ABS INJECTION GRADES

Injection Moulding Grades

Properties	Test Condition	Test Methods	Units	F332	E332	L322	F232
General							
Density		ISO 1183	g/cm3	1.04	1.04	1.04	1.04
Water Absorption		ASTM D 570	%	0.3	0.3	0.3	0.3
Rheological							
Melt Flow Rate (MFR)		ISO 1133	g/10min	14	10	23	14
Mechanical							
Tensile Strength	50 mm/min	ASTM D 638	MPa	42	40	45	45
Strain at break	50 mm/min	ASTM D 638	%	60	75	20	20
Flexural Strength	2 mm/min	ASTM D 790	MPa	60	62	69	69
Flexural Modulus	2 mm/min	ASTM D 790	MPa	2250	2200	2350	2350
Izod Impact Strength Notched	+23°C - thickness 3.2 mm	ISO 180/4A	J/m	190	190	170	170
	0°C - thickness 3.2 mm	ISO 180/4A	J/m	125	115	100	100
	- 20°C - thickness 3.2 mm	ISO 180/4A	J/m	100	90	70	70
	- 40°C - thickness 3.2 mm	ISO 180/4A	J/m	90	85	50	50
	+23°C - thickness 4 mm	ISO 180/1A	kJ/m²	14	15	13	13
	- 40°C - thickness 4 mm	ISO 180/1A	kJ/m²	8	8	6	6
Charpy Impact Strength, Notched	+23°C	DIN 53453	kJ/m²	13	12	10	10
Unnotched	+23°C	DIN 53453	kJ/m²	NB	NB	NB	NB
Unnotched	- 40°C	DIN 53453	kJ/m²	NB	NB	NB	NB
Rockwell Hardness	scale R	ISO 2039/2	kJ/m²	R110	R111	R109	R109
Thermal							
Vicat Softening Tempreture	10 N - 120°C/h	ISO 306/A120	ºC	107	109	99	107
	50 N - 120°C/h	ISO 306/B120	ºC	102	104	96	101
Deflection temp. under load (annealed)	1.8 MPa - 120°C/h	ASTM D 648	ºC	101	103	96	102
Ceofficient of linear thermal expansion		ASTM D 696	10 -5/ºC	9	9	9	9
Thermal Conductivity		ASTM C 177	W/(Km)	0.17	0.17	0.17	0.17
Moulding Shrinkage		ISO 294.4	%	0.4-0.6	0.4-0.6	0.4-0.6	0.4-0.6
Flammability							
Flame behaviour	thickness 1.5 mm	UL 94	class	HB	HB	HB	HB
Glow wire test	thickness 3 mm	IEC 60695-2-1	ºC	650	650	650	650
Electrical							
Surface resistivity	dry	IEC 60093	ohm	10+14	10+14	10+14	10+14
Volume resistivity	dry	IEC 60093	ohm*cm	10+15	10+15	10+15	10+15
Dielectric strength	dry	IEC 60243	kV/mm	30	30	30	30
Dielectric constant (relative permittivity)	1000 Hz - dry	IEC 60250		3.1	3.1	3.1	3.1
Dissipation factor	1000 Hz - dry	IEC 60250		$15*10^{-3}$	$15*10^{-3}$	$15*10^{-3}$	$15*10^{-3}$
Main Features							
				"General purpose, self-coloring"	"Medium heat resistance, goo flow, good impact strength"	"Medium heat injection moulding, high flow, good thermal stability during processing"	"General purpose, high flow injection moulding grade, good impact resistance, excellent gloss"
Main Applications & Properties							
"Keys: Packaged product should be protected from the atmosferic agents and stored out of direct sunlight **NB**: No Break **/M**: Matt - Digit following letter/ M indicates increasing values of mattness"				"Households Small Appliances and white goods Vacuum Cleaners Electrical components for civil and industrial applications"	"Automative Interior (Trim parts), tiles, forms "	"Domestic appliances thermal resistant items (front panels, frames etc.) Electrical sector"	"Small and large household appliances, vacuum cleaners, toys, telephones and consumer electronics"