



## Technical Data Sheet

### **EVOLV3D™ Olefin Block Copolymer (OBC)**

#### **Introduction**

EVOLV3D™ OBC, a polyethylene-based 3D-printable filament, brings polyolefin properties to 3D-printed parts. This material demonstrates significantly improved warpage and printability for a polyolefin, enabling lightweight, durable parts with excellent chemical resistance.

#### **Application**

- Polyolefin build material for 3D-printing

#### **Features**

- Low warpage – faster startup and less fine tuning
- Chemical resistant – Resistant to common solvents enabling new applications
- Low Density – enabling light weight, durable parts
- Recyclable

#### **Recommended Print Conditions\***

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Nozzle Temperature	180 ± 20 °C
Bed Temperature	60 - 100 °C
Bed Modification	Polypropylene tape
Print Speed	10 - 40 mm/sec

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\*Settings are based on a 0.4 mm nozzle,  
Recommended to be printed in ventilated area

#### **Material Properties\***

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Density	0.905 g/cc	ASTM D792
Melt Flow Rate (2.16 kg @ 230 C)	9.5 g/10 min	ASTM D1238
Melting Temperature	130 °C	DSC
Tensile Strength (Yield)	14 MPa	ASTM D1708
Elongation (Yield)	10 %	ASTM D1708
Tensile Strength (Break)	14 MPa	ASTM D1708
Elongation (Break)	>700 %	ASTM D1708

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\*Typical values, not to be construed as specifications. Users should confirm results by their own tests.

EVOLV3D™ OBC shows excellent chemical resistance compared to common filaments

**Chemical Resistance\***

Acetone	++	Petroleum	+
Ethanol	++	Propylene Glycol	++
Ethanol (60 °C)	++	Acetic Acid (80%)	++
Isopropanol	++	Nitric Acid (10%)	++
Limonene	+	Phosphoric Acid (40%)	++
Methanol	++	Sulfuric Acid (70%)	++
Methyl Ethyl Ketone	+		

Samples were tested by immersion in solvent for 24 hours

++ : no change in appearance, retention of mechanical properties

+ : little/no change in appearance, slight drop in mechanical properties

\*Typical values, not to be construed as specifications.

**Contact information:**

North America: +1 (800) 447-4369

Latin America: +55 (115) 188-9000

Europe: +3 (111) 567-2626

Pacific: +6 (037) 965-5392

[www.dow.com](http://www.dow.com)

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