

Product Data Sheet

Superior impact and toughness characterize HYDEX 4301 polycarbonate and 4320BK, 20% glass filled polycarbonate rod and slab.

PRODUCT DESCRIPTION

HYDEX 4301 is a natural unfilled polycarbonate that has transparency, excellent impact strength and tensile properties. HYDEX 4320BK is a 20% glass filled polycarbonate with higher temperature and tensile properties than the unfilled 4301, it is supplied in a black color.

Polycarbonate is an amorphous thermoplastic. Good electrical properties combined with superior impact strength and moderate chemical resistance make this product widely accepted for numerous applications. This product is offered in many popular rod and slab sizes.

NOTE: *This data sheet shows both 20% glass filled and a unfilled grade of polycarbonate. Additional loading levels of glass filler may be available on a custom basis.*

PROPERTIES

Engineering thermoplastic with an excellent combination of physical properties:

- Superior Impact
- Outstanding Mechanical Strength and Stiffness
- Excellent Dimensional Stability
- Good Electrical Properties
- Transparency
- Good Machinability

TYPICAL APPLICATIONS

- Business Equipment
 - Gears
 - Rollers
 - Internal Mechanical Parts
 - Connectors
 - Relays
- Automotive
 - Pumps
 - Valves
 - Light Bezels
 - Instrument Panels

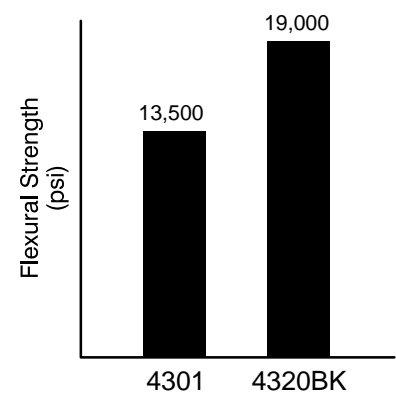
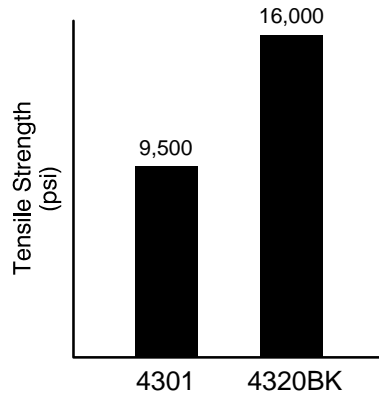
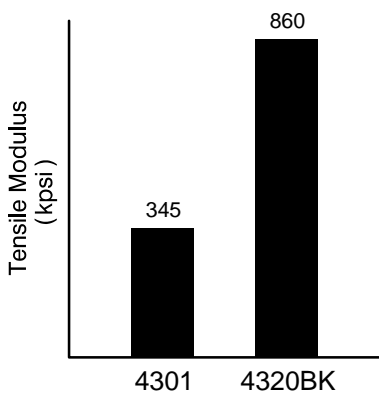
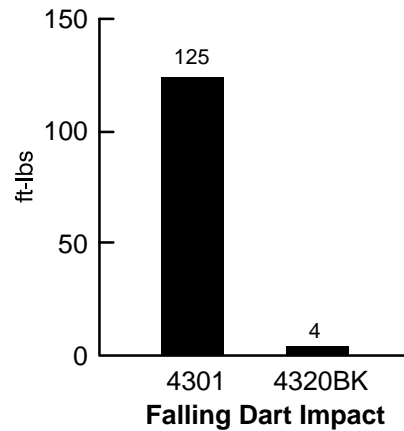
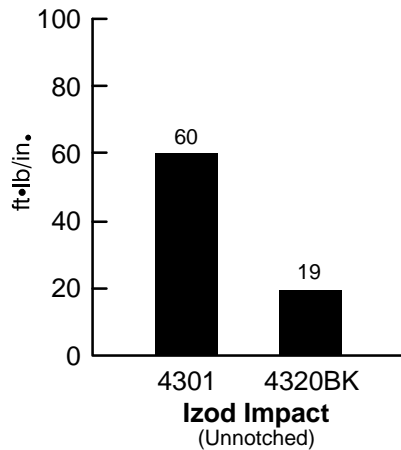
PHYSICAL PROPERTIES	ASTM	UNITS	HYDEX 4301 (unfilled)	HYDEX 4320BK (filled – 20% glass)
• Specific Gravity	D792	—	1.20	1.35
• Water Absorption (24-hours)	D570	%	.15	.16
• DTUL, 66 psi	D648	°F	280	300
• CTE, Flow – 40 to 200° F	E381	in./in. °F	3.75	1.49
• Izod Impact (Unnotched)	D256	ft•lb/in.	60	19
• Izod Impact (Notched)	D256	ft•lb/in.	14	2
• Falling Dart Impact	D3029	ft-lbs	125	4
• Tensile Strength, Break	D638	psi	9500	16,000
• Tensile Elongation, Break	D638	%	110	4-6
• Tensile Modulus	D638	psi	345,000	860,000
• Flexural Strength	D790	psi	13,500	19,000
• Flexural Modulus	D790	psi	340,000	800,000
• Compressive Strength	D695	psi	12,500	16,000
• Hardness, Rockwell M scale	D785	—	70	91
• Flammability	UL94	—	V-2	V-1

HYDEX™ 4301, 4320BK

ROD AND SLAB

ELECTRICAL PROPERTIES	ASTM	UNITS	4301	4320BK
• Volume Resistivity	D257	ohm – cm	1.0E17	1.0E17
• Dielectric Strength in air, 0.125 in.	D149	V/mil	380	490
• Dielectric Constant, 60 Hz	D150	—	3.17	3.17
• Dielectric Constant, 1mHz	D150	—	2.96	3.13
• Dissipation Factor, 60 Hz	D150	—	.0009	.0009
• Dissipation Factor, 1 mHz	D150	—	.0100	.0073

PROPERTY COMPARISONS



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