

TRADE NAME:	<b>Fiberlogy MattFlex 40D</b>
MANUFACTURER:	Fiberlab S.A., Brzezcie 387, 32-014 Brzezcie, Poland
DESCRIPTION:	<b>MattFlex 40D</b> filament designed for printing in FFF/FDM technology, available in a black color, wound on a spool, vacuum-packed in a plastic bag, placed in a cardboard box.

**TECHNICAL INFORMATION:**

Diameter:	1.75 mm
Diameter Tolerance:	+/- 0.05 mm
Avg Roundness:	+ 0.03 mm
Net Weight:	0.85 kg
Print Temperature:	210°C - 230°C
Bed Temperature:	50°C - 60°C



Physical Properties	Test Method	Unit	Typical Value
Specific Gravity	ISO 1183	g/cm <sup>3</sup>	1.16
Hardness	Test Method	Unit	Typical Value
Shore A, 1 sec, 23°C	ISO 7619	-	92
Shore D, 1 sec, 23°C	ISO 7619	-	40
Mechanical Properties	Test Method	Unit	Typical Value
Tensile Stress:			
Break	ISO 527	MPa	30
5% Strain	ISO 527	MPa	3
10% Strain	ISO 527	MPa	5
50% Strain	ISO 527	MPa	10
Elongation at break	ISO 527	%	600
Thermal Properties	Test Method	Unit	Typical Value
Heat Distortion Temperature @ 0.45 MPa	ISO 75	°C	70
Melting Temperature T <sub>m</sub>	DSC	°C	160
Elastomer Properties	Test Method	Unit	Typical Value
Tear Strength	ISO 34-1	kN/m	115

**CHEMICAL RESISTANCE:**

Chemical	Rating	Chemical	Rating
Acetaldehyde	Excellent	Gasoline	Excellent
Acetic acid	Excellent	Glycerin	Excellent
Acetone	Fair	n-Hexane	Excellent
Acetylene	Excellent	Hydrazine	Soluble
Amine	Soluble	Hydrochloric acid	Poor
Aniline	Poor	Isopropyl alcohol	Excellent
ASTM oil No. 1	Excellent	Iso-octane	Excellent
ASTM oil No. 3	Excellent	m-Cresol	Soluble
ASTM ref. fuel A	Excellent	Methyl alcohol	Excellent
ASTM ref. fuel B	Excellent	Methyl ethyl ketone	Excellent
ASTM ref. fuel C	Poor	Methylene chloride	Soluble
Benzene	Fair	Naphthalene	Fair
Butane	Excellent	Nitric acid	Soluble
Butyl acetate	Fair	o-Chlorophenol	Soluble
Carbon monoxide	Excellent	Perchloroethylene	Soluble
Carbon tetrachloride	Poor	Petroleum ether	Excellent
Chlorobenzene	Soluble	Phenol	Soluble
Chloroform	Soluble	Potassium hydroxide	Good
Chlorosulfonic acid	Poor	Sea water	Excellent
Chloric acid	Good	Silicone grease	Excellent
Cresol	Poor	NaCl satd. water	Excellent
Cyclohexane	Good	Sodium hydroxide	Good
Dimethyl formamide	Fair	Steam (100°C)	Fair
D.O.P.	Excellent	Sulfuric acid 5%	Good
Ethyl acetate	Fair	Sulfuric acid 10%	Fair
Ethyl alcohol	Excellent	Sulfuric acid 50%	Soluble
Ethylene chloride	Soluble	THF	Fair
Ethylene dichloride	Soluble	Toluene	Fair
Ethylene glycol	Excellent	Trichloroethane	Soluble
Ethylene oxide	Excellent	Triethanolamine	Soluble
Formaldehyde	Fair	Water	Excellent
Formic acid	Fair	Water (100°C)	Fair
Freon	Excellent	Xylene	Good

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