LEXAN™ SHEET PORTFOLIO

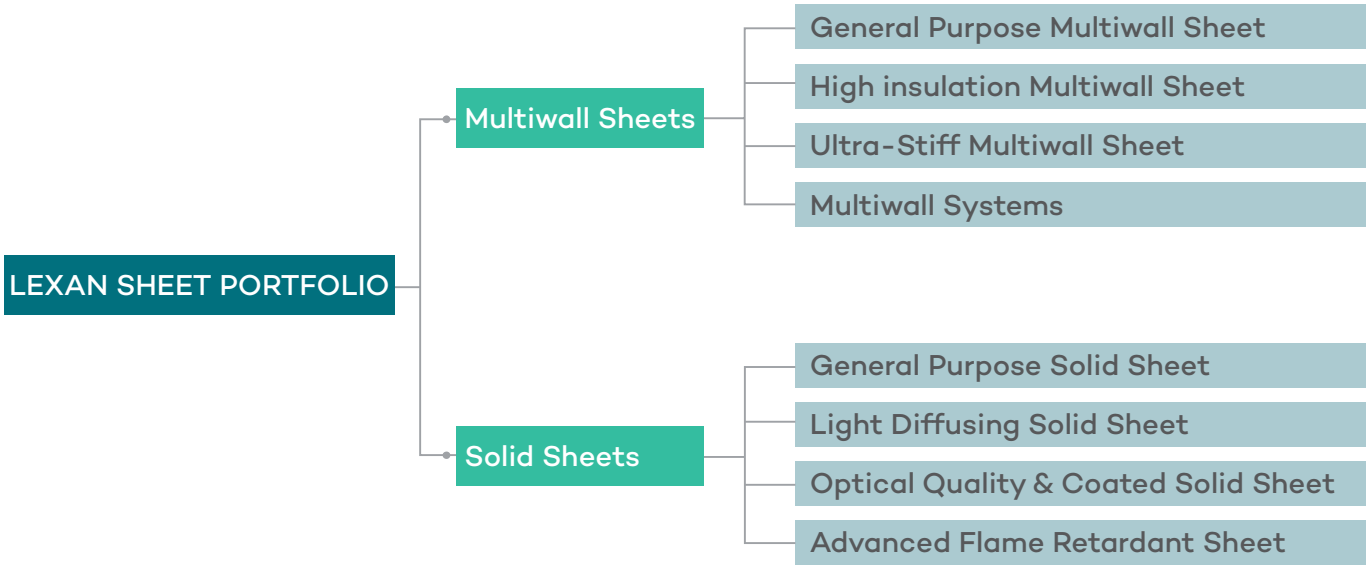


LEXAN™ SHEET

POLYVANTIS

POLYVANTIS BUSINESS OFFERS HIGH QUALITY, ENGINEERED THERMOPLASTIC SOLID AND MULTIWALL SHEET PRODUCTS FOR USE IN A WIDE VARIETY OF INDUSTRIES

POLYVANTIS provides products for use across a wide variety of industries, ranging from building and construction, lamination and signs to transportation. Our LEXAN™ Polycarbonate sheet portfolio is backed by advanced technical support and application development services around the world, to meet our customers' global specification needs with local supply.



CONSTANTLY ADDING VALUE: PROVIDING MORE THAN JUST HIGH QUALITY PRODUCTS



POLYVANTIS business is a leading supplier of high performance engineering sheet products, serving customers around the world in a broad spectrum of applications. Our virtually unbreakable, lightweight, fire resistant sheet product portfolio includes a wide variety of structures, ranging from solid and multiwall to corrugated sheet. The company has integrated extrusion processes, surface texturing, and coating technologies to provide value added solutions across a wide variety of industries.

POLYVANTIS offers mono- and multi-layer extrusion capabilities and in-line master sheeting both in-house and through its distribution and converter partners. The company also offers cut-to-size and 3D forming services. POLYVANTIS application development facilities provide lamination, cold- and hot line-bending, screen printing and architectural design services to customers.

At POLYVANTIS, we are dedicated to meeting our customers' ever changing needs with our high performance LEXAN™ sheet portfolio. Our material solutions and services help our customers to reduce their system costs and create innovative designs and environmentally responsible materials.

POLYVANTIS ongoing investment in world-class technologies demonstrates our commitment to helping our customer's technical requirements, application development needs and business goals.

MULTIWALL SHEET

Our multiwall, polycarbonate LEXAN™ THERMOCLEAR™ sheet portfolio consists of various different structures. The products can provide an outstanding balance of light weight, high impact strength, and stiffness. Its light weight can make this product less expensive to transport and facilitates easy and fast installation. In addition, it provides excellent thermal insulation, UV- and flame resistance and long-term light transmission. LEXAN THERMOCLEAR sheet is available in clear, opal white, solar control and with a variety of specialty finishes, such as Dripgard™ coating, to allow sheets to prevent the formation of condensation. For availability of other colors, please contact POLYVANTIS.





GENERAL PURPOSE GRADES

POLYVANTIS has one of the broadest portfolios of general purpose multiwall sheets available in two and three wall structures. These products are available in various gauges, weights and a wide color range.



POTENTIAL APPLICATIONS:

- Commercial, residential and stadium roof glazing
- Carports
- Greenhouses
- Swimming pool covers
- Industrial roofing, roof-lights
- Signage

KEY BENEFITS:

- Light weight and high stiffness
- High impact strength
- Long-term light transmission
- Ease of installation
- Excellent thermal insulation and flame resistance
- Two side UV resistance, avoiding installation errors and improving cutting yields
- Broad portfolio of structures, coatings and colors
- Custom widths with closed edges



WARRANTY

POLYVANTIS offers a Ten (10) or Twenty (20) Year Limited Written Warranty on LEXAN™ THERMOCLEAR™ sheet covering discoloration, loss of light transmission and loss of strength due weathering.

EUROPE

CHINA

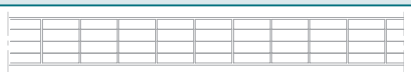
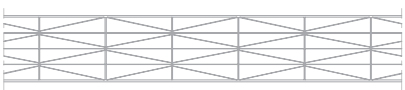
INDIA

10 YEARS warranty

20 YEARS warranty

Please scan the QR code for the exact details of our regional warranties.

PRODUCT OVERVIEW (SELECTED GRADES)

Structure Name	Structure	Gauge (mm)	Weights (kg/m^2)	U-Value
General Purpose				
2-wall		4.5	1.0	3.86
		6	1.3	3.56
		8	1.5	3.26
		10	1.7	3.02
3-wall		16	2.7	2.27
Ultra stiff				
High Insulation				
5-wall		10	1.75	2.39
5-wall X-structure		32	3.8	1.32
		25	3.4	1.51
		16	2.7	1.88
9-wall X-structure		16	1.5	1.77
		20	2.8	1.59
		25	3.0	1.40

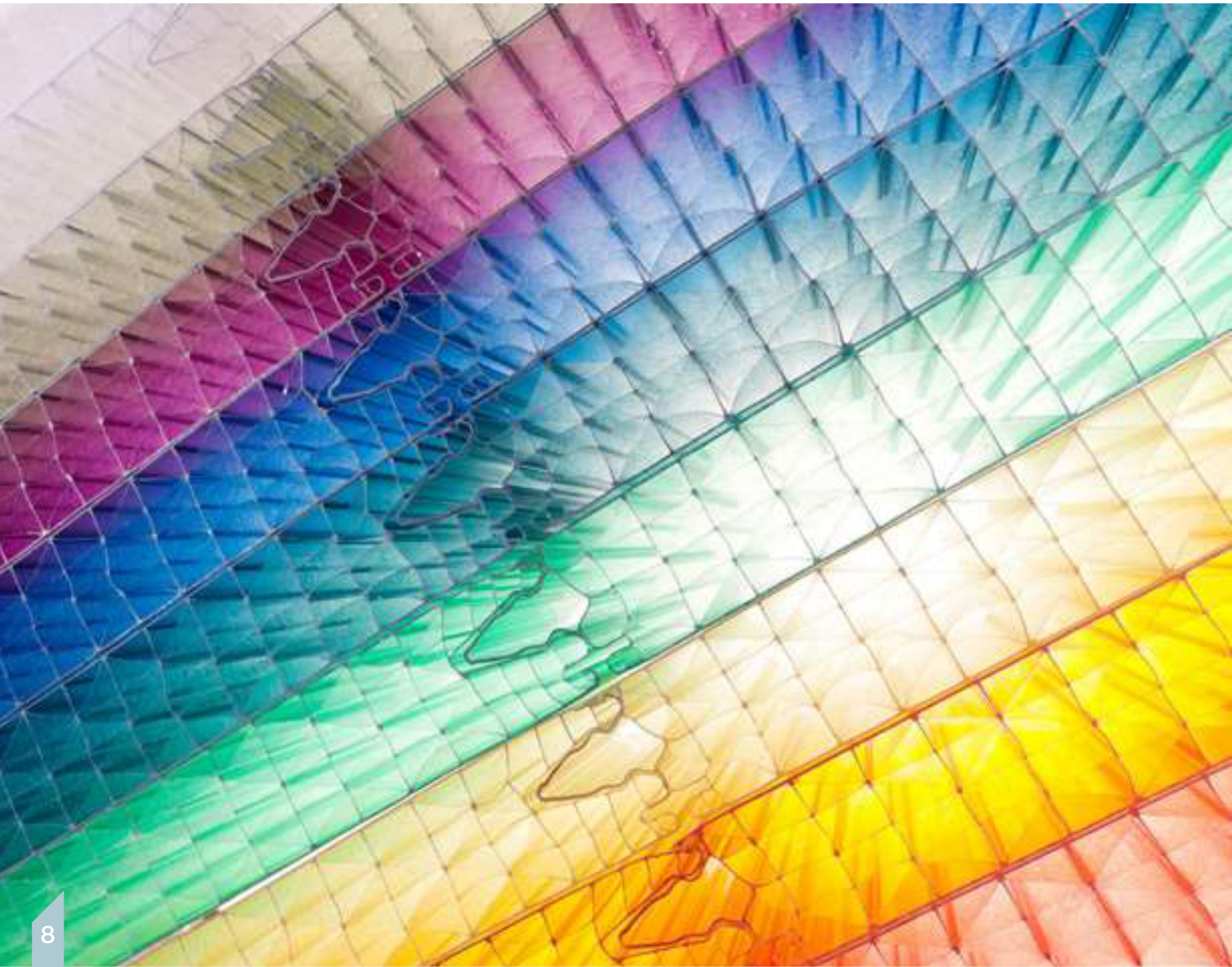
Surface Treatment: Upon request, a special surface treatment can be offered: Our “Dripgard” grade may avoid formation of condensation droplets.

Note: not all surface treatments are available for each product.

Colors: LEXAN THERMOCLEAR sheets are available in a wide range of colors including special Solar Control versions.

BUILDING SYSTEMS

The multiwall LEXAN™ sheet and building systems provide creative glazing solutions for industrial roofing and facades. Characterized by outstanding high impact resistance and excellent mechanical properties, each product in the portfolio is designed to provide added value performance through potentially low system costs and consistent high quality. Installation costs may be kept low as each product is designed using custom-made configurations for fast on-site assembly.

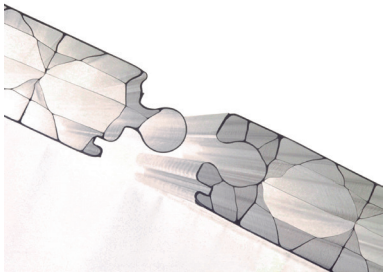


POTENTIAL APPLICATIONS:

- Facades
- Industrial roofing
- Roofing for offices and shopping centers

KEY BENEFITS:

- Smart connection systems reducing need for complex aluminum profiles
- Tailor-made low cost corrugated panels for easy connection with aluminum sandwich panels
- Seamless facade designs
- Excellent water tightness
- Light weight and cost efficient
- Creates high quality diffused light
- Easy and fast installation
- Excellent resistance to UV aging
- Custom colors available



PRODUCT OVERVIEW

Structure Name	Structure	Description / Key Features	Width (mm)	Weights (kg/m^2)
LEXAN™ THERMOCLICK™ sheet 40mm		- Facade panel with integrated connection - 40mm thickness for high insulation - X-structure for high stiffness - High insulation U-value of 1.27	500	4.0

SOLID SHEETS

Based on high-performance polycarbonate LEXAN™ resin, POLYVANTIS portfolio of solid sheet products helps customers develop lightweight, durable parts with tailor-made performance across a wide variety of industries. This virtually unbreakable, transparent or opal white color LEXAN polycarbonate sheet comes with UV protection on one or both sides and provides remarkable clarity - even after many years of intense sunlight and weather extremes.



POTENTIAL APPLICATIONS:

- Machine guards
- Roof and facade glazing
- Signage & LED light covers
- Sound walls
- Carports
- Transportation
- Electrical and electronics applications

KEY BENEFITS:

- High impact resistance
- Excellent light transmission
- High heat resistance
- Wide color range availability
- UV- and weathering resistance
- Light weight
- Large sheet sizes
- Grades with increased flame retardance





PRODUCT OVERVIEW

Product	Description / Key Features	Gauges (mm)
General Purpose		
LEXAN™ 9030 sheet	- General purpose polycarbonate sheet	2-15
LEXAN 9030TG sheet	- General purpose polycarbonate sheet in thin gauges	0.75-1.5
LEXAN EXELL™ D sheet	- General purpose sheet for outdoor applications - UV resistant cap-layer on both sides	2-12
LEXAN EXELL DST sheet	- UV resistant cap-layer on both sides - Rough texture on one side for light diffusion - Also available in corrugated versions	2-6
LEXAN SG305 sheet	- Diffusing clear sheet with matt finish on the outside surface and matte texture on one side - UV resistant cap-layer on both sides	2-8
LED Lighting & Sign		
LEXAN EXELL D OB sheet	- Opal white translucent sheet - Excellent balance on light transmission and hiding power - UV resistant cap-layer on both sides	2-12
LEXAN SG305-OB sheet	- Polycarbonate sheet with optical LED hiding power - Diffusing opal white color and matte texture on one side - UV resistant cap-layer on both sides	2-8

OPTICAL QUALITY & COATED SHEET

Virtually unbreakable, high optical quality LEXAN™ polycarbonate (PC) sheet materials from POLYVANTIS combine crystal clear transparency with value-added performance that is lightweight, features outstanding low ripple and distortion, and has an extremely low number of optical defects. These optical quality and coated sheets are supplied with industrial leading optical specifications.



OPTICAL QUALITY SHEET

Produced with class 10,000 clean room technology, LEXAN™ OQ sheet can offer one of the best optical quality materials for the glazing of forestry vehicles, high speed trains, high security facilities and bullet resistant glass-PC laminates for VIP, military and police vehicles. While providing easy maintenance, these lightweight, shatter proof products also offer excellent vision, long-term appearance, abrasion- and chemicalresistance.



POTENTIAL APPLICATIONS:

- Base sheet for 3D vehicle glazing
- Base sheet for coated sheet
- Layers in (ballistic) safety laminates
- Visors & goggles

KEY BENEFITS:

- Low distortion level
- Minimal number of point defects
- Available in custom colors
- Suitable for lamination with glass by PU interlayers
- High impact & excellent transparency
- Light weight (-50% vs. glass)



COATED SHEET

LEXAN™ MARGARD™ sheet offers optical clarity in combination with a unique abrasion and UV resistance, which can make it an excellent candidate for safety and security glazing to suit a wide range of applications. Available clear or bronze tinted, it can be used for both flat and curved glazing. Unique coatings offer high abrasion resistance, anti-fog behavior and increased resistance to UV weathering. Some product grades can be formed into (moderate) 3D shapes.



POTENTIAL APPLICATIONS:

- Specialty vehicle glazing
- Police vehicle glazing
- Motorcycle windshields
- Layers in (ballistic) safety laminate
- Appliance facias
- Train glazing
- Protective glazing
- Sound-walls
- Visors & goggles
- Machine guards

KEY BENEFITS:

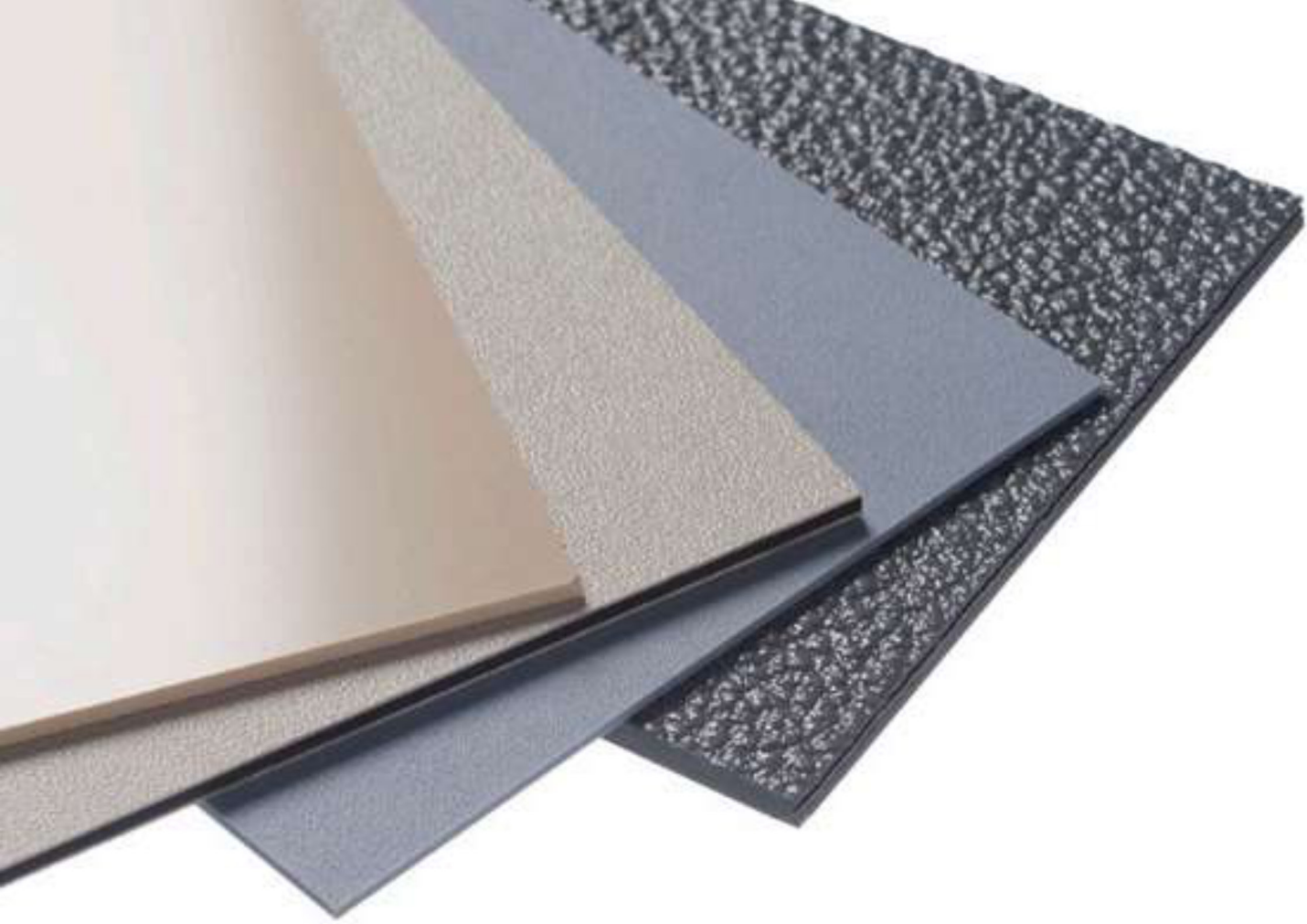
- Abrasion resistance
- Resistance to UV weathering
- Available in custom colors
- Enhanced chemical resistance
- Formability for select coatings
- Optional anti-fogging




PONSSE
ACTIVE FRAME

		OQ[1]	TABER HAZE[2]	WEATHER-ABILITY[3]	FORM ABILITY[4]	UL LISTING	GAUGES (MM)
CURVED APPLICATIONS							
UNCOATED LEXAN™ SHEET GRADES							
ULG1003	Very high optical quality, thermoformable sheet with very low distortion level for coating or lamination applications.	Very high	> 15	1	50	N/A	2-15
ULG1000	High optical quality, thermoformable sheet for coating or lamination applications. Specially designed for automotive side glazing applications.	High	> 15	1	50	N/A	2-15
1-SIDE COATED LEXAN SHEET GRADES							
MAR-RESISTANT							
HLGA2	For interior and non-UV intense glass/pc lamination applications. Improved secondary operations (crack sensitivity) combined with excellent abrasion resistance.	Very high	0.5 - 1	1	0.3	N/A	1 - 8
FLG5XT	Formable (cold/warm) hard coated sheet for glass/PC lamination applications.	High	4 - 8	5	5	N/A	2 - 8
ANTI-FOG							
CTGAF1	Formable 1 side anti-fog coated sheet with abrasion resistance for visor applications.	High	15 - 20	1	5	N/A	0.75 - 5
2-SIDE COATED LEXAN SHEET GRADES							
MAR-RESISTANT							
FMR5XT	Formable (cold/warm) coated sheet for non-UV intense formed applications.	High	4 - 8	5	5	N/A	2 - 12
CTGXT	Formable coated thin gauge sheet for formed applications requiring abrasion resistance on both sides	High	4 - 8	5	5	N/A	0.75 - 2
ANTI-FOG							
CTGXTAF	Formable coated sheet with weathering & abrasion resistance on one side and anti-fog & abrasion resistance on the other side	High	4 - 8	5	5	N/A	0.75 - 5
CTGAF2	Formable 2 sides anti-fog coated sheet & abrasion resistance for visor applications	High	15 - 20	1	5	N/A	0.75 - 5
FLAT APPLICATIONS							
1-SIDE COATED LEXAN SHEET GRADES							
MAR-RESISTANT							
HLG5	Good abrasion resistance, highly weatherable sheet for flat, outdoor glass/pc lamination applications.	Very high	1 - 3	7	0	HB/>3	2 - 12
MRX1	1 side hard coated, weatherable sheet for various flat applications.	High	2 - 4	5	0	N/A	2 - 15
2-SIDE COATED LEXAN SHEET GRADES							
MAR-RESISTANT							
MR5E	Abrasion resistant, weatherable sheet with enhanced chemical resistance & anti- graffiti properties (ECE R43 certified) for use in public areas for high abuse applications in flat applications.	Very high	1 - 3	7	0	HB	2 - 15
MRX	Sheet with wider optical specifications, providing good balance of weatherability, abrasion resistance and costs for flat applications.	High	2 - 4	5	0	N/A	2 - 15
FLAME RETARDANT APPLICATIONS							
1-SIDE COATED LEXAN SHEET GRADES							
MAR-RESISTANT							
HLG5FR	Flame retardant, 1 side hard coated weatherable sheet for flat glass/pc lamination.	Std	1 - 3	7	0	N/A	3 - 5*
HLG5FRA	Flame retardant (according to FST), 1 side hard coated weatherable sheet for flat glass/pc lamination, especially for aircraft.	Std	1 - 3	7	0	FST	2 - 3
MRX1FR	Flame retardant, high optical quality, 1 side hard coated weatherable for various flat applications	Std	2 - 4	5	0	N/A	3 - 6*
2-SIDE COATED LEXAN SHEET GRADES							
MAR-RESISTANT							
MR5FR	Flame retardant, 2 side hard coated weatherable sheet for flat glass/pc lamination.	Std	1 - 3	7	0	V0/3-6 5VB/>6	3 - 9.5
MRXFR	Flame retardant, high optical quality, 2 sides hard coated weatherable sheet for various flat applications	Std	2 - 4	5	0	N/A	3 - 6*

* Other gauges on request
1. OQ - Optical Quality: See page 13 for classifications
2. Taber Haze according ASTM D1044, CS-10F 100 cycles 500gr.
3. Weatherability according to ISO 11431A test, 800 hours - 1 year in central Europe (years of warranty)
4. Formability (maximum thinning in %)



ADVANCED FLAME RETARDANT SHEET

POLYVANTIS offers a range of products for aircraft- and railway-interior applications ranging from seating to wall cladding and lighting. POLYVANTIS opaque and translucent material portfolio not only offers lightweight and high impact resistant materials but also helps aircraft and railway interior manufacturers to meet tough flame, smoke, toxicity and heat release regulations, reduce overall system costs and enhance the aesthetics, safety and comfort of the cabin environment.

SURFACE TEXTURES



5 TEXTURE

Matte texture for low gloss surfaces



6 TEXTURE

Rougher texture for better texture retention after forming and matte surface



11N TEXTURE

Haircell texture for maximum abrasion resistance

POTENTIAL APPLICATIONS:

- Seating
- Wall/ceiling cladding
- Galley applications
- Light diffusers
- Electrical cabinets
- Medical device housings
- Wall cladding applications for high level of sanitation

KEY BENEFITS:

- Compliance with key industry requirements
  - Flame resistance
  - Low smoke density
  - Low toxicity
  - Heat release
- Abrasion resistance by surface texture
- Impact resistance
- Dimensional stability
- Thermoformable



PRODUCT OVERVIEW

Product	Description	Key Features/Certifications*	Texture Type (abrasion)	Gauges (mm)
LEXAN™ F2000 sheet	Clear/translucent FR sheet	Pass German DIN 5510 S4 SR2 ST2 norms at 3mm French NF F 16-101 M2, F2 rating at 2 - 8 mm Compliant with EN/TS 45545 norm R4 for lighting	polished	1.5-9.5
LEXAN F2000A sheet	Clear/translucent FR sheet	Compliant with FAR25.853 & ABD0031 requirements at 2mm and 3mm. Environmentally responsible flame retardancy according to DIN/VDE 0472 part 815	polished	2-6
LEXAN F2500 sheet	Clear FR sheet	Pass Flame/Smoke/Toxicity for FAR ABD aviation requirements. ECO responsible flame retardancy according to DIN-VDE norm meeting UL94 V0 at 2mm	polished	2-6
LEXAN F6000 sheet	Opaque FR sheet	Compliant with FAR25.853 and ABD-0031 regulations. Pass NF16.101 –M2, DIN5510 - S4 SR1 ST2 at 1.5mm	5/6/11N	3-6
LEXAN H6600 sheet	Opaque, glass filled sheet, FR sheet	Compliant to EN45545-2 (R1 HL2), TB/T 3237, NFPA-130. Material may be used in a wide range of large, thermoformed railway interior applications.	6	3-5
LEXAN H6900 sheet	Opaque, glass filled sheet, FR sheet	Compliant to EN45545-2 (R6 HL3), TB/T 3237, UIC564-2, NFPA-130. Material is especially designed for railway seating.	6	2+3
LEXAN F8000HR sheet	Opaque, glass filled sheet, FR sheet	OSU 65/65 compliant / < 55/55, FST compliant/UL94 V0 with enhanced stiffness. Especially designed for aircraft interiors.	6	1.2-4
LEXAN CLINIWALL C6200 SHEET	Opaque FR sheet	Use for Interior wall cladding Pass European norm EN13501 - B,s1,d0 (1.7mm)	—	1.5 & 1.7
LEXAN CLINIWALL AC6200 SHEET	Opaque FR sheet, anti bacterial	Use for Interior wall cladding Pass European norm EN13501 - B,s1,d0 (1.7mm)	—	1.5 & 1.7

*Please contact your representative for up to date certification overview

GLOBAL COMPANY WITH LOCAL SERVICES & SUPPLY



POLYVANTIS IS COMMITTED TO ITS CUSTOMERS AROUND THE WORLD WITH A PORTFOLIO OF SPECIALTY 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™ POLYCARBONATE FILM & SHEET | Tough, Virtually Unbreakable