Property Data

Envalior
Imagine the Future

Stanyl® TW200F8–FC

PA46–GF40

40% Glass Reinforced, Heat Stabilized, Food Contact Quality

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
RHEOLOGICAL PROPERTIES	DRY / COND		
Molding shrinkage [parallel]	0.5 / *	%	Sim. to ISO 294–4
Molding shrinkage [normal]	1.1 / *	%	Sim. to ISO 294–4
MECHANICAL PROPERTIES	DRY / COND		
Tensile modulus	13000 / 8000	MPa	ISO 527–1/–2
Tensile modulus (120°C)	6900 / –	MPa	ISO 527–1/–2
Tensile modulus (160°C)	6100	MPa	ISO 527–1/–2
Tensile modulus (180°C)	5600	MPa	ISO 527–1/–2
Tensile modulus (200°C)	5200	MPa	ISO 527–1/–2
Stress at break	235 / 140	MPa	ISO 527–1/–2
Stress at break (120°C)	130 / –	MPa	ISO 527–1/–2
Stress at break (160°C)	115	MPa	ISO 527–1/–2
Stress at break (180°C)	105	MPa	ISO 527–1/–2
Stress at break (200°C)	100	MPa	ISO 527–1/–2
Strain at break	3.3 / 6	%	ISO 527–1/–2
Strain at break (120°C)	6 / –	%	ISO 527–1/–2
Strain at break (160°C)	7	%	ISO 527–1/–2
Strain at break (180°C)	7	%	ISO 527–1/–2
Strain at break (200°C)	8	%	ISO 527–1/–2
Flexural modulus	11800 / 7000	MPa	ISO 178
Flexural modulus (120°C)	5800	MPa	ISO 178
Flexural modulus (160°C)	5200	MPa	ISO 178
Flexural strength	325 / 220	MPa	ISO 178

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Flexural strength (120°C)	170	MPa	ISO 178
Flexural strength (160°C)	140	MPa	ISO 178
Flexural strength (180°C)	8	MPa	ISO 178
Flexural strength (200°C)	8	MPa	ISO 178
Charpy impact strength (+23°C)	95 / 100	kJ/m²	ISO 179/1eU
Charpy impact strength (–30°C)	75 / 85	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	14 / 21	kJ/m²	ISO 179/1eA
Charpy notched impact strength (–30°C)	12 / 12	kJ/m²	ISO 179/1eA
Izod notched impact strength (+23°C)	14 / 21	kJ/m²	ISO 180/1A
Izod notched impact strength (–40°C)	12 / 12	kJ/m²	ISO 180/1A
THERMAL PROPERTIES	**DRY / COND**		
Melting temperature (10°C/min)	295 / *	°C	ISO 11357–1/–3
Temp. of deflection under load (1.80 MPa)	290 / *	°C	ISO 75–1/–2
Temp. of deflection under load (0.45 MPa)	290 / *	°C	ISO 75–1/–2
Coeff. of linear therm. expansion (parallel)	0.25 / *	E–4/°C	ISO 11359–1/–2
Coeff. of linear therm. expansion (normal)	0.5 / *	E–4/°C	ISO 11359–1/–2
Burning Behav. at 1.5 mm nom. thickn.	HB / *	class	IEC 60695–11–10
Thickness tested	1.5 / *	mm	IEC 60695–11–10
UL recognition	No / *	–	–
Relative Temperature Index – electrical	65	°C	UL746B
RTI electrical (Thickness (1) tested)	1.5	mm	UL746B
Thermal Index 5000 hrs	177	°C	IEC 60216/ISO 527–1/–2
ELECTRICAL PROPERTIES	**DRY / COND**		
Volume resistivity	1E12 / 1E8	Ohm*m	IEC 62631–3–1
Electric strength	30 / 20	kV/mm	IEC 60243–1
Comparative tracking index	300 / –	V	IEC 60112

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Relative permittivity (100Hz)	4.3 / 16	–	IEC 62631–2–1
Relative permittivity (1 MHz)	4 / 4.7	–	IEC 62631–2–1
OTHER PROPERTIES	**DRY / COND**		
Humidity absorption	2.2 / *	%	Sim. to ISO 62
Density	1510 / –	kg/m³	ISO 1183