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| TRADE NAME: | Fiberlogy MattFlex 40D |
| MANUFACTURER: | Fiberlab S.A., Brzezie 387, 32-014 Brzezie, Poland |
| DESCRIPTION: | MattFlex 40D 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:

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|---------------------|---------------|
| 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 - 70°C |



| Physical Properties | Test Method | Unit | Typical Value |
|--|-------------|-------------------|---------------|
| Specific Density | ISO 1183 | g/cm ³ | 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 _m | 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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