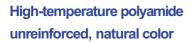
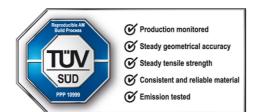
LUVOCOM 3F Filament PA^{HT®} 9825 NT





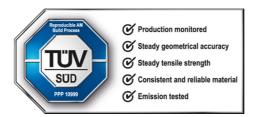


Specific gravity	Physical properties		Test method	Specimen	Units	Typical value
Melt flow rates (MFR) 250°C / 2.16kg ISO 1133 Pellet gr/l Umin 3.6 Melt volume rate (MVR) 250°C / 2.16kg ISO 1133 Pellet cm²/l Umin 3.5 Thermal properties Heat distortion temperature HDT A − 1.8 MPa ISO 75 Printed specimen °C 80 Continuous service temperature Quo00 h IEC 60216 MPTS ISO 3167 A °C 100 Coefficient of thermal expansion ISO 11359 10x8x4mm 10°K 0.5 Thermal conductivity in plane hot disk ISO 22007 II 60x60x3mm WmK 0.3 Electrical properties RCS DIN IEC 60167 MPTS ISO 3167 A Ω >10° Surface resistance strip electrode RCB DIN IEC 60167 MPTS ISO 3167 A Ω 10° Surface resistance strip electrode RCB DIN IEC 60167 MPTS ISO 3167 A Ω 10° Surface resistance strip electrode RCB DIN IEC 60167 MPTS ISO 3167 A Ω Q 10° Surface resistance strip electrode RC	Specific gravity		ISO 1183-3		g/cm³	1.20
Melt volume rate (MVR) 250°C / 2.16kg ISO 1133 Pellet cm²10min 3.5 Thermal properties Heat distortion temperature HDTA = 1.8 MPa IEC 60216 MPTS ISO 3167 A °C 100 Service temperature 20,000 h IEC 60216 MPTS ISO 3167 A °C 120 Coefficient of thermal expansion hot disk ISO 21039 I0x8x4mm 10°N K 0.5 Thermal conductivity in plane hot disk ISO 22007 I60x60x3mm W/mK 0.5 Thermal conductivity in plane hot disk ISO 22007 IFOx8x4mm IFOx9kK 0.5 Thermal conductivity in plane hot disk ISO 22007 IFOx8x4mm IFOx9kK 0.5 Thermal conductivity in plane hot disk ISO 22007 IFOx8x4mm IFOx9kK 0.5 Thermal conductivity in plane hot disk ISO 22007 IFOx8x4mm IFOx9kK 0.5 Thermal conductivity in plane hot disk ISO 22007 IFOx8x4mm IFOx9kK 0.5 Thermal conductivity in plane hot disk ISO 22007 IFOx8x4mm IFOx9kK 0.5 Thermal conductivity in plane Hot disk ISO 22007 IFOx8x4mm IFOx9kK 0.5 Thermal conductivity in plane Hot disk ISO 22007 IFOx8x4mm IFOx9k IFOx9k 0.5 Thermal conductivity in plane Hot disk ISO 22007 IFOx9k IFOx9k IFOx9k 0.5 Thermal conductivity in plane Hot disk ISO 22007 IFOx9k	Water absorption	23°C / 24h	ISO 62	MPTS ISO 3167 A	%	<0.3
Heat distortion temperature	Melt flow rates (MFR)	250°C / 2.16kg	ISO 1133	Pellet	g/10min	3.6
Heat distortion temperature HDT A = 1.8 MPa ISO 75 Printed specimen °C 100 Continuous service temperature 20,000 h IEC 60216 MPTS ISO 3167 A °C 100 Conficient of thermal expansion Town ISO 11359 10x8x4mm 10°° M 0.5 100 ISO 1167 A °C 120 ISO 20007 IEC 60216 ISO 1167 A °C 120 ISO 20007 IEC 60216 ISO 20007 IEC 60236	Melt volume rate (MVR)	250°C / 2.16kg	ISO 1133	Pellet	cm³/10min	3.5
Continuous service temperature 20,000 h IEC 60216 MPTS ISO 3167 A °C 100 Service temperature during lifetime max. 200h ISO 11359 10x8x4mm 10° K 0.5 100	Thermal properties					
Service temperature during lifetime max. 200h ISO 11359 10x8x4mm 10*7/k 0.5 Thermal conductivity in plane hot disk ISO 2007 IBOx60x3mm W/mk 0.3 The maximum fore R25 DIN IEC 60167 MPTS ISO 3167 A Ω >10*2 Surface resistance strip electrode R25 DIN IEC 60167 MPTS ISO 3167 A Ω >10*2 Surface resistance ROB DIN IEC 60093 Ronde 60x4mm Ω >10*2 Mechanical properties at 23*C /50* wh *Printed using Ultimaker \$5 Pro and Engineering settings Tensile strength 100% infill - 0* - XY ISO 527-2 ISO 3167.2014 Typ A MPa 69.1 ± 2.9 Elongation at maximum force 100% infill - 0* - XY ISO 527-2 ISO 3167.2014 Typ A MPa 82.1 ± 0.9 Elongation at maximum force 100% infill - 45/135* - XY ISO 527-2 ISO 3167.2014 Typ A MPa 82.1 ± 0.9 Elongation at maximum force 100% infill - 45/135* - XY ISO 527-2 ISO 3167.2014 Typ A MPa 81.6 ± 0.9 Elongation at maximum force 100% infill - 90* - XY ISO 527-2 ISO 3167.2014 Typ A MPa 81.6 ± 0.9 Elongation at maximum force 100% infill - 90* - XY ISO 527-2 ISO 3167.2014 Typ A MPa 81.6 ± 0.9 Elongation at maximum force 100% infill - 90* - XY ISO 527-2 ISO 3167.2014 Typ A MPa 81.6 ± 0.9 Elongation at maximum force 100% infill - 90* - XY ISO 527-2 ISO 3167.2014 Typ A MPa 81.6 ± 0.9 Elongation at maximum force 100% infill - 20* - XY ISO 527-2 ISO 3167.2014 Typ A MPa 26.3 ± 2.7 Elongation at maximum force 100% infill - 20* - XY ISO 527-2 ISO 3167.2014 Typ A MPa 26.3 ± 2.7 Elongation at maximum force 100% infill - 0* - XY ISO 527-2 ISO 3167.2014 Typ A MPa 26.3 ± 2.7 Elongation at maximum force 100% infill - 0* - XY ISO 527-2 ISO 3167.2014 Typ A MPa 26.3 ± 2.7 Elongation at maximum force 100% infill - 0* - XY ISO 527-2 ISO 3167.2014 Typ A MPa 26.3 ± 2.7 Elongation at maximum force 100% infill - 0* - XY ISO 527-2 ISO 3167.2014 Typ A MPa 51.2 ± 1.9 Elo	Heat distortion temperature	HDTA – 1.8 MPa	ISO 75	Printed specimen	°C	80
Coefficient of thermal expansion Not disk ISO 22007 II 60x80x3mm W/mk 0.3	Continuous service temperature	20,000 h	IEC 60216	MPTS ISO 3167 A	°C	100
Thermal conductivity in plane Not disk ISO 22007 I60x60x3mm W/mk 0.3	Service temperature	during lifetime max. 200h		MPTS ISO 3167 A	°C	120
Page	Coefficient of thermal expansion		ISO 11359	10x8x4mm	10⁻⁵/K	0.5
Insulation resistance strip electrode ROB DIN IEC 60167 MPTS ISO 3167 A Ω >1012	Thermal conductivity in plane	hot disk	ISO 22007	60x60x3mm	W/mK	0.3
Surface resistance ROB DIN IEC 60093 Ronde 60x4mm Ω >1012 Mechanical properties at 23°C / 50% rh *Printed using Ultimaker S5 Pro and Engineering settings Tensile strength 100% infill - 0° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 69.1 ± 2.9 Elongation at maximum force 100% infill - 0° - XY ISO 527-2 ISO 3167:2014 Typ A % 2.7 ± 0.3 Modulus of elasticity 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 82.1 ± 0.9 Elongation at maximum force 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 82.1 ± 0.9 Blongation at maximum force 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 81.6 ± 0.9 Modulus of elasticity 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 3.1 ± 0.0 Tensile strength 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 3.1 ± 0.0 Modulus of elasticity 100% infill - 20° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 26.3 ± 2.7	Electrical properties					
Mechanical properties at 23°C / 50% rh *Printed using Ultimaker S5 Pro and Engineering settings Tensile strength 100% infill - 0° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 69.1 ± 2.9 Elongation at maximum force 100% infill - 0° - XY ISO 527-2 ISO 3167:2014 Typ A % 2.7 ± 0.3 Modulus of elasticity 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 82.1 ± 0.9 Elongation at maximum force 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 82.1 ± 0.9 Elongation at maximum force 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 82.1 ± 0.9 Hodulus of elasticity 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 81.6 ± 0.9 Elongation at maximum force 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 81.6 ± 0.9 Elongation at maximum force 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 3.1 ± 0.0 Modulus of elasticity 100% infill - 2X ISO 527-2 ISO 3167:2014 Typ A MPa	Insulation resistance strip electrode	R25	DIN IEC 60167	MPTS ISO 3167 A	Ω	>1012
Tensile strength 100% infill - 0 ° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 69.1 ± 2.9 Elongation at maximum force 100% infill - 0 ° - XY ISO 527-2 ISO 3167:2014 Typ A % 2.7 ± 0.3 Modulus of elasticity 100% infill - 0 ° - XY ISO 527-2 ISO 3167:2014 Typ A GPa 3.1 ± 0.1 Tensile strength 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 82.1 ± 0.9 Elongation at maximum force 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A % 3.7 ± 0.0 Modulus of elasticity 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 81.6 ± 0.9 Elongation at maximum force 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 81.6 ± 0.9 Elongation at maximum force 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A GPa 3.1 ± 0.0 Tensile strength 100% infill - 2X ISO 527-2 ISO 3167:2014 Typ A MPa 26.3 ± 2.7 Elongation at maximum force 100% infill - 2X ISO 527-2 ISO 3167:2	Surface resistance	ROB	DIN IEC 60093	Ronde 60x4mm	Ω	>1012
Elongation at maximum force 100% infill - 0 ° - XY	Mechanical properties at 23°C / 5	60% rh	*Printed using	Ultimaker S5 Pro	and Engine	ering settings
Modulus of elasticity 100% infill - 0 ° - XY ISO 527-2 ISO 3167:2014 Typ A GPa 3.1 ± 0.1 Tensile strength 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 82.1 ± 0.9 Elongation at maximum force 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 3.7 ± 0.0 Modulus of elasticity 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A GPa 3.1 ± 0.1 Tensile strength 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 81.6 ± 0.9 Elongation at maximum force 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 81.6 ± 0.9 Elongation at maximum force 100% infill - 2X ISO 527-2 ISO 3167:2014 Typ A MPa 3.7 ± 0.0 Modulus of elasticity 100% infill - 2X ISO 527-2 ISO 3167:2014 Typ A MPa 26.3 ± 2.7 Elongation at maximum force 100% infill - 2X ISO 527-2 ISO 3167:2014 Typ A MPa 2.8 ± 0.1 Mechanical properties at 23°C / 50% rh **Printed using Ultimaker S5 Pro and Fast settings </td <td>Tensile strength</td> <td>100% infill - 0 ° - XY</td> <td>ISO 527-2</td> <td>ISO 3167:2014 Typ</td> <td>A MPa</td> <td>69.1 ± 2.9</td>	Tensile strength	100% infill - 0 ° - XY	ISO 527-2	ISO 3167:2014 Typ	A MPa	69.1 ± 2.9
Modulus of elasticity 100% infill - 0 ° - XY ISO 527-2 ISO 3167:2014 Typ A GPa 3.1 ± 0.1 Tensile strength 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 82.1 ± 0.9 Elongation at maximum force 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A % 3.7 ± 0.0 Modulus of elasticity 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A GPa 3.1 ± 0.1 Tensile strength 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 81.6 ± 0.9 Elongation at maximum force 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A % 3.7 ± 0.0 Modulus of elasticity 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A % 3.7 ± 0.0 Modulus of elasticity 100% infill - 2X ISO 527-2 ISO 3167:2014 Typ A % 1.1 ± 0.1 Modulus of elasticity 100% infill - 2X ISO 527-2 ISO 3167:2014 Typ A % 1.1 ± 0.1 Mechanical properties at 23°C / 50% rh *** *** *** *** *** *** *** *** *** **	Elongation at maximum force	100% infill - 0 ° - XY	ISO 527-2	ISO 3167:2014 Typ	ο A %	2.7 ± 0.3
Tensile strength 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 82.1 ± 0.9 Elongation at maximum force 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A % 3.7 ± 0.0 Modulus of elasticity 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A GPa 3.1 ± 0.1 Tensile strength 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 81.6 ± 0.9 Elongation at maximum force 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A % 3.7 ± 0.0 Modulus of elasticity 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A % 3.1 ± 0.0 Tensile strength 100% infill - 2X ISO 527-2 ISO 3167:2014 Typ A % 1.1 ± 0.1 Modulus of elasticity 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A % 1.1 ± 0.1 Mechanical properties at 23°C / 50% rh *** Printed using Ultimaker S5 Pro and Fast settings Tensile strength 100% infill - 0° - XY ISO 527-2 ISO 3167:2014 Typ A % 2.6 ± 0.1	Modulus of elasticity	100% infill - 0 ° - XY		ISO 3167:2014 Typ	A GPa	3.1 ± 0.1
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Tensile strength	100% infill - 45/135° - XY	ISO 527-2	•		82.1 ± 0.9
Tensile strength 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 81.6 ± 0.9 Elongation at maximum force 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 3.7 ± 0.0 Modulus of elasticity 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 26.3 ± 2.7 Elongation at maximum force 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A MPa 26.3 ± 2.7 Elongation at maximum force 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A MPa 26.3 ± 2.7 Modulus of elasticity 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A MPa 26.3 ± 2.7 Mechanical properties at 23°C / 50% rh *Printed using Ultimaker S5 Pro and Fast settings Tensile strength 100% infill - 0° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 54.8 ± 1.7 Elongation at maximum force 100% infill - 0° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 54.8 ± 1.7 Elongation at maximum force 100% infill - 0° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 2.6 ± 0.1 Modulus of elasticity 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 51.2 ± 1.9 Elongation at maximum force 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 51.2 ± 1.9 Elongation at maximum force 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 66.2 ± 2.6 Elongation at maximum force 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 66.2 ± 2.6 Elongation at maximum force 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 66.2 ± 2.6 Elongation at maximum force 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 66.2 ± 2.6 Elongation at maximum force 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 66.2 ± 2.6 Elongation at maximum force 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 22.2 ± 3.5 Elongation at maximum force 100% infill - 2X ISO 527-2 ISO 3167:2014 Typ A MPa 22.2 ± 3.5 Elongation at maximum force 100% infill - 2X ISO 527-2 ISO 3167:2014 Typ A MPa 22.2 ± 3.5 Elongation at maximum force 100% infill - 2X ISO 527-2 ISO 3167:2014 Typ A MPa 22.2 ± 3.5 Elongation at maximum force 100% infill - 2X ISO 527-2 ISO 3167:2014 Typ A MPa 22.2 ± 3.5 Elongation at ma	Elongation at maximum force	100% infill - 45/135° - XY	ISO 527-2	ISO 3167:2014 Typ	Α %	3.7 ± 0.0
Elongation at maximum force 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A % 3.7 ± 0.0 Modulus of elasticity 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A GPa 3.1 ± 0.0 Tensile strength 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A MPa 26.3 ± 2.7 Elongation at maximum force 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A MPa 26.3 ± 2.7 Modulus of elasticity 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A GPa 2.8 ± 0.1 Mechanical properties at 23°C / 50% rh *Printed using Ultimaker S5 Pro and Fast settings Tensile strength 100% infill - 0° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 54.8 ± 1.7 Elongation at maximum force 100% infill - 0° - XY ISO 527-2 ISO 3167:2014 Typ A GPa 2.8 ± 0.1 Modulus of elasticity 100% infill - 0° - XY ISO 527-2 ISO 3167:2014 Typ A GPa 2.8 ± 0.1 Tensile strength 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 51.2 ± 1.9 Elongation at maximum force 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 51.2 ± 1.9 Elongation at maximum force 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 51.2 ± 1.9 Elongation at maximum force 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 66.2 ± 2.6 Elongation at maximum force 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 66.2 ± 2.6 Elongation at maximum force 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 66.2 ± 2.6 Elongation at maximum force 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 66.2 ± 2.6 Elongation at maximum force 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 66.2 ± 2.6 Elongation at maximum force 100% infill - 2X ISO 527-2 ISO 3167:2014 Typ A MPa 22.2 ± 3.5 Elongation at maximum force 100% infill - 2X ISO 527-2 ISO 3167:2014 Typ A MPa 22.2 ± 3.5 Elongation at maximum force 100% infill - 2X ISO 527-2 ISO 3167:2014 Typ A MPa 22.2 ± 3.5 Elongation at maximum force 100% infill - 2X ISO 527-2 ISO 3167:2014 Typ A MPa 22.2 ± 3.5 Elongation at maximum force 100% infill - 2X ISO 527-2 ISO 3167:2014 Typ A MPa 22.2 ± 3.5 Elongation at maximum force 100% i	Modulus of elasticity	100% infill - 45/135° - XY	ISO 527-2	ISO 3167:2014 Typ	A GPa	3.1 ± 0.1
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	Tensile strength	100% infill - 90° - XY	ISO 527-2	ISO 3167:2014 Ty	A MPa	81.6 ± 0.9
Tensile strength 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A MPa 26.3 ± 2.7 Elongation at maximum force 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A % 1.1 ± 0.1 Modulus of elasticity 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A GPa 2.8 ± 0.1 Mechanical properties at 23°C / 50% rh *Printed using Ultimaker S5 Pro and Fast settings Tensile strength 100% infill - 0° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 54.8 ± 1.7 Elongation at maximum force 100% infill - 0° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 54.8 ± 1.7 Modulus of elasticity 100% infill - 0° - XY ISO 527-2 ISO 3167:2014 Typ A GPa 2.8 ± 0.1 Tensile strength 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 51.2 ± 1.9 Elongation at maximum force 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 51.2 ± 1.9 Elongation at maximum force 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A GPa 2.8 ± 0.1 Modulus of elasticity 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 66.2 ± 2.6 Elongation at maximum force 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 66.2 ± 2.6 Elongation at maximum force 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 66.2 ± 2.6 Elongation at maximum force 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 66.2 ± 2.6 Elongation at maximum force 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 2.8 ± 0.3 Tensile strength 100% infill - 2X ISO 527-2 ISO 3167:2014 Typ A MPa 22.2 ± 3.5 Elongation at maximum force 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A MPa 22.2 ± 3.5 Elongation at maximum force 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A MPa 22.2 ± 3.5 Elongation at maximum force 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A MPa 22.2 ± 3.5 Elongation at maximum force 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A MPa 22.2 ± 3.5 Elongation at maximum force 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A MPa 22.2 ± 3.5 Elongation at maximum force 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A MPa 22.2 ± 3.5 Elongation at maximum force 100% infill - X	Elongation at maximum force	100% infill - 90° - XY	ISO 527-2	ISO 3167:2014 Ty	о А %	3.7 ± 0.0
Elongation at maximum force 100% infill - ZX $1SO 527-2$ $1SO 3167:2014$ Typ A $\%$ 1.1 ± 0.1 Modulus of elasticity 100% infill - ZX $1SO 527-2$ $1SO 3167:2014$ Typ A $\%$ 2.8 ± 0.1 Mechanical properties at 23° C / 50% rh *Printed using Ultimaker S5 Pro and Fast settings Tensile strength 100% infill - 0° - XY $1SO 527-2$ $1SO 3167:2014$ Typ A 100% MPa 100% infill - 100%	Modulus of elasticity	100% infill - 90° - XY	ISO 527-2	ISO 3167:2014 Ty	A GPa	3.1 ± 0.0
Modulus of elasticity 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A GPa 2.8 ± 0.1 Mechanical properties at 23°C / 50% rh *Printed using Ultimaker S5 Pro and Fast settings Tensile strength 100% infill - 0° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 54.8 ± 1.7 Elongation at maximum force 100% infill - 0° - XY ISO 527-2 ISO 3167:2014 Typ A % 2.6 ± 0.1 Modulus of elasticity 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 51.2 ± 1.9 Elongation at maximum force 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 51.2 ± 1.9 Modulus of elasticity 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A % 2.8 ± 0.1 Tensile strength 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 66.2 ± 2.6 Elongation at maximum force 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A % 3.2 ± 0.2 Modulus of elasticity 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A % 3.2 ± 0.2	Tensile strength	100% infill - ZX	ISO 527-2	ISO 3167:2014 Typ	A MPa	26.3 ± 2.7
Mechanical properties at 23°C / 50% rh *Printed using Ultimaker S5 Pro and Fast settings Tensile strength 100% infill - 0° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 54.8 ± 1.7 Elongation at maximum force 100% infill - 0° - XY ISO 527-2 ISO 3167:2014 Typ A % 2.6 ± 0.1 Modulus of elasticity 100% infill - 0° - XY ISO 527-2 ISO 3167:2014 Typ A GPa 2.8 ± 0.1 Tensile strength 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 51.2 ± 1.9 Elongation at maximum force 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A % 2.8 ± 0.1 Modulus of elasticity 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 66.2 ± 2.6 Elongation at maximum force 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A % 3.2 ± 0.2 Modulus of elasticity 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A % 3.2 ± 0.2 Modulus of elasticity 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 2.8 ± 0.3	Elongation at maximum force	100% infill - ZX	ISO 527-2	ISO 3167:2014 Typ	ο Α %	1.1 ± 0.1
Tensile strength 100% infill - 0 $^{\circ}$ - XY ISO 527-2 ISO 3167:2014 Typ A MPa 54.8 \pm 1.7 Elongation at maximum force 100% infill - 0 $^{\circ}$ - XY ISO 527-2 ISO 3167:2014 Typ A % 2.6 \pm 0.1 Modulus of elasticity 100% infill - 0 $^{\circ}$ - XY ISO 527-2 ISO 3167:2014 Typ A GPa 2.8 \pm 0.1 Tensile strength 100% infill - 45/135 $^{\circ}$ - XY ISO 527-2 ISO 3167:2014 Typ A MPa 51.2 \pm 1.9 Elongation at maximum force 100% infill - 45/135 $^{\circ}$ - XY ISO 527-2 ISO 3167:2014 Typ A % 2.8 \pm 0.1 Modulus of elasticity 100% infill - 45/135 $^{\circ}$ - XY ISO 527-2 ISO 3167:2014 Typ A GPa 2.9 \pm 0.2 Tensile strength 100% infill - 90 $^{\circ}$ - XY ISO 527-2 ISO 3167:2014 Typ A MPa 66.2 \pm 2.6 Elongation at maximum force 100% infill - 90 $^{\circ}$ - XY ISO 527-2 ISO 3167:2014 Typ A % 3.2 \pm 0.2 Modulus of elasticity 100% infill - 90 $^{\circ}$ - XY ISO 527-2 ISO 3167:2014 Typ A GPa 2.8 \pm 0.3 Tensile strength 100% infill - 90 $^{\circ}$ - XY ISO 527-2 ISO 3167:2014 Typ A MPa 22.2 \pm 3.5 Elongation at maximum force 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A MPa 22.2 \pm 3.5 Elongation at maximum force 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A % 1.0 \pm 0.2	Modulus of elasticity	100% infill - ZX	ISO 527-2	ISO 3167:2014 Typ	A GPa	2.8 ± 0.1
Elongation at maximum force 100% infill -0° - XY $1SO 527$ -2 $1SO 3167$:2014 Typ A 9 9 $1SO 527$ -2 $1SO 3167$:2014 Typ A $1SO 527$ -2 $1SO 316$	Mechanical properties at 23°C / 50% rh *Printed using Ultimaker S5 Pro and Fast s					l Fast settings
Elongation at maximum force 100% infill -0° - XY ISO 527-2 ISO 3167:2014 Typ A % 2.6 \pm 0.1 Modulus of elasticity 100% infill -0° - XY ISO 527-2 ISO 3167:2014 Typ A GPa 2.8 \pm 0.1 Tensile strength 100% infill $-45/135^{\circ}$ - XY ISO 527-2 ISO 3167:2014 Typ A MPa 51.2 \pm 1.9 Elongation at maximum force 100% infill $-45/135^{\circ}$ - XY ISO 527-2 ISO 3167:2014 Typ A % 2.8 \pm 0.1 Modulus of elasticity 100% infill $-45/135^{\circ}$ - XY ISO 527-2 ISO 3167:2014 Typ A GPa 2.9 \pm 0.2 Tensile strength 100% infill -90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 66.2 \pm 2.6 Elongation at maximum force 100% infill -90° - XY ISO 527-2 ISO 3167:2014 Typ A % 3.2 \pm 0.2 Modulus of elasticity 100% infill -90° - XY ISO 527-2 ISO 3167:2014 Typ A GPa 2.8 \pm 0.3 Tensile strength 100% infill -2 X ISO 527-2 ISO 3167:2014 Typ A MPa 22.2 \pm 3.5 Elongation at maximum force 100% infill -2 X ISO 527-2 ISO 3167:2014 Typ A % 1.0 \pm 0.2	Tensile strength	100% infill - 0 ° - XY	ISO 527-2	ISO 3167:2014 Typ	A MPa	54.8 ± 1.7
$\begin{array}{llllllllllllllllllllllllllllllllllll$	Elongation at maximum force	100% infill - 0 ° - XY	ISO 527-2			2.6 ± 0.1
Tensile strength 100% infill - $45/135^{\circ}$ - XY ISO 527-2 ISO 3167:2014 Typ A MPa 51.2 ± 1.9 Elongation at maximum force 100% infill - $45/135^{\circ}$ - XY ISO 527-2 ISO 3167:2014 Typ A % 2.8 ± 0.1 Modulus of elasticity 100% infill - $45/135^{\circ}$ - XY ISO 527-2 ISO 3167:2014 Typ A GPa 2.9 ± 0.2 Tensile strength 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 66.2 ± 2.6 Elongation at maximum force 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A % 3.2 ± 0.2 Modulus of elasticity 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A GPa 2.8 ± 0.3 Tensile strength 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A MPa 22.2 ± 3.5 Elongation at maximum force 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A MPa 22.2 ± 3.5 Elongation at maximum force 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A % 1.0 ± 0.2	Modulus of elasticity	100% infill - 0 ° - XY	ISO 527-2			2.8 ± 0.1
Modulus of elasticity 100% infill - 45/135° - XY ISO 527-2 ISO 3167:2014 Typ A GPa 2.9 ± 0.2 Tensile strength 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 66.2 ± 2.6 Elongation at maximum force 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A % 3.2 ± 0.2 Modulus of elasticity 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A GPa 2.8 ± 0.3 Tensile strength 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A MPa 22.2 ± 3.5 Elongation at maximum force 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A % 1.0 ± 0.2	Tensile strength	100% infill - 45/135° - XY	ISO 527-2			51.2 ± 1.9
Tensile strength 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A MPa 66.2 ± 2.6 Elongation at maximum force 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A % 3.2 ± 0.2 Modulus of elasticity 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A GPa 2.8 ± 0.3 Tensile strength 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A MPa 22.2 ± 3.5 Elongation at maximum force 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A % 1.0 ± 0.2	Elongation at maximum force	100% infill - 45/135° - XY	ISO 527-2	ISO 3167:2014 Typ	Α %	2.8 ± 0.1
Elongation at maximum force 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A % 3.2 ± 0.2 Modulus of elasticity 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A GPa 2.8 ± 0.3 Tensile strength 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A MPa 22.2 ± 3.5 Elongation at maximum force 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A % 1.0 ± 0.2	Modulus of elasticity	100% infill - 45/135° - XY	ISO 527-2	ISO 3167:2014 Typ	A GPa	2.9 ± 0.2
Modulus of elasticity 100% infill - 90° - XY ISO 527-2 ISO 3167:2014 Typ A GPa 2.8 ± 0.3 Tensile strength 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A MPa 22.2 ± 3.5 Elongation at maximum force 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A % 1.0 ± 0.2	Tensile strength	100% infill - 90° - XY	ISO 527-2	ISO 3167:2014 Typ	A MPa	66.2 ± 2.6
Tensile strength 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A MPa 22.2 \pm 3.5 Elongation at maximum force 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A % 1.0 \pm 0.2	Elongation at maximum force	100% infill - 90° - XY	ISO 527-2	ISO 3167:2014 Typ	Α %	3.2 ± 0.2
Elongation at maximum force 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A % 1.0 ± 0.2	Modulus of elasticity	100% infill - 90° - XY	ISO 527-2	ISO 3167:2014 Typ	A GPa	2.8 ± 0.3
0 100 0 101 120 1 1 1,151 1 1	Tensile strength	100% infill - ZX	ISO 527-2	ISO 3167:2014 Typ	A MPa	22.2 ± 3.5
Modulus of elasticity 100% infill - ZX ISO 527-2 ISO 3167:2014 Typ A GPa 2.8 ± 0.1	Elongation at maximum force	100% infill - ZX	ISO 527-2	ISO 3167:2014 Typ	Α %	1.0 ± 0.2
	Modulus of elasticity	100% infill - ZX	ISO 527-2	ISO 3167:2014 Typ	A GPa	2.8 ± 0.1



LUVOCOM 3F Filament PAHT® 9825 NT

High-temperature polyamide unreinforced, natural color





General information

LUVOCOM 3F Filament PAHT® 9825 NT is an unreinforced polyamide based formulation with the ability to be printable on non-heated chamber machines. It has excellent tensile and impact strength and allows continues use up to 100°C while retaining 50% of its mechanical properties. Its water uptake takes about 4 times longer to reach the saturation point compared to unmodified PA6, also its saturation point is 5 times lower than conventional PA6 materials.

Engineering and Fast settings print profiles can be found in Ultimaker Cura Marketplace for download and use.

Geometric accuracy was measured according VDI3405:Part 7 (length = 24 - 150 mm) and achieved 0.32 mm for the Engineering settings.

Predrying

It is advisable to pre-dry the filament with a suitable dryer immediately before processing. The material may absorb moisture from the environment.

Dryer type	Temperature °C	Drying time in h	
Dehumidifying dryer	110 6-8		
Vacuum dryer	100 4-6		
Processing*	*when not using profiles from Ultimaker Cura Marketplace		
Printing temperature	°C	265 - 290	
Print bed temperature	°C	≥ 50	
Layer thickness	mm ≥ 0.1		
Nozzle diameter	mm	≥ 0.2	
Printing speeds	mm/s	30 - 80	

In order to improve adhesion and facilitate part removal Magigoo PA® or Vision Miner Nano Adhesive are recommended. The processing notes provided merely represent a recommendation for general use. Due to the large variety of machines, geometries and volumes of parts, it may be necessary to employ different settings according to the specific application. For additional information please refer to our printing guidelines document.

Delivery form & storage

Unless indicated otherwise, the material is delivered as Ø 1.75mm and Ø 2.85mm filaments in re-sealable aluminum bags. Preferably storage should be under dry, normal temperature and pressure conditions.



Europe and Head Office

Lehmann&Voss&Co. KG Alsterufer 19 20354 Hamburg Germany Tel +49 40 44 197-530 Email: luvocom@lehvoss.de

North America

LEHVOSS North America, LLC 185 South Broad Street Pawcatuck, CT 06379 USA Tel +1-855-681-3226

Email: info@lehvoss.us

Asia

LEHVOSS(Shanghai) Chemical Trading Co., Ltd. Unit 4805, 8 Xingyi Road Changning District, Shanghai 200336 China Tel +86 21 62785181 Email: info@lehvoss.cn

