

Xytron™ G4080HR PPS-GF40

40% Glass Reinforced, Flame Retardant, Hydrolysis resistant

RHEOLOGICAL PROPERTIES VALUE Wolding shrinkage (parallel) 0.2 % ISO 294–4 Molding shrinkage (normal) 0.5 % ISO 294–4 MECHANICAL PROPERTIES VALUE Fensile modulus (120°C) 6300 MPa ISO 527–1/–2 Fensile modulus (160°C) 4400 MPa ISO 527–1/–2 Fensile modulus (200°C) 3500 MPa ISO 527–1/–2 Stress at break 190 MPa ISO 527–1/–2 Stress at break (120°C) 85 MPa ISO 527–1/–2 Stress at break (120°C) 85 MPa ISO 527–1/–2 Stress at break (120°C) 85 MPa ISO 527–1/–2 Stress at break (120°C) 62 MPa ISO 527–1/–2 Stress at break (120°C) 50 MPa ISO 527–1/–2 Strain at break (200°C) 50 MPa ISO 527–1/–2 Strain at break (120°C) 51 % ISO 527–1/–2 Strain at break (200°C) 51 % ISO 527–1/–2				
Molding shrinkage (parallel) 0.2 % ISO 294-4 Molding shrinkage (normal) 0.5 % ISO 294-4 MECHANICAL PROPERTIES VALUE Mechanical properties VALUE Tensile modulus (120°C) 6300 MPa ISO 527-1/-2 Fensile modulus (160°C) 4400 MPa ISO 527-1/-2 Fensile modulus (200°C) 3500 MPa ISO 527-1/-2 Stress at break 190 MPa ISO 527-1/-2 Stress at break (120°C) 3500 MPa ISO 527-1/-2 Stress at break (120°C) 85 MPa ISO 527-1/-2 Stress at break (120°C) 85 MPa ISO 527-1/-2 Stress at break (120°C) 85 MPa ISO 527-1/-2 Stress at break (200°C) 50 MPa ISO 527-1/-2 Strain at break (200°C) 50 MPa ISO 527-1/-2 Strain at break (120°C) 4.5 % ISO 527-1/-2 Strain at break (120°C) 5.1 % ISO 527-1/-2 Strain at break (200°C)	PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
Molding shrinkage (normal) 0.5 % ISO 294-4 MECHANICAL PROPERTIES VALUE Fensile modulus 15000 MPa ISO 527-1/-2 Fensile modulus (120°C) 6300 MPa ISO 527-1/-2 Fensile modulus (160°C) 4400 MPa ISO 527-1/-2 Fensile modulus (200°C) 3500 MPa ISO 527-1/-2 Stress at break 190 MPa ISO 527-1/-2 Stress at break (120°C) 85 MPa ISO 527-1/-2 Stress at break (120°C) 85 MPa ISO 527-1/-2 Stress at break (200°C) 62 MPa ISO 527-1/-2 Stress at break (200°C) 62 MPa ISO 527-1/-2 Stress at break (200°C) 50 MPa ISO 527-1/-2 Strain at break (200°C) 50 MPa ISO 527-1/-2 Strain at break (200°C) 50 MPa ISO 527-1/-2 Strain at break (160°C) 51 % ISO 527-1/-2 Strain at break (200°C) 58 % ISO 527-1/-2	RHEOLOGICAL PROPERTIES	VALUE		
MECHANICAL PROPERTIES VALUE Fensile modulus 15000 MPa ISO 527-1/-2 Fensile modulus (120°C) 6300 MPa ISO 527-1/-2 Fensile modulus (160°C) 4400 MPa ISO 527-1/-2 Fensile modulus (160°C) 4400 MPa ISO 527-1/-2 Fensile modulus (200°C) 3500 MPa ISO 527-1/-2 Stress at break 190 MPa ISO 527-1/-2 Stress at break (120°C) 85 MPa ISO 527-1/-2 Stress at break (160°C) 62 MPa ISO 527-1/-2 Stress at break (200°C) 50 MPa ISO 527-1/-2 Stress at break (200°C) 50 MPa ISO 527-1/-2 Stress at break (200°C) 50 MPa ISO 527-1/-2 Strain at break (200°C) 50 MPa ISO 527-1/-2 Strain at break (160°C) 51 % ISO 527-1/-2 Strain at break (200°C) 5.1 % ISO 527-1/-2 Strain at break (200°C) 5.8 % ISO 527-1/-2 <t< td=""><td>Molding shrinkage (parallel)</td><td>0.2</td><td>%</td><td>ISO 294-4</td></t<>	Molding shrinkage (parallel)	0.2	%	ISO 294-4
Tensile modulus 15000 MPa ISO 527-1/-2 Tensile modulus (120°C) 6300 MPa ISO 527-1/-2 Tensile modulus (160°C) 4400 MPa ISO 527-1/-2 Tensile modulus (200°C) 3500 MPa ISO 527-1/-2 Stress at break 190 MPa ISO 527-1/-2 Stress at break (120°C) 85 MPa ISO 527-1/-2 Stress at break (120°C) 85 MPa ISO 527-1/-2 Stress at break (200°C) 50 MPa ISO 527-1/-2 Stress at break (120°C) 62 MPa ISO 527-1/-2 Stress at break (200°C) 50 MPa ISO 527-1/-2 Strain at break (200°C) 50 MPa ISO 527-1/-2 Strain at break (120°C) 4.5 % ISO 527-1/-2 Strain at break (120°C) 5.1 % ISO 527-1/-2 Strain at break (200°C) 5.8 % ISO 527-1/-2 Strain at break (200°C) 5.8 % ISO 527-1/-2 Strain at break (200°C) 5.8 %	Molding shrinkage (normal)	0.5	%	ISO 294-4
Tensile modulus 15000 MPa ISO 527-1/-2 Tensile modulus (120°C) 6300 MPa ISO 527-1/-2 Tensile modulus (160°C) 4400 MPa ISO 527-1/-2 Tensile modulus (200°C) 3500 MPa ISO 527-1/-2 Stress at break 190 MPa ISO 527-1/-2 Stress at break (120°C) 85 MPa ISO 527-1/-2 Stress at break (120°C) 85 MPa ISO 527-1/-2 Stress at break (200°C) 50 MPa ISO 527-1/-2 Stress at break (120°C) 62 MPa ISO 527-1/-2 Stress at break (200°C) 50 MPa ISO 527-1/-2 Strain at break (200°C) 50 MPa ISO 527-1/-2 Strain at break (120°C) 4.5 % ISO 527-1/-2 Strain at break (120°C) 5.1 % ISO 527-1/-2 Strain at break (200°C) 5.8 % ISO 527-1/-2 Strain at break (200°C) 5.8 % ISO 527-1/-2 Strain at break (200°C) 5.8 %				
Fensile modulus (120°C) 6300 MPa ISO 527-1/-2 Fensile modulus (160°C) 4400 MPa ISO 527-1/-2 Fensile modulus (200°C) 3500 MPa ISO 527-1/-2 Stress at break 190 MPa ISO 527-1/-2 Stress at break (120°C) 85 MPa ISO 527-1/-2 Stress at break (160°C) 62 MPa ISO 527-1/-2 Stress at break (160°C) 62 MPa ISO 527-1/-2 Stress at break (160°C) 50 MPa ISO 527-1/-2 Strain at break (120°C) 50 MPa ISO 527-1/-2 Strain at break (120°C) 4.5 % ISO 527-1/-2 Strain at break (120°C) 5.1 % ISO 527-1/-2 Strain at break (200°C) 5.8 % ISO 178 Elexural modulus (120°C) 5800 MPa <td>MECHANICAL PROPERTIES</td> <td>VALUE</td> <td></td> <td></td>	MECHANICAL PROPERTIES	VALUE		
Fensile modulus (160°C) 4400 MPa ISO 527-1/-2 Fensile modulus (200°C) 3500 MPa ISO 527-1/-2 Stress at break 190 MPa ISO 527-1/-2 Stress at break (120°C) 85 MPa ISO 527-1/-2 Stress at break (160°C) 62 MPa ISO 527-1/-2 Stress at break (200°C) 50 MPa ISO 527-1/-2 Stress at break (200°C) 50 MPa ISO 527-1/-2 Strain at break (200°C) 50 MPa ISO 527-1/-2 Strain at break (120°C) 51 % ISO 527-1/-2 Strain at break (120°C) 5.1 % ISO 527-1/-2 Strain at break (200°C) 5.1 % ISO 527-1/-2 Strain at break (200°C) 5.8 % ISO 178 Elexural modulus 120°C) 5800 MPa ISO 178 Strain at break (200°C) 5800	Tensile modulus	15000	MPa	ISO 527-1/-2
Fensile modulus (200°C) 3500 MPa ISO 527-1/-2 Stress at break 190 MPa ISO 527-1/-2 Stress at break (120°C) 85 MPa ISO 527-1/-2 Stress at break (160°C) 62 MPa ISO 527-1/-2 Stress at break (200°C) 50 MPa ISO 527-1/-2 Stress at break (200°C) 50 MPa ISO 527-1/-2 Strain at break 2 % ISO 527-1/-2 Strain at break (120°C) 50 MPa ISO 527-1/-2 Strain at break (120°C) 5.1 % ISO 527-1/-2 Strain at break (160°C) 5.1 % ISO 527-1/-2 Strain at break (200°C) 5.8 % ISO 527-1/-2 Strain at break (200°C) 5.8 % ISO 527-1/-2 Strain at break (200°C) 5.8 % ISO 527-1/-2 Elexural modulus 14000 MPa ISO 178 Elexural modulus (120°C) 5800 MPa ISO 178 Elexural modulus (160°C) 4400 MPa ISO 1	Tensile modulus (120°C)	6300	MPa	ISO 527-1/-2
Stress at break 190 MPa ISO 527-1/-2 Stress at break (120°C) 85 MPa ISO 527-1/-2 Stress at break (160°C) 62 MPa ISO 527-1/-2 Stress at break (200°C) 50 MPa ISO 527-1/-2 Stress at break (200°C) 50 MPa ISO 527-1/-2 Strain at break 2 % ISO 527-1/-2 Strain at break (120°C) 4.5 % ISO 527-1/-2 Strain at break (160°C) 5.1 % ISO 527-1/-2 Strain at break (160°C) 5.1 % ISO 527-1/-2 Strain at break (160°C) 5.1 % ISO 527-1/-2 Strain at break (200°C) 5.8 % ISO 527-1/-2 Flexural modulus 14000 MPa ISO 178 Flexural modulus (120°C) 5800 MPa ISO 178 Flexural modulus (160°C) 4400 MPa ISO 1	Tensile modulus (160°C)	4400	MPa	ISO 527-1/-2
Stress at break (120°C) 85 MPa ISO 527-1/-2 Stress at break (160°C) 62 MPa ISO 527-1/-2 Stress at break (200°C) 50 MPa ISO 527-1/-2 Stress at break (200°C) 50 MPa ISO 527-1/-2 Strain at break 2 % ISO 527-1/-2 Strain at break (120°C) 4.5 % ISO 527-1/-2 Strain at break (160°C) 5.1 % ISO 527-1/-2 Strain at break (200°C) 5.8 % ISO 527-1/-2 Flexural modulus 1200°C 5.8 % ISO 178 Flexural modulus (120°C) 5800 MPa ISO 178 Flexural modulus (160°C) 4400 MPa ISO 178 Flexural modulus (200°C) 3900 MPa </td <td>Tensile modulus (200°C)</td> <td>3500</td> <td>MPa</td> <td>ISO 527-1/-2</td>	Tensile modulus (200°C)	3500	MPa	ISO 527-1/-2
Stress at break (160°C) 62 MPa ISO 527-1/-2 Stress at break (200°C) 50 MPa ISO 527-1/-2 Strain at break (200°C) 4.5 % ISO 527-1/-2 Strain at break (120°C) 4.5 % ISO 527-1/-2 Strain at break (160°C) 5.1 % ISO 527-1/-2 Strain at break (160°C) 5.1 % ISO 527-1/-2 Strain at break (200°C) 5.8 % ISO 527-1/-2 Strain at break (200°C) 5.8 % ISO 527-1/-2 Flexural modulus 14000 MPa ISO 178 Flexural modulus (120°C) 5800 MPa ISO 178 Flexural modulus (160°C) 4400 MPa ISO 178 Flexural modulus (200°C) 3900 MPa ISO 178 Flexural modulus (200°C) 3900 MPa ISO 178 Flexural modulus (200°C) 3900 MPa ISO 178 Flexural modulus (200°C) 60 kJ/m² ISO 179/1eU	Stress at break	190	MPa	ISO 527-1/-2
Stress at break (200°C) 50 MPa ISO 527-1/-2 Strain at break 2 % ISO 527-1/-2 Strain at break (120°C) 4.5 % ISO 527-1/-2 Strain at break (160°C) 5.1 % ISO 527-1/-2 Strain at break (200°C) 5.1 % ISO 527-1/-2 Strain at break (200°C) 5.8 % ISO 527-1/-2 Strain at break (200°C) 5.8 % ISO 527-1/-2 Elexural modulus 14000 MPa ISO 178 Flexural modulus (120°C) 5800 MPa ISO 178 Flexural modulus (120°C) 5800 MPa ISO 178 Flexural modulus (120°C) 3900 MPa ISO 178 Flexural modulus (200°C) 3900 MPa ISO 178 Flexural modulus (200°C) 3900 MPa ISO 178 Charpy impact strength (+23°C) 60 kJ/m² ISO 179/1eU	Stress at break (120°C)	85	MPa	ISO 527-1/-2
Strain at break 2 % ISO 527-1/-2 Strain at break (120°C) 4.5 % ISO 527-1/-2 Strain at break (160°C) 5.1 % ISO 527-1/-2 Strain at break (200°C) 5.8 % ISO 527-1/-2 Strain at break (200°C) 5.8 % ISO 527-1/-2 Strain at break (200°C) 5.8 % ISO 527-1/-2 Flexural modulus 14000 MPa ISO 178 Flexural strength 290 MPa ISO 178 Flexural modulus (120°C) 5800 MPa ISO 178 Flexural modulus (160°C) 4400 MPa ISO 178 Flexural modulus (200°C) 3900 MPa ISO 178 Strain modulus (200°C) 60 kJ/m² ISO 179/1eU	Stress at break (160°C)	62	MPa	ISO 527-1/-2
Strain at break (120°C) 4.5 % ISO 527–1/–2 Strain at break (160°C) 5.1 % ISO 527–1/–2 Strain at break (200°C) 5.8 % ISO 527–1/–2 Flexural modulus 14000 MPa ISO 178 Flexural strength 290 MPa ISO 178 Flexural modulus (120°C) 5800 MPa ISO 178 Flexural modulus (160°C) 4400 MPa ISO 178 Flexural modulus (200°C) 3900 MPa ISO 178 Flexural modulus (160°C) 4400 MPa ISO 178 Flexural modulus (160°C) 60 kJ/m² ISO 179/1eU	Stress at break (200°C)	50	MPa	ISO 527-1/-2
Strain at break (160°C) 5.1 % ISO 527-1/-2 Strain at break (200°C) 5.8 % ISO 527-1/-2 Flexural modulus 14000 MPa ISO 178 Flexural strength 290 MPa ISO 178 Flexural modulus (120°C) 5800 MPa ISO 178 Flexural modulus (160°C) 4400 MPa ISO 178 Flexural modulus (200°C) 3900 MPa ISO 178 Charpy impact strength (+23°C) 60 kJ/m² ISO 179/1eU	Strain at break	2	%	ISO 527-1/-2
Strain at break (200°C) 5.8 % ISO 527-1/-2 Flexural modulus 14000 MPa ISO 178 Flexural strength 290 MPa ISO 178 Flexural modulus (120°C) 5800 MPa ISO 178 Flexural modulus (160°C) 4400 MPa ISO 178 Flexural modulus (200°C) 3900 MPa ISO 178 Charpy impact strength (+23°C) 60 kJ/m² ISO 179/1eU	Strain at break (120°C)	4.5	%	ISO 527-1/-2
Flexural modulus 14000 MPa ISO 178 Flexural strength 290 MPa ISO 178 Flexural modulus (120°C) 5800 MPa ISO 178 Flexural modulus (160°C) 4400 MPa ISO 178 Flexural modulus (200°C) 3900 MPa ISO 178 Charpy impact strength (+23°C) 60 kJ/m² ISO 179/1eU	Strain at break (160°C)	5.1	%	ISO 527-1/-2
Flexural strength290MPaISO 178Flexural modulus (120°C)5800MPaISO 178Flexural modulus (160°C)4400MPaISO 178Flexural modulus (200°C)3900MPaISO 178Charpy impact strength (+23°C)60kJ/m²ISO 179/1eU	Strain at break (200°C)	5.8	%	ISO 527-1/-2
Flexural modulus (120°C) 5800 MPa ISO 178 Flexural modulus (160°C) 4400 MPa ISO 178 Flexural modulus (200°C) 3900 MPa ISO 178 Charpy impact strength (+23°C) 60 kJ/m² ISO 179/1eU	Flexural modulus	14000	MPa	ISO 178
Flexural modulus (160°C) 4400 MPa ISO 178 Flexural modulus (200°C) 3900 MPa ISO 178 Charpy impact strength (+23°C) 60 kJ/m² ISO 179/1eU	Flexural strength	290	MPa	ISO 178
Flexural modulus (200°C)3900MPaISO 178Charpy impact strength (+23°C)60kJ/m²ISO 179/1eU	Flexural modulus (120°C)	5800	MPa	ISO 178
Charpy impact strength (+23°C)60kJ/m²ISO 179/1eU	Flexural modulus (160°C)	4400	MPa	ISO 178
	Flexural modulus (200°C)	3900	MPa	ISO 178
Charpy impact strength (-30°C) 70 kJ/m ² ISO 179/1eU	Charpy impact strength (+23°C)	60	kJ/m²	ISO 179/1eU
	Charpy impact strength (-30°C)	70	kJ/m²	ISO 179/1eU

Print Date: 2024-03-27

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Property Data Xytron[™] G4080HR

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
Charpy notched impact strength (+23°C)	10.5	kJ/m²	ISO 179/1eA
Charpy notched impact strength (-30°C)	10	kJ∕m²	ISO 179/1eA
Izod impact strength (+23°C)	55	kJ∕m²	ISO 180/1U
Izod notched impact strength (+23°C)	11.5	kJ∕m²	ISO 180/1A
Izod notched impact strength (-40°C)	10.5	kJ∕m²	ISO 180/1A
Rockwell hardness, R scale	120	_	ISO 2039-2
Rockwell hardness, M scale	100	_	ISO 2039-2
THERMAL PROPERTIES	VALUE		
Melting temperature (10°C/min)	280	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	265	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	0.15	E-4/°C	ISO 11359–1/–2
Coeff. of linear therm. expansion (normal)	0.4	E-4/°C	ISO 11359-1/-2
Coef. of lin. therm expansion, parallel, above Tg	0.15	E-4/°C	ISO 11359-1/-2
Coef. of lin. therm expansion, normal, above Tg	1.1	E-4/°C	ISO 11359-1/-2
ELECTRICAL PROPERTIES	VALUE		
Volume resistivity	>1E13	Ohm*m	IEC 62631-3-1
Electric strength	31	kV/mm	IEC 60243-1
Comparative tracking index	175	V	IEC 60112
Dissipation factor (5GHz)	55	E-4	IEC 61189-2-721
Relative permittivity (5GHz)	4	_	IEC 61189-2-721
OTHER PROPERTIES	VALUE		
Density	1650	kg∕m³	ISO 1183
Humidity absorption	0.04	%	Sim. to ISO 62

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