

# ForTii<sup>®</sup> Ace WX51–FC

## PPA–GF30

30% Glass Reinforced, PA4T, Food Contact Quality, Drinking Water Grade

Print Date: 2024–10–04

ForTii<sup>®</sup> Ace WX51–FC has best in class high temperature and wet mechanical performance, weldline strength and weldline strength retention in hot water and steam. For detailed statements and information regarding food contact and water contact approvals please contact your Envalior representative.

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
<b>RHEOLOGICAL PROPERTIES</b>			
	<b>DRY / COND</b>		
Molding shrinkage (parallel)	0.43 / *	%	ISO 294–4
Molding shrinkage (normal)	1.2 / *	%	ISO 294–4
<b>MECHANICAL PROPERTIES</b>			
	<b>DRY / COND</b>		
Tensile modulus	11000 / 11000	MPa	ISO 527–1/–2
Tensile modulus (–40°C)	11800 / –	MPa	ISO 527–1/–2
Tensile modulus (40°C)	10500 / –	MPa	ISO 527–1/–2
Tensile modulus (80°C)	10300 / 9500	MPa	ISO 527–1/–2
Tensile modulus (100°C)	10200 / –	MPa	ISO 527–1/–2
Tensile modulus (120°C)	9600 / 5500	MPa	ISO 527–1/–2
Tensile modulus (150°C)	7500	MPa	ISO 527–1/–2
Tensile modulus (160°C)	6300	MPa	ISO 527–1/–2
Tensile modulus (180°C)	4900	MPa	ISO 527–1/–2
Tensile modulus (200°C)	4400	MPa	ISO 527–1/–2
Stress at break	210 / 190	MPa	ISO 527–1/–2
Stress at break (–40°C)	240 / –	MPa	ISO 527–1/–2
Stress at break (40°C)	200 / –	MPa	ISO 527–1/–2
Stress at break (80°C)	180 / 120	MPa	ISO 527–1/–2
Stress at break (100°C)	170 / –	MPa	ISO 527–1/–2
Stress at break (120°C)	150 / 80	MPa	ISO 527–1/–2

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Stress at break (150°C)	115	MPa	ISO 527-1/-2
Stress at break (160°C)	100	MPa	ISO 527-1/-2
Stress at break (200°C)	75	MPa	ISO 527-1/-2
Strain at break	2.6 / 2.5	%	ISO 527-1/-2
Strain at break (-40°C)	2.7 / -	%	ISO 527-1/-2
Strain at break (40°C)	2.5 / -	%	ISO 527-1/-2
Strain at break (80°C)	2.7 / 2.8	%	ISO 527-1/-2
Strain at break (100°C)	2.7 / -	%	ISO 527-1/-2
Strain at break (120°C)	3 / 5	%	ISO 527-1/-2
Strain at break (150°C)	3.8	%	ISO 527-1/-2
Strain at break (160°C)	5	%	ISO 527-1/-2
Strain at break (180°C)	5	%	ISO 527-1/-2
Strain at break (200°C)	5	%	ISO 527-1/-2
Flexural modulus	10500 / 10500	MPa	ISO 178
Flexural strength	300 / 275	MPa	ISO 178
Flexural modulus (120°C)	9500	MPa	ISO 178
Flexural modulus (160°C)	5700	MPa	ISO 178
Flexural modulus (180°C)	4700	MPa	ISO 178
Flexural modulus (200°C)	4300	MPa	ISO 178
Charpy impact strength (+23°C)	70 / 60	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength (-30°C)	65 / 55	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength (+23°C)	10 / 8	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength (-30°C)	10 / 8	kJ/m <sup>2</sup>	ISO 179/1eA

## THERMAL PROPERTIES

### DRY / COND

Melting temperature (10°C/min)	340 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	320 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	0.18 / *	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	0.6 / *	E-4/°C	ISO 11359-1/-2

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Burning Behav. at 3.0 mm nom. thickn.	HB / *	class	IEC 60695–11–10
Thickness tested	3 / *	mm	IEC 60695–11–10
UL recognition	Yes / *	–	–
<b><i>ELECTRICAL PROPERTIES</i></b>		<b><i>DRY / COND</i></b>	
Volume resistivity	>1E13 / >1E13	Ohm*m	IEC 62631–3–1
Electric strength	45 / –	kV/mm	IEC 60243–1
Comparative tracking index	600 / –	V	IEC 60112
<b><i>OTHER PROPERTIES</i></b>		<b><i>DRY / COND</i></b>	
Humidity absorption	2 / *	%	Sim. to ISO 62
Density	1460 / –	kg/m <sup>3</sup>	ISO 1183

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