INEOS ABS

Data Sheet

Triax 1120

Standard injection molding grade, easy flowing, good chemical and stress crack resistance, very good impact strength, matt surface

ISO Shortname: [ABS+PA]

Property	Test Condition	Unit	Standard	Value d.a.m.	Value cond.
Rheological properties					
C Melt volume-flow rate	260 °C; 5 kg	cm³/(10 min)	ISO 1133	6.0	
Molding shrinkage, parallel	150x105x3; 260 °C / MT 80 °C; 300 bar	%	acc. ISO 2577	0.9	0.8
Molding shrinkage, normal	150x105x3; 260 °C / MT 80 °C; 300 bar	%	acc. ISO 2577	1.0	0.85
Post- shrinkage, parallel	150x105x3; 80 °C; 1 h	%	acc. ISO 2577	0.06	
Post- shrinkage, normal	150x105x3; 80 °C; 1 h	%	acc. ISO 2577	0.05	
C Molding shrinkage, parallel	60x60x2; 260 °C / MT 80 °C; 500 bar	%	ISO 294-4	0,7	
C Molding shrinkage, normal	60x60x2; 260 °C / MT 80 °C; 500 bar	%	ISO 294-4	0,8	
Post- shrinkage, parallel	60x60x2; 80 °C; 1 h	%	ISO 294-4	0,1	
Post- shrinkage, normal	60x60x2; 80 °C; 1 h	%	ISO 294-4	0,1	
Mechanical properties (23 °C/50 % r. h.)					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	1900	1050
C Yield stress	50 mm/min	MPa	ISO 527-1,-2	40	30
C Yield strain	50 mm/min	%	ISO 527-1,-2	3.2	13
C Nominal strain at break	50 mm/min	%	ISO 527-1,-2	>= 50	>= 100
Tensile Stress at break	50 mm/min	MPa	ISO 527-1,-2	38	29
Tensile Strain at break	50 mm/min	%	ISO 527-1,-2	>= 50	>= 100
C Charpy impact strength	23 °C	kJ/m²	ISO 179-1eU	N	N
C Charpy impact strength	-30 °C	kJ/m²	ISO 179-1eU	N	N
C Charpy notched impact strength	23 °C	kJ/m²	ISO 179-1eA	63	63
C Charpy notched impact strength	-30 °C	kJ/m²	ISO 179-1eA	12	12
Izod impact strength	23 °C	kJ/m²	ISO 180-1U	N	N
Izod impact strength	-30 °C	kJ/m²	ISO 180-1U	N	N
Izod notched impact strength	23 °C	kJ/m²	ISO 180-1A	60	60
Izod notched impact strength	-30 °C	kJ/m²	ISO 180-1A	11	11
Flexural modulus	2 mm/min	MPa	ISO 178	1800	1000
Flexural strength	2 mm/min	MPa	ISO 178	60	39
Flexural strain at flexural strength	2 mm/min	%	ISO 178	5.7	6.6
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178	54	32
Thermal properties					
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	68	93
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	91	99
C Vicat softening temperature	50 N; 50 °C/h	°C	ISO 306	102	98
Vicat softening temperature	10 N; 120 °C/h	°C	ISO 306	185	170

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C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10^{-4}/K	ISO 11359-1,-2	1.05	
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10^{-4}/K	ISO 11359-1,-2	1.15	
C Burning behavior UL 94 (1.6 mm)	1.5 mm	Class	UL 94	HB	
Electrical properties (23 °C/50 % r. h.)					
C Relative permittivity	100 Hz	-	IEC 60250	4.3	6.7
C Relative permittivity	1 MHz	-	IEC 60250	3.6	3.7
C Dissipation factor	100 Hz	10^{-4}	IEC 60250	290	1000
C Dissipation factor	1 MHz	10^{-4}	IEC 60250	300	550
C Volume resistivity		Ohm·m	IEC 60093	1E12	1E10
C Surface resistivity		Ohm	IEC 60093	1E14	1E14
C Electric strength	1 mm	kV/mm	IEC 60243-1	34	34
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	600	
Other properties (23 °C)					
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	~ 6	
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	~ 1.7	
C Density		kg/m³	ISO 1183	1060	
Processing conditions for test specimens					
C Injection molding-Melt temperature		°C	ISO 294	260	
C Injection molding-Mold temperature		°C	ISO 294	80	
C Injection molding-Injection velocity		mm/s	ISO 294	40	

C These property characteristics are taken from the CAMPUS plastics data bank and are based on the international catalogue of basic data for plastics according to ISO 10350.

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Test values

Unless specified to the contrary, the values given have been established on standardized test specimens at room temperature. The figures should be regarded as guide values only and not as binding minimum values. Kindly note that, under certain conditions, the properties can be affected to a considerable extent by the design of the mould/die, the processing conditions and the colouring.

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