

# Stanyl® TW363

## PA46-I

Heat Stabilized, Impact Modified

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Stanyl® TW363 is an impact-modified high heat polyamide that offers excellent wear & friction properties in combination with outstanding creep resistance, strength, stiffness and fatigue resistance especially at high temperatures in combination with cycle-time advantages and excellent flow.

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
<b>RHEOLOGICAL PROPERTIES</b>			
	<b>DRY / COND</b>		
Molding shrinkage [parallel]	2 / *	%	Sim. to ISO 294-4
Molding shrinkage [normal]	2 / *	%	Sim. to ISO 294-4
<b>MECHANICAL PROPERTIES</b>			
	<b>DRY / COND</b>		
Tensile modulus	1850 / 600	MPa	ISO 527-1/-2
Tensile modulus (120°C)	400 / -	MPa	ISO 527-1/-2
Tensile modulus (160°C)	350	MPa	ISO 527-1/-2
Yield stress	60 / 45	MPa	ISO 527-1/-2
Yield stress (120°C)	35	MPa	ISO 527-1/-2
Yield stress (160°C)	30	MPa	ISO 527-1/-2
Nominal strain at break	>50 / >50	%	ISO 527-1/-2
Nominal strain at break (120°C)	>50	%	ISO 527-1/-2
Nominal strain at break (160°C)	>50	%	ISO 527-1/-2
Flexural modulus	1800 / 550	MPa	ISO 178
Flexural modulus (120°C)	400	MPa	ISO 178
Flexural modulus (160°C)	350	MPa	ISO 178
Flexural strength	80 / 40	MPa	ISO 178
Flexural strength (120°C)	40	MPa	ISO 178
Flexural strength (160°C)	30	MPa	ISO 178
Charpy impact strength (+23°C)	N / N	kJ/m²	ISO 179/1eU

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## Property Data

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<i>PROPERTIES</i>	<i>TYPICAL DATA</i>	<i>UNIT</i>	<i>TEST METHOD</i>
Charpy impact strength (-30°C)	N / N	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength (+23°C)	75 / 125	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength (-30°C)	26 / 30	kJ/m <sup>2</sup>	ISO 179/1eA
Izod notched impact strength (+23°C)	80 / 125	kJ/m <sup>2</sup>	ISO 180/1A
Izod notched impact strength (-40°C)	40 / 40	kJ/m <sup>2</sup>	ISO 180/1A
<b><i>THERMAL PROPERTIES</i></b>		<b><i>DRY / COND</i></b>	
Melting temperature (10°C/min)	295 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	90 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	200 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	1.6 / *	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	1.8 / *	E-4/°C	ISO 11359-1/-2
Thermal Index 5000 hrs	135	°C	IEC 60216/ISO 527-1/-2
<b><i>ELECTRICAL PROPERTIES</i></b>		<b><i>DRY / COND</i></b>	
Volume resistivity	1E13 / 1E7	Ohm*m	IEC 62631-3-1
Electric strength	25 / 15	kV/mm	IEC 60243-1
Comparative tracking index	475 / -	V	IEC 60112
Relative permittivity (100Hz)	3.6 / 14	-	IEC 62631-2-1
Relative permittivity (1 MHz)	3.2 / 4	-	IEC 62631-2-1
<b><i>OTHER PROPERTIES</i></b>		<b><i>DRY / COND</i></b>	
Humidity absorption	2.95 / *	%	Sim. to ISO 62
Density	1100 / -	kg/m <sup>3</sup>	ISO 1183

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