

Plastics Properties Chart

Tableau des propriétés des plastiques

PROPERTIES	MATERIALS							
	Low Density Polyethylene	Medium Density Polyethylene	High Density Polyethylene	Polypropylene	Styrene	Nylon	Fiber Filled Nylon	Delrin®
SPECIFIC GRAVITY	0.910-0.925	0.926-0.940	0.941-0.965	0.902-0.906	0.98-1.1	1.13-1.15	1.17-1.52	1.425
TENSILE STRENGTH PSI	600-2,300	1,200-3,500	3,100-5,500	4,300-5,500	3,000-6,800	9,000-12,000	13,000-35,000	10,000-12,000
ELONGATION %	90-800	50-600	15-100	200-700	5-80	60-300	1.5-10	15
COMPRESSIVE STRENGTH PSI	-	-	3,200	5,500-8,000	4,000-9,000	6,700-12,500	13,000-24,000	18,000
FLEXURAL STRENGTH PSI	-	4,800-7,000	1,000	6,000-8,000	5,000-10,000	No Break	15,500-40,000	14,000-15,500
SPECIFIC HEAT CAL/°C/gm	0.55	0.55	0.55	0.46	0.32-0.35	0.4	0.3-0.35	0.35
RESISTANCE TO HEAT °F	180-200	220-250	250	250-320	140-175	180-300	300-400	185
HEAT DISTORTION TEMPERATURE °F	100-121 (66 PSI)	120-165 (66 PSI)	140-180 (66 PSI)	205-230 (66 PSI)	210 Max. (264 PSI)	360-365 (66 PSI)	400-510 (66 PSI)	338 (66 PSI)
WATER ABSORPTION % 24 HR. 1/8" THICKNESS	<0.01	0.01	0.01	0.01	0.05-0.6	1.5	0.2-2.0	0.25
EFFECT OF SUNLIGHT	Crazes rapidly unless black colour or ultraviolet inhibitor is used.			Crazes Rapidly	Some Strength Loss	Discolours Slightly	Discolours Slightly	Chalks Slightly
EFFECT OF WEAK ACIDS	Resistant	Very Resistant	Very Resistant	None	None	Resistant	Resistant	Resists Some
EFFECT OF STRONG ACIDS	Attacked by Oxidizing Acid	Attacked by Slowly Oxidizing Acids	Attacked by Slowly Oxidizing Acids	Attacked by Oxidizing Acids	Attacked by Oxidizing Acids	Attacked	Attacked	Attacked
EFFECT OF WEAK ALKALIES	Resistant	Very Resistant	Very Resistant	None	None	None	None	Resists Some
EFFECT OF STRONG ALKALIES	Resistant	Very Resistant	Very Resistant	Very Resistant	None	None	None	Resists Some
EFFECT OF ORGANIC SOLVENTS	Resistant Below (60°C)	Resistant Below (60°C)	Resistant Below (80°C)	Resistant Below (80°C)	Soluble in Some	Resists Most	Resists Most	Excellent Resistance
EFFECT OF OILS AND GREASES	Attacked by Some	Attacked by Some	Slight	Attacked by Some	-	None	None	None
IMPACT STRENGTH FT./LB./IN. NOTCH	No Break	0.5-16	1.5-20	.4	0.5-11.0	1.0-5.5	1.3-6	1.4
<p>This information is for reference only. Independent verification with your engineering department or other authoritative citation should precede using it for any critical application SPAENAU cannot be held responsible for the accuracy of these figures.</p>								

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