

ABS

ABS stands for Acrylonitrile Butadiene Styrene. ABS is an impact resistant engineering thermoplastic and amorphous polymer. ABS is made up of three monomers: acrylonitrile, butadiene and styrene. ABS is of high rigidity and good impact resistance, even at low temperatures. ABS demonstrates good insulating properties, good weldability and good abrasion and strain resistance. It is high dimensional (ie. mechanically strong and stable over time). ABS comprises high surface brightness and excellent surface aspect. It offers very good resistance to diluted acid and alkalis, moderate resistance to aliphatic hydrocarbons and poor resistance to aromatic hydrocarbons, halogenated hydrocarbons and alcohols.

Typical Property Values

Property	Item	Test Method	Test Condition	Units	Result
Physical	Density	ISO 1183	23°C	kg/m ³	1050
	Specific Gravity	ASTM D792		-	1.05
Mechanical	Tensile Strength	ISO 527 -1,2	23°C	MPa	54
	Tensile Strength	ASTM D638		MPa	50
	Tensile Elongation at Break	ASTM D638		%	35
	Elongation at Break	ISO 527 -1,2	23°C	%	18
	Flexural Strength	ISO 178	23°C	MPa	81
	Flexural Strength	ASTM D790		MPa	76
	Flexural Modulus	ISO 178	23°C / 50% RH	MPa	2540
	Flexural Modulus	ASTM D790		MPa	2540
	Rockwell Hardness	ISO 2039-2	23°C	R Scale	115
	Rockwell Hardness	ASTM D785	23°C / 50% RH	R Scale	115
	Charpy Impact V-notched	ISO 179	23°C	kJ/m ²	17
	Ball Pressure			°C	95-95
	Izod Impact, Notched	23°C 12.7mm	ASTM D256	J/m	186
		0°C 12.7mm			108
		-30°C 12.7mm			78
		23°C 3.2mm			196
		0°C 3.2mm			157
		-30°C 3.2mm			118
Heat Property	Coeff of Linear Thermal Expansion	-	ASTM D696	°C ⁻¹	0.000071
	Heat Deflection Temp High Load	1.80MPa	ISO75-1,2	°C	82
	Heat Deflection Temp (Unannealed) High Load	6.44mm/1.82MPa	ASTM D648	°C	87
	Flammability	-	UL94		HB
Molding Property	Linear Mold Shrinkage	230C/50% RH	Toray Method	%	0.4-0.6
	Melt Flow	2200C/98N	ISO 1133	g/10min	23

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