



## DIMENGEL 400

**Dimengel 400 (DIM 400)** is the strongest and toughest of Massivit's family of high-performance printing materials. Its impact resistance makes it ideal for the most demanding functional prototyping and end-use applications. It offers a high Heat Deflection Temperature (HDT) enabling the production of large parts that can withstand elevated temperatures. As with other Dimengel materials, DIM 400 enables models to cure instantly under UV light while printing, delivering solid, large parts straight off the printer. It allows the production of complex geometries, including non-vertical parts and ceilings, with practically no need for support structures.

### Key Benefits

- Durable resilience
- Superior strength and thermal durability
- A wide range of applications

### Applications

- Customized end-use parts
- Tough, functional prototypes
- Jigs and fixtures
- Internal cores for layups

Properties	Metric		Imperial		Method
	Green	Post cured*	Green	Post cured*	
Ultimate Tensile Strength	40 MPa	45 MPa	5,800 psi	6,530 psi	ASTM D638-14
Elongation at Break	58%	46%	58%	46%	ASTM D638-14
Tensile Modulus	1.4 GPa	1.7 GPa	203,000 psi	247,000 psi	ASTM D638-14
Izod Notched Impact	40-50 J/m	40-50 J/m	0.75-0.94 ft-lb/in	0.75-0.94 ft-lb/in	ASTM D256-23e1
Flexural Strength	55 MPa	80 MPa	7,980 psi	11,600 psi	ASTM D790-17
Flexural Modulus	1.2 GPa	1.5 GPa	174,000 psi	218,000 psi	ASTM D790-17
Heat Deflection Temperature @0.45MPa	64 °C	67-70 °C	147 °F	153-158 °F	ASTM D648-18
Heat Deflection Temperature @ 1.8 MPa	52 °C	55-57 °C	126 °F	131-135 °F	ASTM D648-18
Glass Transition, Tg	-	72 °C	-	162 °F	ASTM D3418-2
Shore Hardness (D)	81 Scale D	86 Scale D	81 Scale D	86 Scale D	ASTM D2240-15
Density	1.17 g/cm3		73 lb/ft3		
Color	Amber				

\*Data was obtained from Dimengel 400 samples and post cured for 2 hours at 60°C.

Post curing can also be obtained by exposing to sunlight for 2-8 hours.

\* All measurements were done on lab specimens of cured material

## Coating and Finishing

Dimengel 400 supports a wide array of finishes:

- SAV self-adhesive vinyl
- Car / body filler
- Polyester
- Epoxy
- Polyurethane
- Fiberglass

## Regulation Compliancy

- Compliant with 1907/2006/EEC regulation 2006 ("REACH")
- Compliant with Regulation (EC) No. 1272/2008 ("CLP")
- Does not contain any chemicals listed on California Prop.65
- Compliant with the US Toxic Substances Control Act (TSCA) regulations

## Precautionary Statement

Massivit maintains up-to-date Material Safety Data Sheets (MSDS) on all of its products. These sheets contain pertinent information that you may need to protect your employees and customers against any known health or safety hazards associated with our products. Users should review the latest MSDS to determine possible health hazards and appropriate precautions to implement prior to using this material.