

Performance/Performance comparison

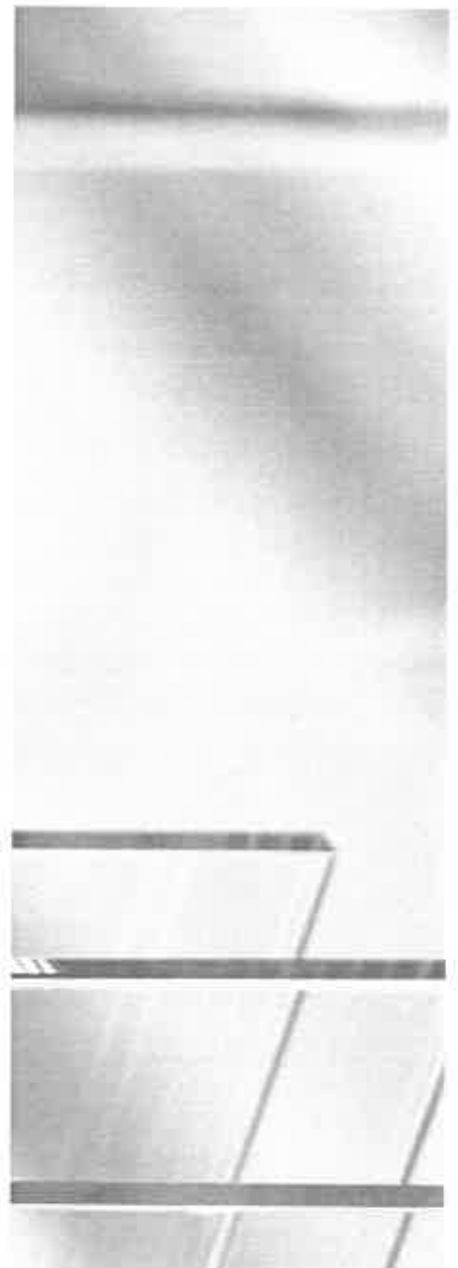
VIVAK® sheet combines an excellent balance of properties for a wide range of fabricated products.

Typical physical properties of VIVAK sheet			
Property	VIVAK sheet	Units	Test method
Physical			
Specific gravity	1.27	-	ASTM D-792
Water absorption after 24 hrs.	0.2	%	ASTM D-570
Light transmission	86	%	ASTM D-1003
Refractive Index	1.57	-	ASTM D-642
Haze	1.0	%	ASTM D-1003
Thermal			
Deflection temperature @ 264 psi	157	°F	ASTM D-648
Deflection temperature @ 66 psi	164	°F	ASTM D-648
Coefficient of thermal expansion	3.8	In/In/°F x 10 ⁻⁴	ASTM D-696
Thermal Conductivity	0.13	BTU-ft/(hr-ft ²)	ASTM E-1225
Flammability (Burning Rate)	0.08	In/minute	ASTM D-635
Smoke Density Rating	53.8	%	ASTM D-2843
Self-Ignition Temperature	880	°F	ASTM D-1929
Flame Spread Index	85		ASTM E-84
Smoke Developed Index	450		ASTM E-84
Flammability	HB		UL94
Glass transition temperature	178	°F	ASTM D-3418
Forming temperature	280°-320°	°F	-
Mechanical			
Tensile strength	7,700	psi	ASTM D-638
Tensile modulus	320,300	psi	ASTM D-638
Flexural strength	11,200	psi	ASTM D-790
Flexural modulus	310,000	psi	ASTM D-790
Izod Impact notched @73°F	1.7	ft-lb/in	ASTM D-256
Izod Impact notched @32°F	1.2	ft-lb/in	ASTM D-256
Drop dart Impact	22	ft-lbs	ASTM D-3763
Dielectric Constant @1kHz	2.6	-	ASTMD-150
Dielectric Constant @1mHz	2.4	-	ASTMD-150
Dielectric Strength	410	volts/ml	ASTMD-149
Compressive Strength	8,000	psi	ASTMD-695
Shear Strength	9,000	psi	ASTMD-732
Rockwell hardness	115	R Scale	ASTM D-785

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 @ .125	Polycarbonate	VIVAK sheet
10 In-lbs	No break	No break
100 In-lbs	No break	No break
300 In-lbs	No break	No break
Heat distortion @ 264 psi @ 66 psi	270°F 280°F	157°F 164°F
Gamma stability	Fair	Excellent
Chemical resistance	Fair	Good

Material availability				
Materials	Gauge range	Colors	Patterns	Sizes
VIVAK sheet	.020"-.500"	Clear Custom Tints Opagues	Satin	48" x 72" 48" x 96" 60" x 96" Custom Available



These suggestions and data are based on information that we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and methods of use are beyond our control. We recommend that the prospective user determine the suitability of our materials and suggestions before adopting them on a commercial scale.

Chemical Resistance

VIVAK is Resistant to:		VIVAK is NOT Resistant to:	
Acetic Acid 10%	Isooctane	Acetic Acid, conc.	Silicone Spray Lube
Antifreeze (Ethylene Glycol)	Isopropyl Alcohol	Acetone	Silicone Oil
Brake Fluid, DOT 3	Linseed Oil	Ammonia	Sodium Hydroxide >10%
Chromic Acid 20%	Kerosene	Ammonium Chloride	Sulphuric Acid, conc.
Citric Acid	Methanol	Ammonium Hydroxide, conc.	Toluene
Cottonseed Oil	Mineral Oil	Benzene	Tetrahydrofuran
Deionized Water	Nitric Acid 10%	Carbon Tetrachloride	
Detergent, Alconox (0.25%)	Oleic Acid	Chloroform	
Di(2-Ethylhexyl) Phthalate	Olive Oil	Dimethyl Formamide	
Dibutyl Sebacate	Soap Solution	Diesel Oil	
Diethylene Glycol	Sodium Carbonate 20%	Ethyl Acetate	
Ethyl Alcohol 96%	Sodium Chlorate	Ethylene Chloride	
Gasoline, Regular	Sodium Chloride 10%	Gasohol, Ethanol	
Grease, Automotive	Sodium Hypochlorite 5%	Gasohol, Methanol	
Hand Cleaner*	Spirit, Pure	Methyl Ethyl Ketone	
Hexane	Sulphuric Acid 30%	Methylene Chloride	
Hydrochloric Acid 20%	Transformer Oil	Penetrating Oil**	
Hydrogen Peroxide 28%	Transmission Fluid	Phenol 5%	

*Waterless, Jergens SBS 30

**Liquid Wrench #1

