

PERFORMANCE

VIVAK sheet combines an excellent balance of properties for a wide range of fabricated products

Typical physical properties of VIVAK sheet

Property	Test method	Units	Values
PHYSICAL			
Specific gravity	ASTM D792	-	1.27
Water absorption after 24 hrs.	ASTM D570	%	0.2
Light transmission	ASTM D1003	%	86
Refractive index	ASTM D542	-	1.57
Haze	ASTM D1003	%	1.0
THERMAL			
Deflection temperature @ 264 psi	ASTM D648	°F	157
Deflection temperature @ 66 psi	ASTM D648	°F	164
Coefficient of thermal expansion	ASTM D696	in/in/°F x 10 ⁻⁵	3.8
Glass transition temperature	ASTM D3418	°F	178
Forming temperature	-	°F	280°-320°
MECHANICAL			
Tensile strength	ASTM D638	psi	7,700
Tensile modulus	ASTM D638	psi	320,300
Flexural strength	ASTM D790	psi	11,200
Flexural modulus	ASTM D790	psi	310,000
Izod impact notched at 73°F	ASTM D256	ft-lb/in	1.7
Izod impact notched at 32°F	ASTM D256	ft-lb/in	1.2
Drop dart impact	ASTM D3763	ft-lbs	22
Rockwell hardness	ASTM D785	R Scale	115
FLAMMABILITY			
≥ 0.060"	UL 94	-	HB

VIVAK Chemical Resistance

Resistant to:	Not Resistant to:
Acetic Acid 10%	Acetic Acid (conc.)
Ethylene Glycol (Antifreeze)	Acetone
Brake Fluid, DOT 3	Ammonia
Chromic Acid 20%	Ammonium Chloride
Citric Acid	Ammonium Hydroxide (conc.)
Cottonseed Oil	Benzene
Deionized Water	Carbon Tetrachloride
Detergent, Alconox 0.25%	Chloroform
Di(2-Ethylhexyl) Phthalate	Dimethyl Formamide
Dibutyl Sebacate	Diesel Oil
Diethylene Glycol	Ethyl Acetate
Ethyl Alcohol	Ethylene Chloride
Gasoline (Regular)	Gasohol (Ethanol)
Grease (Automotive)	Gasohol (Methanol)
Hand Cleaner (Jergens SBS 30)	Methyl Ethyl Ketone
Hexane	Methylene Chloride
Hydrochloric Acid 20%	Penetrating Oil (Liquid Wrench #1)
Hydrogen Peroxide 28%	Phenol 5%
Isooctane	Silicone Spray Lube
Isopropyl Alcohol	Silicone Oil
Linseed Oil	Sodium Hydroxide >10%
Kerosene	Sulfuric Acid (conc.)
Methanol	Toluene
Mineral Oil	Tetrahydrofuran
Nitric Acid 10%	
Oleic Acid	
Olive Oil	
Soap Solution	
Sodium Carbonate 20%	
Sodium Chlorate	
Sodium Chloride 10%	
Sodium Hypochlorite 5%	
Spirit, Pure	
Sulfuric Acid 30%	
Transformer Oil	
Transmission Fluid	

Compare VIVAK sheet for interior fabricated and formed applications – It delivers an optimum balance of performance and economy

Performance comparison

Impact strength falling dart @ 73°F ASTM D 5420 @ 0.125"	Acrylic	Polycarbonate	VIVAK sheet
10 in-lbs	Failed	No break	No break
100 in-lbs	Failed	No break	No break
300 in-lbs	Failed	No break	No break
Heat distortion @ 264 psi	203°F	270°F	157°F
@ 66 psi	207°F	280°F	164°F
Gamma stability	Poor	Fair	Excellent
Chemical resistance	Good	Fair	Good