

# VERSATILITY+ DURABILITY

XYLEX™ PC/POLYESTER RESIN



CHEMISTRY THAT MATTERS™

# XYLEX RESIN PRODUCT OVERVIEW

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XYLEX resin combines transparency, ductility, high flow, chemical resistance, and processability for increased design flexibility.

A key product from SABIC's resin portfolio, XYLEX resin is a polyester alloy with an unparalleled combination of clarity, chemical resistance to commonly occurring chemicals, ductility, and high flow.

Prior to the breakthrough of XYLEX resin, design engineers had to sacrifice clarity for improved chemical resistance, and ductility for special effect additives. These problems have been eliminated with new XYLEX resin.

In addition, XYLEX resin is available in a variety of VISUALFX™ resin looks beyond just clear. Diffusion features a "mysterious" look with hidden power and depth. Illuminate with an edgy glow effect, or the glitter of the Diamond effect. XYLEX resin is also offered in an assortment of opaque colors.

That's good news for design engineers. XYLEX resin is an excellent candidate for a variety of applications, including:

- Cellular phone covers and lenses
- Consumer electronics
- Outdoor recreation equipment, such as scooter and bicycle accessories
- Sports and safety eyewear frames
- Housewares and food service products
- Appliances and personal care

As part of our commitment to these resins, we are establishing global manufacturing capability and supply to help meet your material needs wherever you manufacture your products.



## XYLEX RESIN GRADE

			X8300	X8210	X7300	X7509HP	X8409AC
	Test method	Units	Typical value				
<b>MECHANICAL</b>							
Tensile stress, yield, 50 mm/min	ISO 527	MPa	55	45	55	60	60
Tensile stress, break, 50 mm/min	ISO 527	MPa	54	45	55	62	60
Tensile strain, break, 50 mm/min	ISO 527	%	>200	>150	>150	133	117
Tensile modulus, 1 mm/min	ISO 527	MPa	1600	1500	1900	2300	2180
Flexural stress, break, 2 mm/min	ISO 178	MPa	78	58	71	92	89
Flexural modulus, 2 mm/min	ISO 178	MPa	1700	1600	2000	2260	2000
<b>IMPACT</b>							
Izod impact, notched 80*10*4,+23 °C	ISO 180/1A	kJ/m <sup>2</sup>	8	45	9	9	10
Izod impact, notched 80*10*4,-10 °C	ISO 180/1A	kJ/m <sup>2</sup>	5	30	5	6	—
<b>THERMAL</b>							
Vicat B/120	ISO 306	°C	96	97	106	126	123
HDT/Ae, 1.82 MPa	ISO 75/Ae	°C	80	82	90	106	102
<b>PHYSICAL</b>							
Density	ISO 1183	g/cm <sup>3</sup>	1.17	1.16	1.18	1.20	1.20
Melt volume rate, 265 °C/2.16 kg	ISO 1133	cm <sup>3</sup> /10min	15	10	21	12	4
Mold shrinkage, flow, 3.2 mm	ASTM D 955		0.5–0.8%	0.5–0.8%	0.4–0.8%	0.4–0.6%	0.5–0.8%
Mold shrinkage, xflow, 3.2 mm	ASTM D 955		0.4–0.6%	0.4–0.6%	0.5–0.7%	0.5–0.7%	0.5–0.8%
<b>OPTICAL</b>							
Light Transmission (3 mm thick)	ASTM D 1003	%	88	83	88	88	87
Haze (1/8 inch thickness)	ASTM D 1003	%	0.9	5.1	1.3	2	1.5

APPLICATIONS	POTENTIAL XYLEX RESIN GRADES	TYPICAL BENEFITS OF XYLEX RESIN
Mobile phone cover and lenses, personal digital assistant, peripherals, electronic devices	X7300 resin X8210 resin	<ul style="list-style-type: none"> <li>High melt flow allows advanced processing in thinner walls and in-mold decorating for potentially lower part cost and reduced cycle times</li> <li>Impact modified with transparency</li> <li>VISUALFX resin with low temperature ductility</li> <li>“Softer” touch than standard PC</li> </ul>
Safety, sun, and sports eyewear frames	X8210 resin X7300 resin X8300 resin	<ul style="list-style-type: none"> <li>Clarity and VISUALFX resin look with ductility for product differentiation</li> <li>High melt flow allows advanced processing in thinner walls and in-mold decorating for potentially lower part cost and reduced cycle times</li> <li>Optimized for chemical resistance, for example, to most body oils, lotions, and sun creams</li> </ul>
Outdoor recreation equipment, sporting goods, pool, and spa accessories	X8210 resin X8300 resin	<ul style="list-style-type: none"> <li>Clarity and VISUALFX resin look with ductility for product differentiation</li> <li>Weatherability performances</li> <li>Optimized for chemical resistance, for example, to most greases, oils, and swimming pool conditioners</li> </ul>
Housewares and food service products	X7509HP resin	<ul style="list-style-type: none"> <li>FDA and/or EUFC compliance</li> <li>Optimized for chemical resistance, for example, to dishwasher detergent</li> <li>Sound dampening effect</li> </ul>
Appliances and personal care accessories	X7509(HP) resin X8409AC resin	<ul style="list-style-type: none"> <li>FDA and/or EUFC compliance possible</li> <li>Optimized for chemical resistance, for example, to dishwasher detergents, and most body oils and lotions</li> <li>“Softer” touch than standard PC and sound dampening effect</li> <li>Various processing possible (injection molding, injection, and extrusion blow molding)</li> </ul>

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