IEMAI®

3D printing solutions for high performance materials

All IEMAI 3D Filaments TDS

PEEK Technical Data Sheet(TDS)

Mechanical Properties	Conditions	Methods	Value
Tensile Strength	Yield,23°C	ISO 527	100 MPa
Tensile Elongation	Break,23°C	ISO 527	40%
Flexural Strength	Yield,23°C	ISO 178	170 MPa
Flexural Modulus	23°C	ISO 178	4.2 GPa
Compressive Strength	23°C	ISO 604	125MPa
Charpy Impact Strength	Notched,23°C	ISO 179	$6kJm^{-2}$
Izod Impact Strength	Notched,23°C	ISO 180	$6kJm^{-2}$

Thermal Data			
Melting Point		ISO 11357	343°C
Glass Transition	Onset	ISO 11357	143°C
Coefficient of Thermal Expansion	Along flow below	ISO 11359	$45ppmK^{-1}$
Heat Deflection Temperature	1.8Mpa	ISO 75-f	152°C
Thermal Conductivity	Along flow, 23°C	ISO22007-4	$0.29Wm^{-1}\ K^{-1}$

Other			
Density	Crystalline	ISO 1183	$1.30Gcm^{-3}$
Shore D Hardness	Saturation, 23°C	ISO 868	85
Water Absorption by Immersion	23°C	ISO 62-1	0.40%

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PEKK Technical Data Sheet(TDS)

Mechanical Properties	Conditions	Methods	Value
Tensile Strength	23 °C/50% rh	ISO 527	90 Mpa
Tensile Elongation	23 °C/50% rh	ISO 527	5%
Flexural Strength	23 °C/50% rh	ISO 527	150MPa
Flexural Modulus	23 °C/50% rh	ISO 178	3GPa
Compressive Strength	23 °C/50% rh	ISO 178	2.5GPa
Charpy Impact Strength	23 °C/50% rh	ISO 178	6%
Izod Impact Strength	23 °C/50% rh	ISO 179 1eU	NB

Thermal Data			
Continuous Service Temp.	23 °C/50% rh	IEC 60216	255°C
Service Temperature	During lifetime max. 200h		300°C

Physical Data			
Specific Gravity		ISO 1183-2	1.27gcm^{-3}
Water Absorption	23°C/24h	ISO 62	<0.1%
Melt Volume Rate	MVR 380°C/2,16 kg	ISO 1133	20cm^3/10 min
Linear Mould Shrinkage		DIN 16742	1,0-1.6%
Flammability Behavior		UL 94	(V-0)

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PEI 9085 Technical Data Sheet (TDS)

Mechanical Properties	Metric	Imperial	Test Method
Tensile Strength	54MPa	7830 psi	ISO 527
Tensile Modulus	2050 MPa	297 ksi	ISO 527
Tensile Elongation	3%	3%	ISO 527
Flexural Strength	90 MPa	13100 psi	ISO 527
Flexural Modulus	2170 MPa	315 ksi	ISO 527

Thermal Properties	Metric	Imperial	Test Method
Glass Transition Temperature	186° C	367 ° F	DSC
Deflection Temperature at 0.45MPa (66psi)	158 C	316 ° F	ISO 75

Fire Testing*	Metric	Imperial	Test Method
Flammability Rating (*Base Resin)	V-0@1.5mm	V-0@1.5mm	UL 94

Other Properties	Metric	Imperial	Test Method
Density	1.34g/cm^3	11.2IB/gal	ISO 1183

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PEI 1010 Technical Data Sheet(TDS)

Physical	Conditions	Test Method	Typical
Density		ISO 1183	1.27 g/cm^3
Melt Volume-Flow Rate (MVR)	360 / 5.0 kg	ISO 1183	13.0 cm^3/ 10 min
	340 / 5.0 kg	ISO 1183	13.0 cm^3/ 10 min
Modling Shrinking- Flow			0.50 to 0.70%
Water Absorption	Saturation, 23	ISO 62	1.30%
	Equilibrium, 23 ,50%RH	1.30%	0.70%

MECHANICAL			
Tensile modulus		ISO 527-2/1	3200 MPa
Tensile Stress	Yield	ISO 527-2/1	105 MPa
	Break		85.0 Mpa
Tensile Strain	Yield	ISO 527-2/50	6.00%
	Break		60%
Flexural Modulus		ISO 178	3300 Mpa
Flexural Stress		ISO 178	160MPa
Taber Abrasion Resistance	1000 cycles , 1000 g	Internal Method	10.0mg

IMPACT			
Notched Izod Impact Strength	23	ISO 180/1U	5.0 KJ/m^2
Unotched Izod Impact Strength	23	ISO 180/1A	No Break

Hardness			
Ball Indentation Hardness		ISO 2039-1	140MPa

Thermal			
Heat Deflection Temperature	0, 45 MPa , Unannealed,	ISO 75-2/ Be	200°C
	1.8 MPa,	ISO 75-2/ Ae	190°C

Vicat Softenting Temperature		ISO 306/A50	215°C
		ISO 306/B50	211°C
		ISO 306/B120	212°C
Ball Pressure Test	125°C	IEC 60695-10-2	Pass
CLTE		ISO 11359-2	
Flow	23°C to 150°C		5.0E-5 cm/cm/°C
Transverse	23°C to 151°C		5.0E-5 cm/cm/°C
Thermal Conductivity		ISO 8302	0 ,21 W/m/K
RTI Elec		UL 746	170°C
RTI Imp		UL 746	170°C
RTI STr		UL 746	170°C
Flammability			
Flame Rating	1.50 mm	UL94	V-0
	3.00 mm		5VA
Glow Wire Flammability Index	3.20 mm	IEC 60695-2-12	960°C
Oxygen Index		ISO 4589-2	47%

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PPSU Technical Data Sheet (TDS)

General Properties		Standard
Printed Part Density	1209 Kg/m3 / 75.4 IB/ft3	ISO 1183-1

Thermal Properties		Standard
HDT at 1.8MPa	212 °C / 414 °F	ISO 75-2
HDT at 0.45 MPa	218 °C / 424 °F	ISO 75-2
Vicat softening point at 50 N	220 °C / 428 °F	ISO 306
Glass Transition Temperature	220 °C / 428 °F	ISO 11357-2
Melt Volume Rate	39 cm3/10 min / 2.38 in3/10 min	ISO 1133
Coefficient of Thermal Expansion	55 E-6/K	ISO 11359-2
Flammability 12 s. vertical	Passed (thickness 1.59 and 6.35 mm)	FAR 25.853 (a)
Flammability 60 s. vertical	Passed (thickness 1.59 and 6.35 mm)	FAR 25.853 (a)

Mechanical Properties| Dried specimen			
Print direction	Standard	XY	ZX
		Flat	Upright
Tensile strength	ISO 527	65.1 MPa / 9.4 ksi	51.6 MPa / 7.5 ksi
Elongation at Break	ISO 527	6.50%	3.20%
Young's Modulus	ISO 527	2037 MPa / 295 ksi	2036 MPa / 295 ksi
Flexural Strength	ISO 178	92.6 MPa / 13.4 ksi	96.5 MPa / 14.0 ksi
Flexural Modulus	ISO 178	2152 MPa / 312 ksi	1999 MPa / 290 ksi
Impact Strength Charpy (notched)	ISO 179-2	13.8 kJ/m^2	5.5 kJ/m^2
Impact Strength Charpy	ISO 179-2	200.7 kJ/m^2	22.6 kJ/m^2
Impact Strength Izod (notched)	ISO 180	12.0 kJ/m^2	5.5 kJ/m^2
Impact Strength Izod (unnotched)	ISO 180	119 kJ/m^2	14.3 kJ/m^2

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PPS Technical Data Sheet (TDS)

Mechanical Properties	Metric	Test Method
Tensile Strength	50MPa	ISO 527
Tensile Elongation	5%	ISO 527
Flexural Strength	83 MPa	ISO 527
Flexural Modulus	2300 MPa	ISO 527
Impact Strength (Charpy)	30	J/m

Thermal Properties	Metric	Test Method
Glass Transition Temperature	86° C	DSC
Deflection Temperature at 0.45MPa (66psi)	180 C	ISO 75

Fire Testing*	Metric	Test Method
Flammability Rating (*Base Resin)	V-0@1.5mm	UL 94

Other Properties	Metric	Test Method
Density	1.38g/cm^3	ISO 1183

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GF-PEEK Technical Data Sheet(TDS)

Mechanical Properties	Parameter	Norm	Value	Unit
Tensile Strength	50 mm/min	DIN EN ISO 527-2	105	MPa
Tensile Modulus	50 mm/min	DIN EN ISO 527-2	7250	MPa
Flexural Strength		DIN EN ISO 178	130	MPa
Flexural Modulus		DIN EN ISO 178	7625	MPa
Elongation at Break	50 mm/min	DIN EN ISO 527-2	2.5	%
Impact Strength (Charpy)	max. 7,5J	DIN EN ISO 179-1eU	73	kJ/m^2
Thermal properties	Parameter	Norm	Value	Unit
Glass Transition Temperature		DIN EN ISO 11357	143	°C
Melting Temperature		DIN EN ISO 11357	341	°C
Service Temperature	Short term		300	°C
Service Temperature	Long term		260	°C

Other Properties	Parameter	Norm	Value	Unit
Water Absorption	24h/96h	DIN EN ISO 62	0.02/0.03	%
Resistance to weathering		-	-	
Flammability (UL94)	Corresponding to	DIN IEC 60695-11-10	V0	

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CF-PEEK Technical Data Sheet(TDS)

Mechanical Properties	Parameter	Norm	Value	Unit
Tensile Strength	50 mm/min	DIN EN ISO 527-2	112	MPa
Modulus of Elasticity	1 mm/min	DIN EN ISO 527-2	6000	MPa
Elongation at Break	50 mm/min	DIN EN ISO 527-2	10	%
Compressive Strength	1% /2%/5%	EN ISO 604	25/47/111	MPa
Impact Strength (Charpy)	max. 7,5J	DIN EN ISO 179-1eU	92	kJ/m^2
Ball Indentation Hardness		ISO 2039-1	298	MPa
Thermal properties	Parameter	Norm	Value	Unit
Glass Transition Temperature		DIN EN ISO 11357	147	°C
Melting Temperature		DIN EN ISO 11357	341	°C
Service Temperature	Short term		300	°C
Service Temperature	Long term		260	°C
Thermal Expansion (CLTE)	23 - 60°C, long	DIN EN ISO 11359-1;2	4	$10^{-5}k^{-1}$
Thermal Expansion (CLTE)	23-100°C, long	DIN EN ISO 11359-1;2	4	$10^{-5}k^{-1}$
Thermal Expansion (CLTE)	100-150°C, long	DIN EN ISO 11359-1;2	6	$10^{-5}k^{-1}$
Specific Heat		ISO 22007-4 : 2008	1.2	J/(g(K)
Thermal Conductivity		ISO 22007-4 : 2008	0.66	W/(K*m)

Electrical Properties	Parameter	Norm	Value	Unit
Surface Resistivity		DIN EN 61340-2-3	$10^3 - 10^{12}$	Ω
Volume Resistivity		DIN EN 61340-2-3		Ω*cm

Other Properties	Parameter	Norm	Value	Unit
Water Absorption	24h/96h	DIN EN ISO 62	0.02/0.03	%
Resistance to weathering		-	-	
Flammability (UL94)	Corresponding to	DIN IEC 60695-11-10	V0	

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GF-PA Technical Data Sheet(TDS)

Property	Testing Method	Typical Value
Density	ISO1183, GB/T1033	1.16 g/cm^3 at 21°C
Melt Index	235°C, 2.16Kg	3.6 g/10 min
Flame Retardancy	UL 94	V2
Property	Testing Method	Typical Value
Glass Transition	DSC, 10°C/min	70.4°C
Heat Deflection Temperature	ISO 75 1.8 MPA	157°C
Property	Testing Method	Typical Value
Tensile Strength (X-Y)	ISO 527, GB/T 1040	51 MPa
Tensile Strength (Z)		18 MPa
Elongation at break (X-Y)	ISO 527, GB/T 1040	9 %
Elongation at break (Z)		2.8%
Bending modulus (X-Y)	ISO 178, GB/T 9341	2720 MPa
Bending modulus (Z)		1224 MPa
Bending Strength (X-Y)	ISO 178, GB/T 9341	72 MPa
Bending Strength (Z)		19 MPa
Charpy impact strength (X-Y)	ISO 178, GB/T 9341	43 kJ/m^2
Charpy impact strength (Z)		5 kJ/m^2

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CF-PA Technical Data Sheet(TDS)

Property	Testing Method	Typical Value
Density	ISO1183, GB/T1033	1.21 g/cm^3 at 21°C
Melt Index	235°C, 2.16Kg	5.2 g/10 min
Property	Testing Method	Typical Value
Glass Transition	DSC, 10°C/min	74°C
Heat Deflection Temperature	ISO 75 1.8 MPA	140°C
Property	Testing Method	Typical Value
Tensile Strength (X-Y)	ISO 527, GB/T 1040	30 MPa
Tensile Strength (Z)		12 MPa
Elongation at break (X-Y)	ISO 527, GB/T 1040	1.5%
Elongation at break (Z)		0.9%
Bending modulus (X-Y)	ISO 178, GB/T 9341	1904 MPa
Bending modulus (Z)		675 MPa
Bending Strength (X-Y)	ISO 178, GB/T 9341	50 MPa
Bending Strength (Z)		20 MPa
Charpy impact strength (X-Y)	ISO 178, GB/T 9341	16 kJ/m^2
Charpy impact strength (Z)		3 kJ/m^2

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CF-ABS Technical Data Sheet(TDS)

Physical Properties	Standard	Unit	Typical Value
Density	ISO 1183	g/cc	1.10

Mechanical Properties	Standard	Unit	Typical Value
Tensile Strength, Break	ISO 527	MPa	48
Tensile Modulus	ISO 527	MPa	5200
Tensile Elongation, Break	ISO 527	%	3
Flexural Strength	ISO 178	MPa	78
Flexural Modulus	ISO 178	MPa	5280
Thermal Properties	**Standard**	**Unit**	**Typical Value**
Glass Transition Temperature (Tg)	DSC	℃	105
Deflection Temperature at 0.45 MPa (66psi)	ISO 75	℃	78

Electrical Property	Standard	Unit	Typical Value
Surface Resistance	ASTM D257	Ohm/sq	$>10^9$

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CF-PC Technical Data Sheet(TDS)

Physical Properties	Standard	Unit	Typical Value
Density	ISO 1183	g/cc	1.38

Mechanical Properties	Standard	Unit	Typical Value
Tensile Strength, Break	ISO 527	MPa	72
Tensile Modulus	ISO 527	MPa	6205
Tensile Elongation, Break	ISO 527	%	2.5
Flexural Strength	ISO 178	MPa	92
Flexural Modulus	ISO 178	MPa	5880
Thermal Properties	**Standard**	**Unit**	**Typical Value**
Glass Transition Temperature	DSC	°C	143
Deflection Temperature @ 0.45MPa	ISO 75	°C	135

Electrical Property	Standard	Unit	Typical Value
Surface Resistance	ASTM D257	Ohm/sq	> 10^9

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ESD-PETG Technical Data Sheet(TDS)

Physical Properties	Standard	Unit	Typical Value
Density	ISO 1183	g/cm3	1.24
Melt Index	230°C, 5Kg		3.6 g/10 min

Mechanical Properties	Standard	Unit	Typical Value
Tensile Strength, Break	ISO 527	MPa	30
Tensile Modulus	ISO 527	MPa	1550
Tensile Elongation, Break	ISO 527	%	5.1
Flexural Strength	ISO 178	MPa	55.8
Flexural Modulus	ISO 178	MPa	1890
Charpy impact strength (X-Y)	ISO 178, GB/T 9341	kJ/m^2	8.5
Thermal Properties	**Standard**	**Unit**	**Typical Value**
Glass Transition Temperature	DSC	°C	78
Deflection Temperature @ 0.45MPa	ISO 75	°C	68

Electrical Property	Standard	Unit	Typical Value
Surface Resistance	ASTM D257	Ohm/sq	10^6≤X≤10^9

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PA12 Technical Data Sheet(TDS)

Property	Testing Method	Typical Value
Density	ISO1183, GB/T1033	1.13 g/cm^3 at 21°C
Melt Index	235°C, 2.16Kg	2.8 g/10 min
Property	Testing Method	Typical Value
Glass Transition	DSC, 10°C/min	67°C
Heat Deflection Temperature	ISO 75 1.8 MPA	155°C
Property	Testing Method	Typical Value
Tensile Strength (X-Y)	ISO 527, GB/T 1040	50 MPa
Tensile Strength (Z)		/
Elongation at break (X-Y)	ISO 527, GB/T 1040	150%
Elongation at break (Z)		/
Bending modulus (X-Y)	ISO 178, GB/T 9341	1600 MPa
Bending modulus (Z)		/
Bending Strength (X-Y)	ISO 178, GB/T 9341	67 MPa
Bending Strength (Z)		/
Charpy impact strength (X-Y)	ISO 178, GB/T 9341	0.5 kJ/m^2
Charpy impact strength (Z)		/

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PC Technical Data Sheet(TDS)

Physical Properties	Methods	Value
Density	ISO 1183, GB/T1033	1.19 g/cm^3 at 21°C
Melt Index	260°C, 1.2Kg	6-8 g/10 min
Flame Retardancy V2	UL94	V2

Mechanical Properties	Methods	Value
Glass transition	DSC, 10°C/min	113°C
Decomposition Temperature	TGA, 20°C/min	>360°C
Vicat softening Temperature	ISO 306 GB/T 1633	116.9°C
Heat deflection Temperature	ISO 75 108 MPa	99.3°C
Heat deflection Temperature	ISO 75 0.45MPa	114.1°C

Property	Testing Method	Typical Value
Young's modulus (X-Y)	ISO 527, GB/T 1040	2048±66MPA
Young's modulus (Z)		1845± 35 MPA
Tensile Strength (X-Y)	ISO 527, GB/T 1040	59.7± 1.8 MPA
Tensile Strength (Z)		29.1± 4.1 MPA
Elongation at break (X-Y)	ISO 527, GB/T 1040	12.24 ± 1.44 %
Elongation at break (Z)		1.84 ± 0.14 %
Bending modulus (X-Y)	ISO 178, GB/T 9341	**2044** ±58 MPA
Bending modulus (Z)		N/A
Bending Strength (X-Y)	ISO 178, GB/T 9341	94.1± 0.9 MPA
Bending Strength (Z)		N/A
Charpy impact strength (X-Y)	ISO 178, GB/T 9341	25.1±1.9kj/m^2
Charpy impact strength (Z)		N/A

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ABS Technical Data Sheet(TDS)

Physical	Condition	Test Method	Typical Value
Density		ISO 1183/B	1.06 g/cm^3
Apparent Density		ISO 60	0.66 g/cm^3
Melt Volume-Flow Rate (MVR)	220 °C / 10.0 kg	ISO 1133	5g / 10 min
Molding Shrinkage-Flow		ISO 294-4	0.42 to 0.72 %

Mechanical	Condition	Test Method	Typical Value
Tensile Modulus	3.20 mm	ISO 527-2	2270MPa
Tensile Stress	Yield, 3.20 mm	ISO 527-2/50	46.0MPa
Tensile Strain	Yield, 3.20 mm	ISO 527-2/50	2.50%
Flexural Modulus	3.20 mm	ISO 178	2350MPa
Flexural Strength	3.20 mm	ISO 178	69.0MPa

Impact	Condition	Test Method	Typical Value
Notched Izod Impact Strength	23 °C	ISO 180/A	19 kJ/m^2
Charpy Izod Impact Strength	23 °C	ISO 170 1eA	19 kJ/m^2

Thermal	Condition	Test Method	Typical Value
Heat Deflection Temperature	1.8 MPa, Unannealed	ISO 75-2/A	97 °C
Vicat Softening Temperature		ISO 306/B50	95 °C
Elastomers	Condition	Test Method	Typical Value
Fogging		ISO 294-4	97%

Flammability	Condition	Test Method	Typical Value
Burning Rate	2.00 mm	ISO 75-2/A	55 mm/min

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ASA Technical Data Sheet(TDS)

Property	Testing Method	Typical Value
Density	ISO 1183, GT/T1033	1.14 g/cm^2 at 21°C
Melt Index	200°C, 10Kg	25g/ 10 min
Flame Retardancy	UL 94	V2

Property	Testing Method	Typical Value
Glass Transition	DSC, 10°C/ min	97.8°C
Vicat Softening Temperature	ISO 306 GB/T 1633	105.3°C
Heat Deflection Temperature	ISO75.1 1.8MPa	100.2°C
Heat Deflection Temperature	ISO 75 0.45MPa	102.6°C

Property	Testing Method	Typical Value
Young's modulus (X-Y)	ISO 527, GB/T 1040	2379 ± 157 MPa
Young's modulus (Z)		1965 ± 136 MPa
Tensile Strength (X-Y)	ISO 527, GB/T 1040	43.8 ± 0.8 MPa
Tensile Strength (Z)		32 ± 1.8 MPa
Elongation at Break (X-Y)	ISO 527, GB/T 1040	6.7 ± 0.6 %
Elongation at Break (Z)		1.65 ± 0.2 %
Bending Modulus (X-Y)	ISO 178, GT/B 9341	3206 ± 108 MPa
Bending Modulus (Z)		N/A
Bending Strength (X-Y)	ISO 178, GT/B 9341	73.4 ± 2.1 MPa
Bending Strength (Z)		N/A
Charpy Impact Strength (X-Y)	ISO 179, GB/T 9343	10.3 ± 0.4 kJ/m^2
Charpy Impact Strength (Z)		6.7 ± 1.4 kJ/m^2

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PETG Technical Data Sheet(TDS)

Physical	Condition	Test Method	Typical Value
Density		ASTM D792	1.29 g/cm^3
Water Absorption		ASTM D570	0.12%

Mechanical	Condition	Test Method	Typical Value
Tensile Modulus		ISO 527-2	3000 MPa
Tensile Yield Stress		ISO 527-2	53 MPa
Elongation at Yield		ISO 527-2	4%
Tensile Strength		ISO 527-2	53 MPa
Elongation at Stress		ISO 527-2	4%
Stress at Break		ISO 527-2	19 MPa
Nominal Elongation at Break		ISO 527-2	31%
Flexural Modulus		ISO 178	2040 MPa
Flexural Stress		ISO 178	171 MPa
Deflection at Flexural Strength		ISO 178	8.6 mm

Impact	Condition	Test Method	Typical Value
Notched Izod Impact Strength	23°C, 50 % RH	ISO 180	4.5kJ/m^2

Hardness	Condition	Test Method	Typical Value
Shore Hardness		ASTM D2240	70

Thermal	Condition	Test Method	Typical Value
Heat Deflection Temperature	0, 45 MPa	ISO 75-2	68°C
	1.8 MPa	ISO 75-2	62°C
Vicat Softening Temperature		ISO 306	78°C
Glass Transition Temperature		ASTM D3418	80°C

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PP Technical Data Sheet(TDS)

Mechanical Properties	Injection Molding	
	Typical Value	Test Method
Tensile Modulus	14MPa	ASTM D1708
Elongation at Break	10%	ASTM D1708
Flexural Strength	7.8MPa	ASTM D790
Flexural Modulus	244MPa	ASTM D790
Charpy Impact Strength (at 23 °C)	0.35 kJ/m^2	ASTM D256
Hardness	53 (Shore D)	ISO 868

Thermal Properties	Typical Value	Test Method
Melt Mass-Flow Rate (MFR)	20 g/ 10 min	ISO 1133 (23°C, 2.16
Vicat Softening Temperature at 5N	114°C	ISO 306
Glass Transition	-13°C	DSC
Melting Temperature	132°C	DSC

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TPU Technical Data Sheet (TDS)

PHYSICAL PROPERTIES		
Property	Testing Method	Typical Value
Density	ISO1183, GB/T1033	1.20-1.24 g/.cm3 at 21 °C
Melt Index	210 °C, 1.2Kg	3-6g/ 10 min
Flame Retardancy	UL94	V2

THERMAL PROPERTIES		
Property	Testing Method	Typical Value
Melting temperature	DSC, 10° C/min	168 °C
Crystallization temperature	DSC, 10° C/min	94 °C

MECHANICAL PROPERTIES		
Property	Testing Method	Typical Value
100% modulus (X-Y)	ISO 527, GB/T 1040	9.4 ± 0.3 MPa
Young's modulus (X-Y)	ISO 527, GB/T 1040	29 ± 2.8 MPa
Elongation at break (X-Y)	ISO 527, GB/T 1040	330.1 ± 14%
Shore hardness	ISO 7619, GB/T 31	95A

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PLA Technical Data Sheet(TDS)

PHYSICAL PROPERTIES		
Property	Testing Method	Typical Value
Density	ISO1183, GB/T1033	1.17 g/cm^3 at 21 ℃
Melt Index	210℃, 2.16 Kg	7-10g/10min

Thermal Properties		
Property	Testing Method	Typical Value
Glass transition	DSC, 10℃/min	61 ℃
Melting temperature	DSC, 10℃/min	150 ℃
Crystallization temperature	DSC, 10℃/min	113.5 ℃
Vicat softening temperature	ISO 306 GB/T 1633	62.9 ℃
Heat deflection temperature	ISO 75 1.8MPa	58.1 ℃
Heat deflection temperature	ISO 75 0.45MPa	59.8 ℃

Mechanical		
Property	Testing Method	Typical Value
Young's modulus (X-Y)	ISO 527, GB/T 1040	2636 ± 330 MPa
Young's modulus (Z)		N/A
Tensile strength (X-Y)	ISO 527, GB/T 1040	46.6 ± 0.9 MPa
Tensile strength (Z)		43.5 ± 3.1 MPa
Elongation at break (X-Y)	ISO 527, GB/T 1040	1.90 ± 0.21 %
Bending modulus (X-Y)	ISO 178, GB/T 9341	3283 ± 132 MPa
Bending strength (X-Y)	ISO 178, GB/T 9341	85.1 ± 2.9 MPa
Charpy impact strength (X-Y)	ISO 179, GB/T 9343	2.68 ± 0.16 KJ/m^2

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