Sawbones Fourth-Generation Simulated Cortical Bone (Short Fiber Filled Epoxy)

Category : Other Engineering Material , Composite Core Material , Polymer , Thermoset , Epoxy , Epoxy, Molded, Glass Fiber Filler , Filled/Reinforced Thermoset

Material Notes:

Fourth-generation bones model natural cortical bone using a mixture of short glass fibers and epoxy resin pressure injected around a foam core. Standard bone models are manufactured with a solid rigid polyurethane foam cancellous core material, unless cellular rigid polyurethane foam is specified. The mid-shaft area has an intermedullarly canal. Fourth-Generation Composite Bones Have Improved Properties Fourth-generation composite cortical bone has been developed in order to meet the demanding needs of in vitro experiments, fatigue testing and to more closely simulate natural cortical bone. The result is a composite bone with enhancements to the following properties: Fracture Toughness - Fatigue Crack Resistance Fatigue Life - Implant Subsidence Tensile Strength & Modulus - Compressive Strength & Modulus Thermal Stability - Moisture Resistance No changes have been made to the anatomical structure of the bones.Information provided by Sawbones.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Sawbones-Fourth-Generation-Simulated-Cortical-Bone-Short-Fiber-Filled-Epoxy.php

Physical Properties	Metric	English	Comments
Density	1.64 g/cc	0.0592 lb/in³	

Mechanical Properties	Metric	English	Comments
Tensile Strength	93.0 MPa	13500 psi	Transverse; ASTM D638
	106 MPa	15400 psi	Longitudinal; ASTM D638
Tensile Modulus	10.0 GPa	1450 ksi	Transverse; ASTM D638
	16.0 GPa	2320 ksi	Longitudinal; ASTM D638
Compressive Strength	157 MPa	22800 psi	ASTM D695
Compressive Modulus	16.7 GPa	2420 ksi	ASTM D695

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