

# LEXAN™ 8010 SHEETED FILM

## PRODUCT DATASHEET

### DESCRIPTION

LEXAN™ 8010 polycarbonate sheeted film is a transparent optical with polished finished at both sides, offers excellent clarity and optical quality in all thickness, high heat resistance, and superior dimension stability for graphics art applications. Derived from one of the world's toughest polymers, LEXAN 8010 also provides a high gloss surface finish while meeting additional requirement for gauge control and flatness.

### TYPICAL PROPERTY VALUES

PROPERTY	ASTM TEST METHOD	UNITS (USCS)	VALUE	ISO TEST METHOD	UNITS (SI)	VALUE
<b>MECHANICAL</b>						
Tensile Strength @ Yield	ASTM D882	psi	8700	ISO 527	MPa	60
Ultimate	ASTM D882	psi	9130	ISO 527	MPa	63
Tensile Modulus	ASTM D882	psi	340000	ISO 527	MPa	2340
Tensile Elongation at Break	ASTM D882	%	80-120	ISO 527	%	80-120
Gardner Impact Strength at 0.03" (0.75 mm)	ASTM D3029	ft-lb	23	ISO 6603-1	J	31
Tear Strength						
Initiation	ASTM D1004	lb/mil	1.4-1.8		kN/m	245
Propagation	ASTM D1922	g/mil	30-55		kN/m	10-20
Puncture Resistance (Dynatup)	ASTM D3763	ft-lb	566		J	30.2
Fold Endurance (MIT)						
0.010" (0.25 mm)	ASTM D2176-69	double folds	130			
0.020" (0.50 mm)	ASTM D2176-69	double folds	35			
<b>THERMAL</b>						
Coefficient of Thermal Conductivity at 0.02" (0.5mm)	ASTM D5470	Btu/hr/ft2/°F/in	1.35		W/m²K	0.20
Coefficient of Thermal Expansion						
CTE -20~100°C, cross-flow	ASTM E831	(x10 <sup>-5</sup> /°F)	4.4	ISO 11359	(x10 <sup>-5</sup> /°C)	7.9
CTE -20~100°C, inflow	ASTM E831	(x10 <sup>-5</sup> /°F)	3.9	ISO 11359	(x10 <sup>-5</sup> /°C)	7.1
Glass Transition Temperature	ASTM D3417 / D3418	°F	302	ISO 11357	°C	150
Heat Deflection Temp. by TMA at 1.8 MPa		°F	290	ISO 75 Modified	°C	143
<b>PHYSICAL</b>						
Density	ASTM D792	slug/ft <sup>3</sup>	2.3	ISO 1183	kg/m <sup>3</sup>	1200
Water Absorption, 24 hrs.	ASTM D570	% change	0.12	ISO 62	% change	0.12
Surface Roughness (RMS)	ASME B46-1	µm	0.01			
Surface Tension	Dyne Pens	Dyne	38-40			
Pencil Hardness (500g loading)	ASTM D3363	-	B			
Taber Abrasion (500g, 100cycles)	ASTM D1044	delta Haze	30			

PROPERTY	ASTM TEST METHOD	UNITS (USCS)	VALUE	ISO TEST METHOD	UNITS (SI)	VALUE
<b>OPTICAL</b>						
Refractive Index @77°F (25°C)	ASTM D542A	-	1.6			
Light Transmission	ASTM D1003	%	91			
Yellowness Index	ASTM D1925	%	<1.0			
Haze	ASTM D1003	%	0.1			
Gloss over Flat Black min/max @ 60°	ASTM D523-60	-	103	ISO 2813	-	103
<b>ELECTRICAL</b>						
Dielectric Strength in oil, short time @ 72°F (23°C), 10 mils (0.25 mm)	ASTM D149-97a Method A	kv/mil	1.81	IEC 60243	kv/mm	71
Dielectric Constant @ 1.1 GHz	ASTM D150	-	2.82	IEC 60250	-	2.82
Dissipation Factor @ 1.1 GHz	ASTM D150	-	0.007	IEC 60250	-	0.007
Volume Resistivity	ASTM D257	Ω-cm	1.13E+16	IEC 60093	Ω-cm	1.13E+16
Surface Resistivity	ASTM D257	Ω/square	9.8E+15	IEC 60093	Ω/square	9.8E+15
Arc Resistance, Tungsten Electrodes	ASTM D495	s	70			

◆ These are typical properties and are not intended for specification purposes. If minimum certifiable properties are required, please contact your local SABIC representative or the SABIC Quality Services Department. Reported values are based on 0.500 mm (0.020") film and are tested at machine direction unless otherwise noted.  
 ™ Trademark of SABIC.

## MANUFACTURING SPECIFICATIONS

NOMINAL GAUGE RANGES	MIN./MAX LIMIT OF NOMINAL
0.385	± 5%
0.500 – 1.500 mm	± 3%

## CONTACT US:

### SABIC CORPORATE HQ

PO Box 5101  
 Riyadh 11422  
 Saudi Arabia  
 T +966 (0) 1 225 8000  
 F +966 (0) 1 225 9000  
 E info@sabic.com

### AMERICAS

SABIC  
 Functional Forms  
 2500 CityWest Boulevard  
 Suite 100  
 Houston, TX 77042  
 USA  
 Toll-free (800) 323 3783  
 F (888) 443 2033  
 E spinside.sales@sabic.com

### EUROPE

SABIC  
 Functional Forms  
 Plasticlaan 1  
 4612 PX  
 Bergen op Zoom  
 The Netherlands  
 T +31 (0)164 293684  
 F +31 (0)164 292272  
 E ff.info@sabic.com

### PACIFIC

SABIC  
 Functional Forms  
 2550 Xiupu Road  
 Pudong  
 201319 Shanghai  
 China  
 T +86 21 3222 4500  
 F +86 21 6289 8998  
 E ff.info@sabic.com

DISCLAIMER: THE MATERIALS, PRODUCTS AND SERVICES OF SAUDI BASIC INDUSTRIES CORPORATION (SABIC) OR ITS SUBSIDIARIES OR AFFILIATES ("SELLER") ARE SOLD SUBJECT TO SELLER'S STANDARD CONDITIONS OF SALE, WHICH ARE AVAILABLE UPON REQUEST. INFORMATION AND RECOMMENDATIONS CONTAINED IN THIS DOCUMENT ARE GIVEN IN GOOD FAITH. HOWEVER, SELLER MAKES NO EXPRESS OR IMPLIED REPRESENTATION, WARRANTY OR GUARANTEE (i) THAT ANY RESULTS DESCRIBED IN THIS DOCUMENT WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (ii) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN OR APPLICATION INCORPORATING SELLER'S MATERIALS, PRODUCTS, SERVICES OR RECOMMENDATIONS. UNLESS OTHERWISE PROVIDED IN SELLER'S STANDARD CONDITIONS OF SALE, SELLER SHALL NOT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS MATERIALS, PRODUCTS, SERVICES OR RECOMMENDATIONS DESCRIBED IN THIS DOCUMENT. Each user is responsible for making its own determination as to the suitability of Seller's materials, products, services or recommendations for the user's particular use through appropriate end-use and other testing and analysis. Nothing in any document or oral statement shall be deemed to alter or waive any provision of Seller's Standard Conditions of Sale or this Disclaimer, unless it is specifically agreed to in a writing signed by Seller. Statements by Seller concerning a possible use of any material, product, service or design do not, are not intended to, and should not be construed to grant any license under any patent or other intellectual property right of Seller or as a recommendation for the use of any material, product, service or design in a manner that infringes any patent or other intellectual property right.

SABIC and brands marked with ™ are trademarks of SABIC or affiliates.  
 © Copyright 2020 All rights reserved.

† Any brands, products or services of other companies referenced in this document are the trademarks, service marks and/or trade names of their respective holders.

