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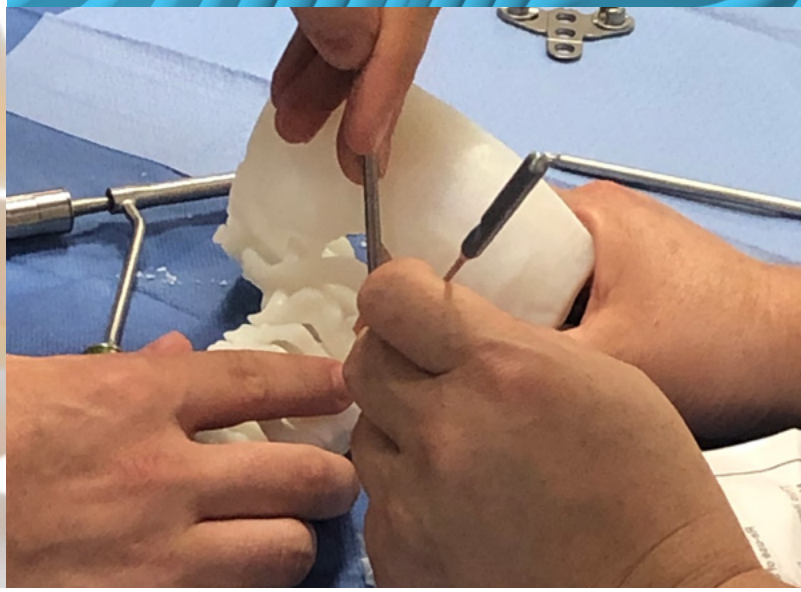
SPEC SHEET
MEDICAL



Digital Anatomy Materials:
BoneMatrix J Series

The Digital Anatomy™ material family includes a collection of materials that can be used to mimic human tissue.

Mixing these materials in different ratios, along with PolyJet™ materials such as the Vero™ or Vero-V family with Agilus30™ or Elastico®Clear, can generate a range of shore values to create almost any anatomy in the human body. This family of materials opens new possibilities to enrich medical modeling — to create models with mechanical properties similar to any type of tissue, educate, suture, puncture, drill, stretch and perform mechanical tests for research and medical practice.

BoneMatrix® J Series

Rigid translucent material is used to mimic bone structures. This material is stiff and stable, and can be drilled into to practice procedures like total knee replacement (TKR).

Example anatomy presets include:

- Long Bone
- Ribs
- Vertebra
- Skull

Technical information about BoneMatrix is listed in the table below:

Test	J850 Digital Anatomy Printer	850 Digital Anatomy Printer
Young`s modulus	884.24 (21.8)	741.83 (47)
Tensile strength, Mpa	29.8 (0.32)	24.9 (0.5)
Elongation, %	36.53 (0.8)	38.35 (1.8)
Flexural strength, MPa	27.6 (0.53)	17.3 (0.53)
Flexural Modulus, Mpa	913.3 (32.5)	642.97 (38)
HDT, oC	40 (0.07)	immeasurable (under 35)
Available print modes	High Speed	High Quality Speed
Printed sample finish	Glossy	Glossy
Number of UV lights	2	1
Support material	SUP706	SUP710S
Color	Translucent	Translucent

Collaboration Makes Development

Stratasys has collaborated with top research and medical institutes to develop a library of anatomies that can be printed for research, surgical planning and education using the Digital Anatomy printer and PolyJet materials.

Technion and TLV University

In 2020, a group of scientists from the Technion Institute of Technology Materials Science and Engineering Laboratory and from the Computational Mechanics and Experimental Biomechanics Lab in Tel-Aviv University, performed a series of mechanical tests to compare the accuracy of bone presets and bone advanced capabilities of GCP to a real tissue. The results showed that the bone presets are highly realistic, have a good repeatability and a significant cost reduction. For more information, read the white paper "Advanced Bone Biomechanical Data."

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