

## MATERIAL

# Therma DM570

Ultra-detailed mold manufacturing using 3D printing, resistant to high temperatures up to 295 °C.



Formulated and manufactured by DWS

## Therma Series

Therma serie includes nanoceramic materials developed for applications where resistance to thermal stress is required.

### PRODUCT DESCRIPTION

**THERMA DM570** is a high-performance material suitable for the production of precision molds using 3D printing technologies. It is designed for applications across various sectors, including footwear, electronics, tool manufacturing, racing and packaging.

#### Suitable Applications and Performance

• **Plastic Injection Molding:**

THERMA DM570 is capable of supporting production runs of up to 2,000 injection cycles. The actual lifespan depends on the type of polymer used, injection pressure, and the complexity of the mold geometry.

• **Ultrasonic Thermocompression:**

This technology is compatible with THERMA DM570. It allows for precise dimensional tolerances, enabling accurate forming of parts with fine detail.

• **Autoclave Processing (Carbon Fiber Curing):**

The material has demonstrated excellent thermal resistance, withstanding high temperatures and pressures during autoclave curing cycles, making it suitable for composite tooling applications.



High  
temperature



High  
pressure



Perfect  
details



Respect  
of dimension



## Industry

Footwear

Electronics

Tool  
Manufacturing

Racing

Packaging

## Available colors

### Name

Therma DM570 Grey

## Technical specs of the liquid material

Viscosity	3000 ~ 6000 mPa•s at 25°C
Density	1,73 g/cm <sup>3</sup>
Environmental values for use	22°C - 27°C - max, RH 40% - 60%

## Technical specs after post-treatment\*

Therma DM570	Technical Data	Method
Flexural strength (MPa)	104	ASTM D790
Flexural modulus (MPa)	8940	ASTM D790
Tensile strength (MPa)	56	ASTM D638
Tensile modulus (MPa)	6340	ASTM D638
Elongation (%)	3,3	ASTM D638
HDT_1.8MPa (°C)	163	ISO 75
Thermal conductivity, 30 °C [W/m K]	0,54	ASTM E1461
Thermal conductivity, 180 °C [W/m K]	0,72	ASTM E1461
Thermal conductivity, 280 °C [W/m K]	0,75	ASTM E1461
C.T.E. 40 to 80 °C (µm/m K)	35	-
C.T.E. 80 to 150 °C (µm/m K)	54	-

\*Complete post treatment in UV and thermal oven is required. Please consult the product use document for more information.