



3D PRINTED MOLD TOOLING

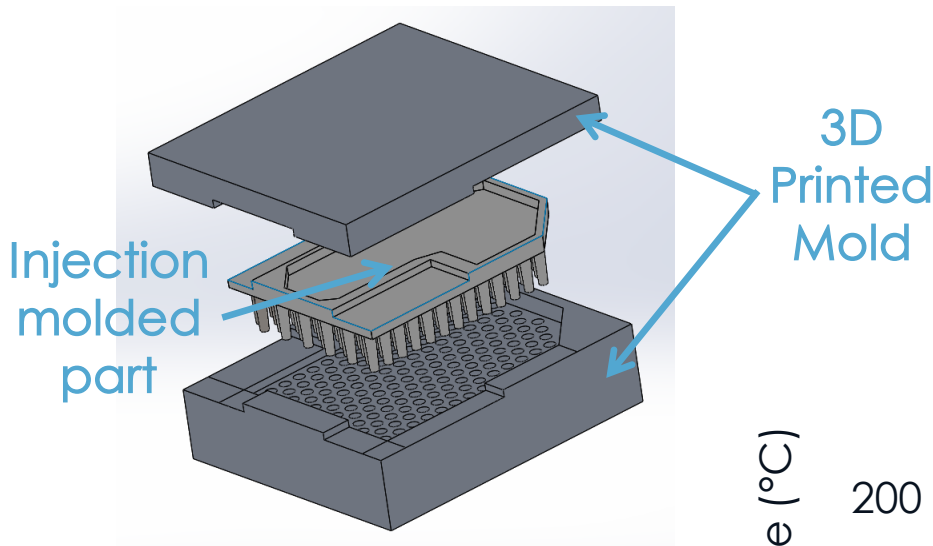
HIGH TEMPERATURE AND HEAT CONDUCTING
FDM PRINTING MATERIALS

ADVANTAGES OF HIGH THERMAL CONDUCTIVITY FOR MOLD TOOLING

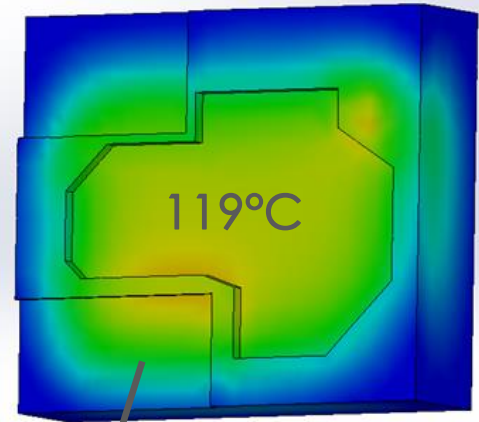
- Fast Cycle Time
- Increased Tool Lifetime
- Even Part Heating/Cooling
- Active Heating/Cooling
- High Temp Stability
- Enhanced Part Properties

MOLD COOLING SIMULATION

INJECTION MOLDING TEMPERATURE 220°C
UNHEATED MOLD

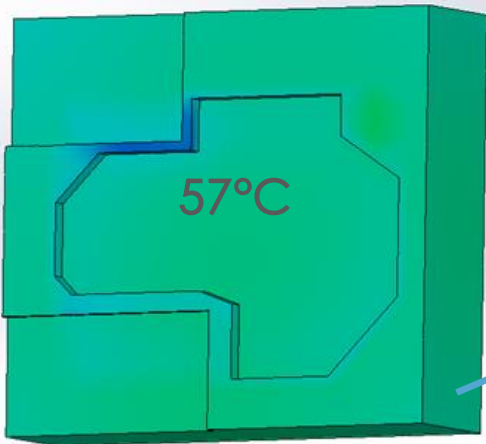


0.3 W/m-K

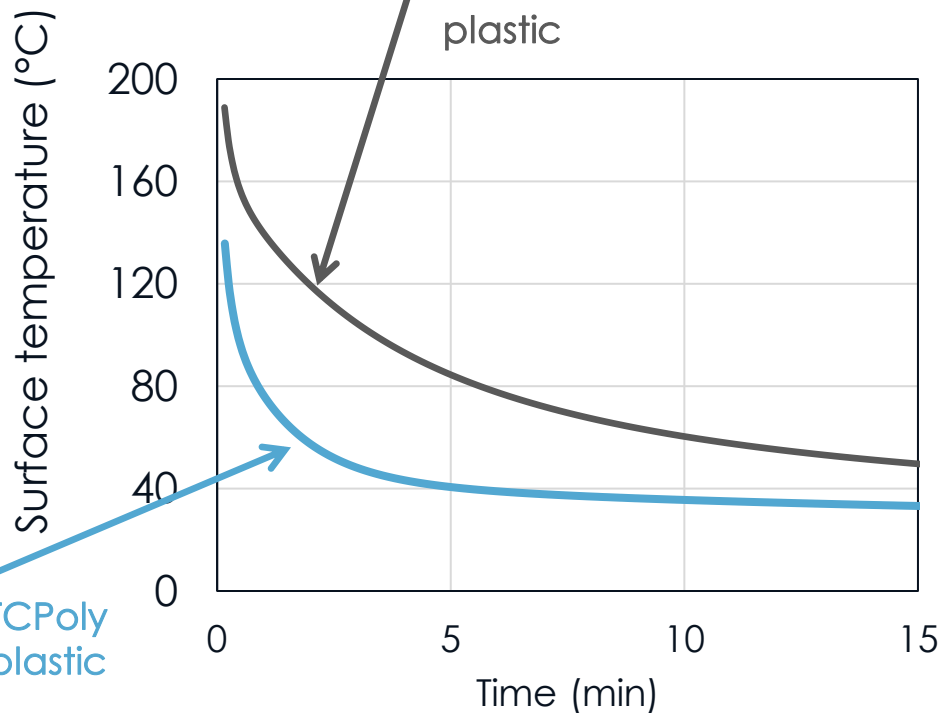


Normal plastic

4 W/m-K



TCPoly plastic



Heat conducting composite cools mold 6x faster than normal plastic



MATERIAL DATA

*20x HIGHER THERMAL
CONDUCTIVITY THAN
STANDARD PLASTICS*

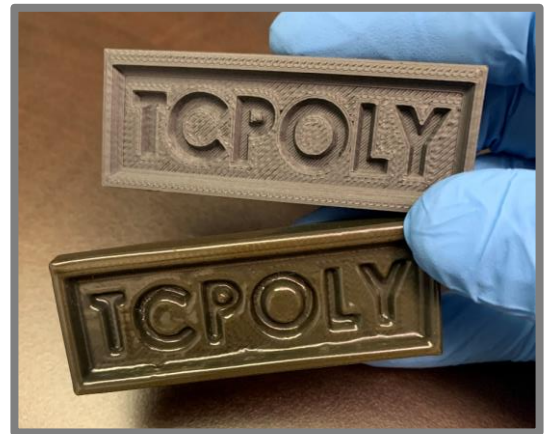
TCPOLY

	TCPoly Rigid (Nylon)	TCPoly Aero (PPSU)	Stratasys Digital ABS
Printing Method	FDM	FDM	Polyjet
Thermal Conductivity (W/m-K)	4	4	0.2
Heat Deflection Temperature, 0.45 MPa (°C)	190	250	95
Hardness (Shore)	70D	90D	87D
Tensile Modulus (GPa)	4	5	5
Tensile Strength (MPa)	50	60	75

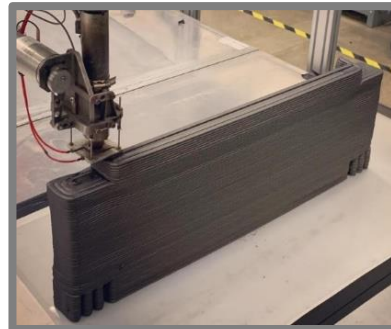
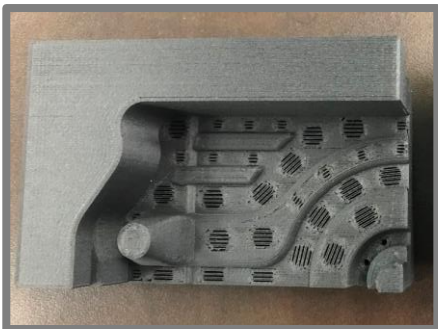
Standard printed tool

*PROPRIETARY TECHNIQUE
TO CREATE TOOLING WITH
SMOOTH SURFACES*

Smoothed tool



EXAMPLE MOLD TOOLING PARTS



*DON'T HAVE AN FDM PRINTER? WE CAN PRINT PROTOTYPE PARTS
AND ALSO CONNECT YOU WITH OUR PRINTING PARTNERS.*

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