

# THERMA DM500

## Technical Data Sheet

TDS\_EN\_THERMADM500\_102019



### MATERIAL FOR INJECTION MOULDING

THERMA DM500 is a photosensitive material developed for the realization, with DWS stereolithographic technology, of injection mouldings for plastic material.

The material has been developed to withstand over 200 cycles. The injected polymer can reach a maximum temperature of 220° C with up to 90 bar of closing pressure.

### FEATURES

- Smooth Surfaces
- High Resolution and Precision
- High Accuracy

### THE THERMA SERIES

The Therma series includes all the materials resistant to high temperature. These materials are extremely accurate, precise and were developed in-house by DWS.

### ADVICE FOR USE

A thermal post treatment of 30 minutes at 120°C is recommended in order to obtain the maximum thermal resistance.

### TECHNICAL FEATURES OF THE LIQUID MATERIAL

Environmental Values for Use	22°C - 27°C - max, RH 40% - 60%
Appearance / Colour	Liquid / Light Grey
Density	1,15 g/cm <sup>3</sup>
Viscosity	2000 ~ 3000 mPa*s at 25°C

### TECHNICAL CHARACTERISTICS OF THE RESIN AFTER UV CURING

Elongation at Break (%)	5 ~ 10
Tensile Strength (MPa)	50 ~ 80
Tensile Modulus (MPa)	2400 ~ 3050
Flexural Strength (MPa)	70 ~ 160
Flexural Modulus (MPa)	1700 ~ 4000
Surface Hardness (ShoreD)	90 ~ 91
HDT@ 0,46 MPa	55 ~ 90
Application / Use	Injection Moulding

Technical specification subject to change without notice.

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### FINISHING PROCEDURE

1. Put on protective gloves and remove the built parts from the building platform.
2. Place the parts in a clean container and pour 95% ethanol till the alcohol covers the parts completely. Stir for 2 minutes.
3. Take out the parts from the container and dry them with air blower.
4. Place the parts in another clean container and pour 95% ethanol till the alcohol covers the parts completely. Stir for 1 minute.
5. Put on new protective gloves and take out the parts from the container and dry them with air blower. Repeat point no. 4 and 5 if there are residues of the liquid resin on the parts.
6. Rinse the parts thoroughly under running water for few seconds.
7. Dry the parts with air blower and put them in the UV curing unit provided by DWS. Post-curing time is 30 minutes (15 minutes each side).
8. After this put them in the oven for a cycle of 2 °C per minute up to 120 °C. Leave the models at 120 °C for 1h (one hour). Let the oven cool down slowly for about 1h (one hour) with the models inside.