

# Materials

Metal | Polymer | Ceramic | Composite | Wood

3DPE.ir/academy

Additive Manufacturing 2.0  
Q3 2023





## Team DM master materials list

At Desktop Metal, we offer more than metals now. Our materials library spans virtually every category, from metals and polymers, to ceramics, composites, and even upcycled materials such as wood.

In an effort to drive production 3D printing to the masses, our qualified materials are designed to ensure that you can 3D print with success and deliver the high-quality parts you need for end-use production. In fact, you won't find a more flexible Additive Manufacturing partner for the long term.

Our materials have been developed by an in-house team of world-leading materials scientists, as well as leading industry partners. Explore our portfolio.

### Qualified

Printing and sintering profiles developed by Desktop Metal, with fully characterized material and mechanical properties.

### Customer Qualified

Printing and sintering profiles developed by or in partnership with customers and/or partners, with material and mechanical properties suitable for customer/partner applications.

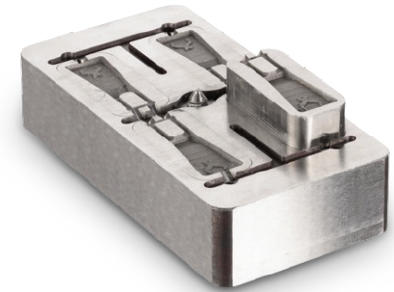
### R&D

Initial testing completed by Desktop Metal demonstrating binder and process compatibility. Printing and sintering profiles under final development.

## Metal

Industry standard metals trusted by manufacturers	Desktop Metal			
	Studio System	Shop System	X-Series	Production System
TECHNOLOGY	BOUND METAL DEPOSITION	PLUG-AND-PLAY BINDER JETTING	BINDER JETTING WITH TRIPLE ACT	BINDER JETTING WITH SINGLE PASS JETTING
17-4 PH Stainless Steel	Qualified	Qualified	Qualified	Qualified
304L Stainless Steel		Qualified	Qualified	
316L Stainless Steel	Qualified	Qualified	Qualified	Qualified
4130 Low-Alloy Steel			R&D	
4140 Low-Alloy Steel	Qualified		R&D	Qualified
420 Stainless Steel				Qualified
440C Stainless Steel				Qualified
4340 Low Alloy Steel			R&D	
8620 Alloy Steel			R&D	
A2	Qualified			
Aluminum 6061			Customer Qualified	R&D
Bronze			R&D	
C18150				Qualified
Cobalt Chrome		Qualified*	Customer Qualified	
Copper	Qualified		Customer Qualified	Qualified
CM247		R&D	R&D	
D2 Tool Steel	Qualified			Qualified
DM HH Stainless Steel				Qualified
Gold			Customer Qualified	Customer Qualified
H13 Tool Steel	Qualified		Customer Qualified	Qualified
Hastelloy			R&D	
Haynes 282			R&D	
M2 Tool Steel			Qualified	
Nickel Alloy Inconel 625	Qualified	Qualified	Qualified	Qualified
Nickel Alloy Inconel 718		Qualified	Qualified	Qualified
Nickel-Free Austenitic Stainless Steel			R&D	Qualified
S7 Tool Steel				Qualified
Silver			Customer Qualified	Qualified
Titanium (Ti64)	Qualified		Customer Qualified	Customer Qualified
Tungsten Carbide Cobalt			Customer Qualified	R&D
Tungsten Heavy Alloy			Customer Qualified	
TZM Molybdenum			R&D	

\*Not currently qualified for medical applications. Material availability as of July 2023. Subject to change.



**Images (left to right):**

Silver rings

17-4 PH golf club putter

IN625 gears

H13 injection mold

## Ceramic & Composite

	Desktop Metal		ExOne			
	X-Series	Production System	S-Max Flex	S-Print	S-Max	S-Max Pro
<b>TECHNICAL AND NATURAL CERAMICS</b>						
Alumina	R&D					
Aluminum Nitride	R&D					
Carbon	R&D			Customer Qualified		
Glass	R&D					
Natural Sands			Qualified	Qualified	Qualified	Qualified
Silicon Carbide	Customer Qualified			Customer Qualified		
Synthetic Sands				Qualified	Qualified	Qualified
Tungsten Carbide Cobalt	Customer Qualified	R&D				
<b>+CERAMIC</b>						
Boron Carbide i/w Aluminum	R&D					
Silicon Carbide i/w Silicon	Customer Qualified					
<b>+METAL</b>						
316i	Qualified					
420i	Qualified					
Iron i/w Bronze	R&D					
Tungsten i/w Bronze	Qualified					
Tungsten i/w Copper	R&D					
Tungsten i/w Invar	R&D					

## Polymer

Exclusive resins developed by ETEC and Adaptive3D as well as trusted providers such as Loctite	ETEC				
	Vida	Envision One	D4K	ProXL	Xtreme 8K
CASTABLE RESINS					
Easy Cast 2.0	Qualified			Qualified	
EPIC	Qualified		Qualified		
PIC 100	Qualified		Qualified		
WIC100			Qualified		
ELASTOMERS					
DuraChain™ Elastic ToughRubber™ 70 Black					Qualified
DuraChain™ Elastic ToughRubber™ 90 Black					Qualified
DuraChain™ Elastic ToughRubber™ 90 White					Qualified
DuraChain™ Soft ToughRubber™ 30 Black					Qualified
DuraChain™ Chemical ToughRubber™					R&D
DuraChain™ FreeFoam™					R&D
LOCTITE® IND 402 Black		Qualified			
HARD PLASTICS					
E-Rigid Form Charcoal		R&D	R&D	Qualified	R&D
LOCTITE® 3843 Black		Qualified			Qualified
LOCTITE® IND 405 Black		Qualified			Qualified
LOCTITE® IND 405 Clear		Qualified			
LOCTITE® MED 413 Clear		Qualified			
Q-View	Qualified		Qualified		
RC70					
RC90					
HIGH TEMPERATURE					
Evonik INFINAM® ST 6100 L					Qualified
HTM 140			R&D	Qualified	
LOCTITE® IND 147 Black		Qualified			Qualified
LOCTITE® IND 406 Black		Qualified			

			Desktop Health	
	Envision One	D4K	Einstein	Einstein Pro XL
DENTAL APPLIANCES				
E-Guard	Qualified	Qualified	Qualified	Qualified
E-Guide	Qualified	Qualified	Qualified	Qualified
E-IBD	Qualified	Qualified	R&D	R&D
E-Tray	Qualified	Qualified	Qualified	Qualified
Flexcera™ Base	Qualified	Qualified	Qualified	Qualified
Flexcera™ Smile	Qualified	Qualified	Qualified	Qualified
Flexcera™ Smile Ultra+	Qualified	Qualified	Qualified	Qualified
Keysplint Soft	Qualified	Qualified	Qualified	R&D
SmileGuard™	Qualified	Qualified	Qualified	Qualified
MEDICAL MODELS				
E-Gum	Qualified	Qualified		
E-Model Beige	Qualified	Qualified		
E-Model Light	Qualified	Qualified	Qualified	Qualified
E-OrthoShape	Qualified	Qualified		
Model X	Qualified	Qualified	Qualified	Qualified
Model Z	Qualified	Qualified	Qualified	Qualified
Press-E-Cast	Qualified	Qualified	Qualified	R&D



## Biofabrication

HT High Temperature LT Low Temperature	RG Research Grade MG Medical Grade TG Technical Grade	Desktop Health
		3D-Bioplotter
2K Silicone 50A RG	Soft tissue materials	Qualified
LT Hydroxyapatite RG	Bone/cartilage materials	Qualified
HT PCL 50K RG	Bone/cartilage materials	Qualified
HT PCL 80K MG	Bone/cartilage materials	Qualified
HT PCL 120K MG	Support materials/other	Qualified
HT Support RG	Bone/cartilage materials	Qualified
LT Silicone TG	Support materials/other	Qualified
LT Support RG	Support materials/other	Qualified
LT TissueInk RG	Soft tissue materials	Qualified
UV Silicone 60A MG	Soft tissue materials	Qualified

## Sheet Metal

Digital Sheet Forming technology to eliminate the need for a traditional stamping or tooling.

Please visit [TeamDM.com/Figur](https://TeamDM.com/Figur) for more information.

## Wood

Rematerializing wood waste to produce beautiful end-use products.

Please visit [TeamDM.com/Forust](https://TeamDM.com/Forust) for more information.



**Images (left to right):**

Complete dentures 3D printed and assembled in Flexcera™ Base and Flexcera™ Smile.

A bicycle helmet 3D printed in LOCTITE® IND 405 on the Xtreme 8K.

The black shroud of the DustBuddie from Dustless® Technologies is 3D printed in Elastic ToughRubber™.

Propeller blades binder jet 3D printed from sawdust and bio-epoxy resin in a variety of finishes.

# Additive Manufacturing 2.0

Metal | Polymer | Ceramic | Composite | Wood

**3D printing solutions with the speed, quality, and repeatability suitable for mass production.**

Desktop Metal (NYSE:DM) is driving Additive Manufacturing 2.0, a new era of on-demand, digital mass production of industrial, medical, and consumer products. Our innovative 3D printers, materials, and software deliver the speed, cost, and part quality required for this transformation. We're the original inventors and world leaders of the 3D printing methods we believe will empower this shift, binder jetting and digital light processing. Today, our systems print metal, polymer, sand and other ceramics, as well as foam and recycled wood. Manufacturers use our technology worldwide to save time and money, reduce waste, increase flexibility, and produce designs that solve the world's toughest problems and enable once-impossible innovations. Learn more about Desktop Metal and our #TeamDM brands at [www.desktopmetal.com](http://www.desktopmetal.com).

Printer platforms



**Desktop Health™**



Materials



Applications and more



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