

## PRODUCT DATASHEET

# Lexan\* 8040 Film

### DESCRIPTION

Lexan 8040 polycarbonate film complies with FDA regulations and meets USP-V1 criteria. It offers high heat resistance, radiation stability, clarity, thermoformability, and autoclave stability to meet sterile medical packaging requirements. Compatible lid stock – TYVEK2 or medical grade paper is available from approved suppliers.

### 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	8500	ISO 527	MPa	62
Ultimate	ASTM D882	psi	9000	ISO 527	MPa	65
Tensile Modulus	ASTM D882	psi	300000	ISO 527	MPa	2506
Tensile Elongation at Break	ASTM D882	%	100-154	ISO 527	%	100-154
Gardner Impact Strength at 0.03" (0.75 mm)	ASTM D3029	ft-lb	23	ISO 6603-1	J	31
<b>Tear Strength</b>						
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	9		J	12
<b>Fold Endurance (MIT)</b>						
0.010" (0.25 mm)	ASTM D2176-69	double folds	130			130
0.020" (0.50 mm)	ASTM D2176-69	double folds	35			35
<b>Thermal</b>						
Coefficient of Thermal Conductivity	ASTM D5470	Btu/hr/ft <sup>2</sup> /°F/in	1.35		W/m <sup>2</sup> K	0.2
Coefficient of Thermal Expansion	ASTM E831	(x10 <sup>-5</sup> /°F)	3.2	ISO 11359	(x10 <sup>-5</sup> /°C)	5.8
Specific Heat @40°F (4°C)	ASTM E1269	Btu/lb/°F	0.3		KJ/Kg-°C	1.25
Glass Transition Temperature	ASTM D3417 / D3418	°F	307	ISO 11357	°C	153
Vicat Softening Temperature, B	ASTM 1525-00 modified	°F	312		°C	155
Heat Deflection Temp. by TMA at 1.8 Mpa		°F	290	ISO 75 Modified	°C	145
Shrinkage at 302°F (150°C)	ASTM D1204	%	1.40%		%	1.40%
Brittleness Temperature	ASTM D746	°F	-211		°C	-135
<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	0.35	ISO 62	% change	0.35
Surface Roughness (RMS)	ASME B46-1	-	NA			
Surface Energy	ASTM D5946-01	-	34			
Surface Tension	Dyne Pens	Dyne	38-40			
Pencil Hardness	ASTM D3363	-	B-HB			
<b>Optical</b>						
Refractive Index @77°F (25°C)	ASTM D542A	-	1.6			
Light Transmission	ASTM D1003	%	91			
Yellowness Index	ASTM D1925	%	0.35-0.70			
Haze	ASTM D1003	%	0.4			
Gloss over Flat Black min/max @ 60°	ASTM D523-60	-	170	ISO 2813	-	170

♦ These are typical properties and are not intended for specification purposes. If minimum certifiable properties are required, Please contact your local SABIC Innovative Plastics representative or the SABIC Innovative Plastics Quality Services Department. Reported Values are Based on 0.250 mm (0.010") Thickness unless otherwise noted.

\* Trademark of SABIC Innovative Plastics IP BV

# PRODUCT DATASHEET

## Lexan\* 8040 Film

### STERILIZATION PERFORMANCE

Technique	Conditions
Autoclave	265°F (129°C) Single Cycle
Gamma Radiation	5 Mrads Exposure
E-Beam Radiation	3.3 Mrads at 175 kV
Ethylene Oxide	All Common Concentrations

### MANUFACTURING SPECIFICATIONS

Nominal Gauge Ranges	Min/Max Limit of Nominal
0.007" (0.175 mm)	± 10%
0.010-0.015" (0.250-0.375 mm)	± 5%
0.020-0.030" (0.500-0.750mm)	± 3%

#### Americas Headquarters

SABIC Innovative Plastics  
One Plastics Avenue  
Pittsfield, MA 01201  
USA  
T +1-413-448-7125  
Toll-free: 1-800-323-3783  
F +1 (888) 443-2033  
sfsustomerservice@sabic-ip.com

#### European Headquarters

SABIC Innovative Plastics  
Plasticslaan 1  
4612 PX  
Bergen op Zoom  
The Netherlands  
T +31 164 293684  
F +31 164 293272  
Sfs.info@sabic-ip.com

#### Pacific Headquarters

SABIC Innovative Plastics  
Specialty Film & Sheet  
1266 Nanjing Road (W)  
16th Floor, Plaza 66  
200040 Shanghai  
China  
T +86 21 62881088 ext. 6733  
F +86 21 6288 0818

#### E-mail

sfsustomerservice@sabic-ip.com



\* Trademark of SABIC Innovative Plastics IP BV

THE MATERIALS, PRODUCTS AND SERVICES OF SABIC INNOVATIVE PLASTICS HOLDING BV, ITS SUBSIDIARIES AND AFFILIATES ("SELLER"), ARE SOLD SUBJECT TO SELLER'S STANDARD CONDITIONS OF SALE, WHICH CAN BE FOUND AT <http://www.sabic-ip.com> AND ARE AVAILABLE UPON REQUEST. ALTHOUGH ANY INFORMATION OR RECOMMENDATION CONTAINED HEREIN IS GIVEN IN GOOD FAITH, SELLER MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, (i) THAT THE RESULTS DESCRIBED HEREIN WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (ii) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN INCORPORATING SELLER'S PRODUCTS, SERVICES OR RECOMMENDATIONS. EXCEPT AS PROVIDED IN SELLER'S STANDARD CONDITIONS OF SALE, SELLER SHALL NOT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS PRODUCTS OR SERVICES DESCRIBED HEREIN. Each user is responsible for making its own determination as to the suitability of Seller's products, services or recommendations for the user's particular use through appropriate end-use 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. No statement by Seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of Seller or as a recommendation for the use of such product, service or design in a manner that infringes any patent or other intellectual property right. SABIC Innovative Plastics is a trademark of SABIC Holding Europe BV

\* Trademark of SABIC Innovative Plastics IP BV

[sabic-ip.com/sfs](http://sabic-ip.com/sfs)