending on the grade and are available with two sides textured or one side polished / one side textured surface.

This PCR film offers high-temperature resistance, significant dimensional stability, and excellent printability (no need for pretreatment). It is a suitable solution for multi-layer printing and can be screen printed using traditional solvent-based or water-based inks and UV or infrared drying inks.



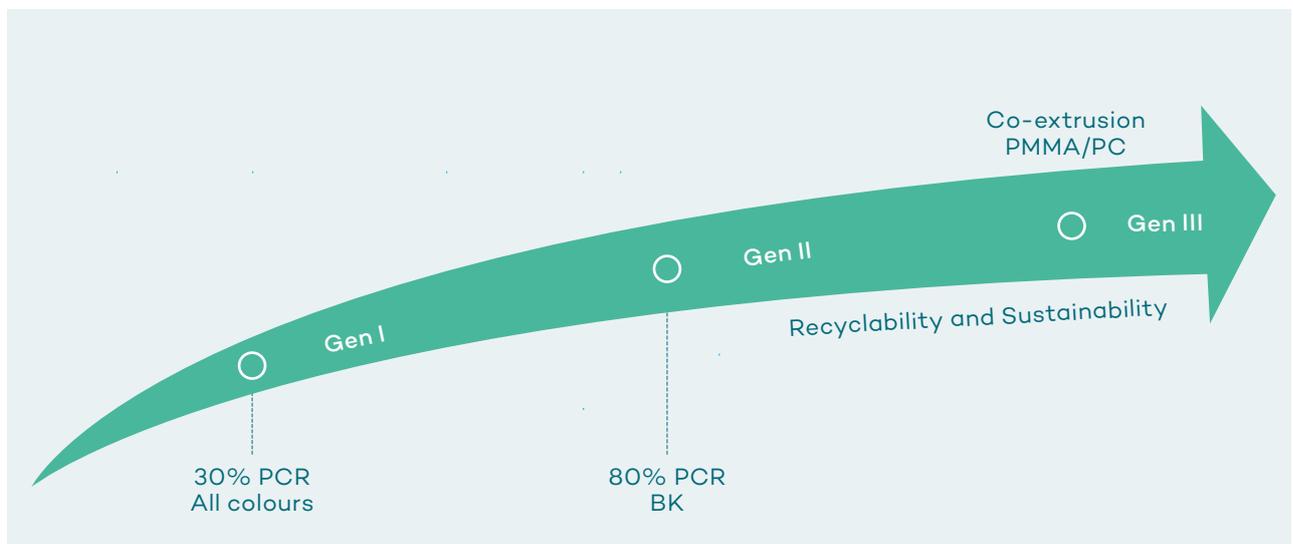
APPLICATIONS

- Multi-layer printing applications, such as overlays
- High-performance labeling for home appliances
- Suitable for forming and die-cutting
- Suitable for screen printing
- LED / LCD or displays for audio and video equipment
- Automotive dashboard and interior applications



KEY BENEFITS

- Excellent dimensional stability
- High impact resistance
- Ease of thermoforming, hydro-forming, and bending
- Ease of embossing and die-cutting
- Scratch and wear resistance on textured sides and mar resistance on polished side
- Printability without pre-treatment



COATED FILMS

LEXAN™ high performance coated films offer unique solutions for scratch resistance, weatherability, anti-glare and anti-fog applications. These films have excellent resistance to abusive cleaners, chemicals and UV, provide excellent clarity of graphics and light diffusion as well as ease of printing and die cutting.



APPLICATIONS

- Flat membrane switch overlays for gas pumps and outdoor labels
- Lenses for handheld devices and consumer electronics
- Overlays and IMD face plates for appliances and automotive interior applications
- Anti-fog lenses for goggles, eyewear

KEY BENEFITS

- Excellent abrasion resistance and flexibility
- Resistance to abusive cleaners and chemicals
- Improved hardness versus uncoated films
- Variable gloss and printability

Grades	Key features	Gauge Availability
LEXAN HPxxS Film	Abrasion resistance, First surface printable	175-750 µm 7-30 mil
LEXAN HPxxW Film	Weatherable, Chemical resistance	175-750 µm 7-30 mil
LEXAN HPxxX Film	Weatherable, Chemical resistance, First surface printable	175-750 µm 7-30 mil
LEXAN HPxxE Film	Abrasion resistance, Flexible	175-750 µm 7-30 mil
LEXAN HP92AF Film	Anti-fog 1 side coated film	175-750 µm 7-30 mil

xx in the grade denotes the gloss or surface finish on the coated side

The attached table highlights the key features of the coated film grades with the available gloss/masking configurations

Surface Finish Guide

92 gloss	Polished	High gloss, smooth, wet look finish
60 gloss	Very Fine Matte	Low glare – not as smooth as polished
40 gloss	Fine Matte	Lower surface reflection and gloss
12 gloss	Matte	Lowest surface reflection and gloss



DIGITAL PRINT FILM

LEXAN™ Digital Print Film is the optimal solution for digital printing applications, preventing ink delamination in adhesive label applications.

These films are one sided primed and specifically designed for increased digital UV ink adhesion and are robust for permanent and temporary pressure sensitive adhesives on the printed surface.



APPLICATIONS

- Interior Menu Boards
- Point-of-Purchase Displays
- Decorative Wraps (Beverage Dispensers)
- Appliance labels
- Promotional Displays
- Strips / Digits / Price Tiles
- In mold decoration (IMD)
- Membrane Switches
- Industrial Graphics
- Most screen-printing jobs can now be ink jet printed

KEY BENEFITS

- Improved cycle time & productivity
- Dimensional stability
- Robust adhesion
- Excellent ink registration & resolution

Grades	texture	width	thickness
LEXAN DP8010MC	polish/ polish	1220 mm	125 - 500 µm
LEXAN DP8A35	polish/velvet	1220 mm	175 - 500 µm
LEXAN DP8B35	matt/velvet	1220 mm	125 - 500 µm

DIFFUSED LIGHT FILMS

LED lighting technology has revolutionized modern illumination, offering energy efficiency, longevity, and low heat generation. Lower LED weight and size provide versatility and increased application potential to the designer. However, LEDs produce glare and hot spots requiring diffusion lenses to overcome these challenges to provide uniform lighting.

POLYVANTIS has developed a diffused light platform, including LEXAN™ DL8B25 film, a polycarbonate (PC) Diffused Light (DL) film which is developed to provide superior performance in LED lens applications.



APPLICATIONS

- Backlit Displays
 - Store signs
 - Advertising panels
- Lighting/Fixture Lenses
- Automotive
 - Taillights
 - Dashboard illuminations
- Mass Transportation
- EV Infrastructure
- Architectural
 - Cove lighting
 - Light panels

KEY BENEFITS

- Translucent film
- Hiding power & light transmission
- Finish options
- Customizable



OPTICAL FLEXIBILITY

Same Light Transmission and Diffusion available in multiple gauges. Designers can use a lower gauge film to lower cost.



OPTICAL EFFICIENCY

Higher Light Transmission at the same level of diffusion. Customers can reduce the number of LEDs or the size of the fixture, saving valuable design space.

INSULATION FILMS

Our electrical film portfolio is a family of high-performance films engineered to meet the demanding needs of electrical and electronic applications. These films play a crucial role in the miniaturization and reliability of modern electronic devices by serving as insulation in environments where thermal, mechanical, and electrical stresses coexist.

STANDARD FR FILM

Clear or opaque LEXAN™ FR films are flame retardant polycarbonate materials, which offer consistent properties for insulation and printability. These include puncture resistance, low moisture absorption, high thermal performance and excellent dielectric strength. It is available in a variety of surface textures and offers reliable ease of fabrication with its formability and dimensional stability at high temperatures



APPLICATIONS

- Heat/dielectric insulation
- Die-cut insulators and spacers
- Labels and overlays
- Printed circuit boards
- EMI shielding
- Electrical vehicle supply for equipment for charging stations & batteries

KEY BENEFITS

- Flame resistance: UL94 V-0, VTM-0; HWI, HAI, CTI performance; meeting UL-1950, IEC950
- Compliance with many of the environmental standards
- Excellent thermal and electrical insulation properties
- High mechanical strength
- Easy, cost-effective fabrication
- Compatibility with adhesives

Grade Names	Key features	Gauge Availability	UL-rating/Gauge
LEXAN FR60 Film	Clear Polish / Polish surfaces	125-750 µm 5-30 mil	VTM-0 / 0.125mm V-0 / 0.2 mm
LEXAN FR63 Film	Translucent Matte / Polish surfaces	175-500 µm 7-20 mil	VTM-0 / 0.125mm V-0 / 0.2 mm
LEXAN FR65 Film	Translucent Velvet / Matte surfaces	175-500 µm 7-20 mil	VTM-0 / 0.125mm V-0 / 0.2 mm
LEXAN FR83 Film	Translucent Matte / Polish surfaces (Black & Clear Translucent Colors)	75-175 µm 3-7 mil	VTM-0 / 0.05mm
LEXAN FR700 Film	Opaque black Velvet / Fine Matte surfaces	250-750 µm 10-30 mil	VTM-0 / 0.175mm V-0 / 0.25 mm
LEXAN FR25A Film	Opaque black Velvet / Polish surfaces (Black and White Colors)	250-750 µm 10-30 mil	VTM-0 / 0.175mm V-0 / 0.25 mm
FR1 Film made with VALOX™ resin	Matte / Polish surfaces	75-750 µm 3-30 mil	VTM-0 / 0.125mm V-0 / 0.625 mm

UL file numbers: F&S EUR - E539252, F&S US - E539157, F&S APAC - E539253



SUSTAINABLE FILMS FOR A BETTER FUTURE

POLYVANTIS' vision for the future involves a world where plastics never end up in our environment, landfills or oceans. To integrate different dimensions of sustainability into the business's core strategy, our scientists are continually striving to find innovative ways to recycle plastics and remake them into new products to reduce the global environmental footprint.

As part of our sustainability portfolio, showcasing our circular innovations, we produce LEXAN™ EFR and non-FR film portfolio from Post-Consumer Recycled (PCR) resins that offer equivalent performance to our virgin polycarbonate films.

More information about our Post Consumer Recycled solutions, can be found on page 6, 12 & 13 of this brochure or you can download our LEXAN PCR Film brochure by scanning the QR code.



Scan Me

CHLORINE & BROMINE FREE ECO FR FILM

These environmentally responsible, UL compliant, translucent or opaque films deliver non-brominated, non-chlorinated, flame retardant performance at various gauges range, enabling electrical/electronics OEMs to go beyond current environmental directives by voluntarily eliminating halogenated additives in their products while meeting the requirements of the European Union's Restriction of Hazardous substances (RoHS) and Waste electrical and electronic equipment (WEEE 2006) directives.



APPLICATIONS

- Heat/dielectric shielding and insulation barriers
- EMI shielding
- Die-cut insulators and spacers
- Printed circuit boards for Desktops and Servers
- Battery packs and adaptors for computers, laptops, mobile phones

KEY BENEFITS

- Non-halogenated (no Chlorine or Bromine) films
- UL-94 recognition, VTM-0 to V-0
- Excellent puncture resistance
- Increased heat resistance



Grade Names	Key features	Gauge Availability	UL-rating/Gauge
LEXAN EFR33 Film	Clear Velvet / Fine Matte surfaces	50-800 µm	VTM-0 / 0.05 mm V-0 / 0.40 mm & above
LEXAN EFR535 Film PCR grade	Opaque Velvet / Fine Matte surfaces	178 -800 µm 7-35 mil	VTM-0 / 0.05-0.08 mm V-0 / 0.38mm & above RTI 130 °C at 0.17 mm & above
LEXAN EFR565 Film PCR grade	Opaque Velvet / Fine Matte surfaces	178 -800 µm 7-35 mil	VTM-0 / 0.05-0.08 mm V-0 / 0.38mm & above RTI 130 °C at 0.17 mm & above
LEXAN EFR63 Film	Clear translucent Matte / Polish surfaces	100-500 µm 4-20 mil	VTM-0 / 0.1 mm V-2 / 0.43 mm
LEXAN EFR65 Film	Clear translucent Velvet / Matte surfaces	100-500 µm 4-20 mil	VTM-0 / 0.1mm V-2 / 0.43 mm
LEXAN EFR85 Film	Black opaque Velvet / Polish surfaces	175-750 µm 7-30 mil	VTM-0 / 0.160 mm V-0 / 0.375 mm
LEXAN EFR95 Film	Velvet / Fine Matte surfaces (clear, black & white colors)	175-750 µm 7-30 mil	VTM-0 / 0.025 mm V-0 / 0.375 mm RTI 130 °C at 0.375 mm & above
1000B Film made with ULTEM® resin	Matte / Matte; Polish / Matte surfaces	25-175 µm 1-7 mil	VTM-0 / 0.025 mm V-2 / 0.2 mm

UL file numbers: F&S EUR - E539252, F&S US - E539157, F&S APAC - E539253
100µm-500µm available for both black and nature color

PFAS FREE EFR FILM

LEXAN™ film portfolio now offers PFAS-free solutions, meeting the growing global demand for safer, more sustainable materials. Engineered without PFAS, these advanced polycarbonate films align with the latest environmental and health regulations, including full REACH compliance, while delivering the exceptional performance LEXAN™ Film is known for.

As part of our ommitment to sustainability and circularity, this PFAS-free film range incorporates post-consumer recycled (PCR) content to help reduce virgin material use and support resource efficiency. The use of PCR in select LEXAN™ films enables a significant reduction in carbon dioxide (CO₂) emissions, contributing to a lower environmental footprint compared to conventional materials.



APPLICATIONS

- Heat/dielectric shielding and insulation barriers
- EMI shielding
- Die-cut insulators and spacers
- Printed circuit boards for Desktops and Servers
- Battery packs and adapters for computers, laptops, mobile phones
- Battery insulation automotive industry

KEY BENEFITS

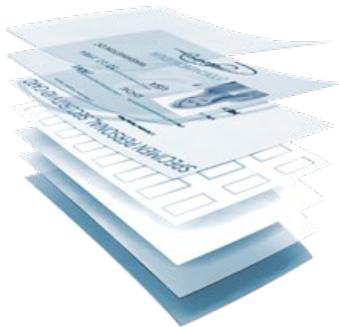
- PFAS-free formulations for safer product design
- Inclusion of PCR content for circular economy integration
- Unique FR technology with robust Flame Retardancy
- Excellent adhesion with PSA
- Good thermal stability
- Good formability

Grade Names	Textures	Gauge Availability	UL-rating/gauge
EFR15TC	Velvet/Matte surfaces	80-254 µm	UL94 VTM-0 / 0.05-0.28, RTI 130 °C at 0.17mm & above
EFR557T	Velvet/Fine Matte	80-254 µm	UL94 VTM-0 / 0.05-0.28, RTI 130 °C at 0.17mm & above
EFR13	Velvet/Fine Matte	330-850 µm	UL94 V-2 / 0.33-0.85mm, RTI 130 °C at 0.33mm & above
EFR35	Matte/Fine Matte	330-850 µm	UL94 V-0/ 0.33-0.85mm, RTI 130 °C at 0.33mm & above
EFR555	Matte/Fine Matte	330-850 µm	UL94 V-0/ 0.33-0.85mm, RTI 130 °C at 0.33mm & above

SECURITY & ID-CARD FILMS

POLYVANTIS' LEXAN™ SD film portfolio has been specially designed for easy manufacturing and lamination of complex secure ID cards. The portfolio includes a laser markable grade, a bright white (opaque) grade, a clear grade for the cover or intermediate layers, co-extruded film and flexible hard-coated film.

These products directly address accelerating industry trends calling for more and thus thinner card layers to accommodate additional safety features, provide easy processing and enhanced durability for ID cards and other security documents.



APPLICATIONS

- (E-)identity cards
- Drivers' licenses
- E-passport data pages
- Border crossing cards
- Residency permits
- Smart card inlays
- Tachometer cards
- Healthcare cards

KEY BENEFITS

- Long term durability of cards (up to 10 years)
- Optimal lamination of different film layers without use of adhesives
- Precise gauge average and gauge tolerance ($\pm 5\%$ max from 50 - 249 μm and $\pm 2.5\%$ max from 250 μm)
- Excellent laser markability when exposed to 1064nm laser-equipment
- Designed to be printed prior to lamination
- PCR portfolio available

Grade Names	Key Features	Gauge Availability
LEXAN SD8B14 film	Clear 2 side textured monolithic PC film for overlays or intermediate layers.	30-400 μm 1.2-16 mil
LEXAN SD8B24 film	Opaque white, 2 side textured monolithic PC film for core layers.	50-400 μm 2-17.3 mil
LEXAN SD8B94 film	Clear laser markable 2 side textured monolithic PC film for high contrast laser personalization	30-150 μm 1.2-6 mil
LEXAN SDCX film	Clear or white co-extruded films for easy processing and laser marking	150 μm 6 mil
LEXAN SC8A12E film	One side flexible hard coated clear overlay	75-105 μm 3-4.1 mil
LEXAN SC8A92E film	One side flexible hard coated clear laser markable overlay	75-105 μm 3-4.1 mil
LEXAN SD5B34 film	112 - 30% PCR clear color 1G9B4380T: 30% PCR laser markable	30-150 μm 1.2-6 mil
LEXAN SD5B74 film	8G9B2161: 70% PCR white color	150 μm 6 mil

If you need more information about this high performance polycarbonate LEXAN™ SD film portfolio please contact us via info.lexan@polyvantis.com

GLOBAL COMPANY WITH LOCAL SERVICES & SUPPLY



POLYVANTIS is committed to its customers around the world with a portfolio of Film & Sheet materials, application support and worldwide services.

We are a world-leading multi-material player for semi-finished plastic products. Our customers from a multitude of different industries can choose from an extensive range of high-quality products provided by a single source, including leading brands such as LEXAN™ film and sheet from polycarbonate resins and PLEXIGLAS® and ACRYLITE® for PMMA semi-finished products.

Our name stands for the variety of products we offer and our quest to secure progress in the area of polymers and related materials. POLYVANTIS offers innovative materials for different needs. The portfolio ranges from solid plastic sheets and films for a multitude of areas of application, through specialty products with custom properties, all the way up to the matching adhesives and auxiliaries. The POLYVANTIS umbrella unites strong plastics brands.

With 15 production sites across the United States, Europe, Asia and Africa, we offer innovative products and solutions for segments such as building and construction, transportation, aircraft & railway interiors, electrical engineering and electronics, automotive manufacturing and the home and garden sectors.

POLYVANTIS

www.polyvantis.com



LEXAN™ Tough,
Virtually
Unbreakable
POLYCARBONATE FILM & SHEET