

Triax 1220S

High melt stability, excellent low-temperature toughness, good thermoformability.

ISO Shortname: [ABS+PA]

Property	Test Condition	Unit	Standard	Value	
				d.a.m.	cond.
Rheological properties					
Melt volume-flow rate	260 °C; 5 kg	cm ³ /(10 min)	ISO 1133	2.8	
Molding shrinkage, parallel	150x105x3; 260 °C / MT 80 °C; 300 bar	%	acc. ISO 2577	1,1	1,05
Molding shrinkage, normal	150x105x3; 260 °C / MT 80 °C; 300 bar	%	acc. ISO 2577	1.25	1.1
Post- shrinkage, parallel	150x105x3; 80 °C; 1 h	%	acc. ISO 2577	0.03	
Post- shrinkage, normal	150x105x3; 80 °C; 1 h	%	acc. ISO 2577	0.03	
Molding shrinkage, parallel	60x60x2; 260 °C / MT 80 °C; 500 bar	%	ISO 294-4	0,7	
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.)					
Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	1700	950
Yield stress	50 mm/min	MPa	ISO 527-1,-2	39	29
Yield strain	50 mm/min	%	ISO 527-1,-2	3.5	13
Nominal strain at break	50 mm/min	%	ISO 527-1,-2	>= 50	>= 100
Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	N	N
Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	N	N
Charpy notched impact strength	23 °C	kJ/m ²	ISO 179-1eA	72	>= 72
Charpy notched impact strength	-30 °C	kJ/m ²	ISO 179-1eA	23	>= 25
Izod impact strength	23 °C	kJ/m ²	ISO 180-1U	N	N
Izod impact strength	-30 °C	kJ/m ²	ISO 180-1U	N	N
Izod notched impact strength	23 °C	kJ/m ²	ISO 180-1A	70	>= 70
Izod notched impact strength	-30 °C	kJ/m ²	ISO 180-1A	23	>= 25
Flexural modulus	2 mm/min	MPa	ISO 178	1600	950
Flexural strength	2 mm/min	MPa	ISO 178	56	36
Flexural strain at flexural strength	2 mm/min	%	ISO 178	5.6	6.9
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178	50	28
Thermal properties					
Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	64	89
Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	91	96
Vicat softening temperature	50 N; 50 °C/h	°C	ISO 306	97	92
Vicat softening temperature	10 N; 120 °C/h	°C	ISO 306	185	165
Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	1.05	
Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	1.15	

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Burning behavior UL 94 (1.6 mm)	1.5 mm	Class	UL 94	HB	
Other properties (23 °C)					
Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	~6	
Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	~1,7	
Density		kg/m ³	ISO 1183	1060	
Processing conditions for test specimens					
Injection molding-Melt temperature		°C	ISO 294	260	
Injection molding-Mold temperature		°C	ISO 294	80	
Injection molding-Injection velocity		mm/s	ISO 294	40	

Disclaimer

Disclaimer for sales products

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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.

Processing note

Under the recommended processing conditions small quantities of decomposition product may be given off during processing. To preclude any risk to the health and well-being of the machine operatives, tolerance limits for the work environment must be ensured by the provision of efficient exhaust ventilation and fresh air at the workplace in accordance with the Safety Data Sheet. In order to prevent the partial decomposition of the polymer and the generation of volatile decomposition products, the prescribed processing temperatures should not be substantially exceeded. Since excessively high temperatures are generally the result of operator error or defects in the heating system, special care and controls are essential in these areas.

Conditioning

Conditioning in accordance with ISO 1110 (70°C; 62% r.H.)

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