

## 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 <sup>2</sup> 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<sup>™</sup> 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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