

Materials

Additive Manufacturing Solutions

Material	Description
ABS-M30 (acrylonitrile butadiene styrene)	Good tensile, impact and flexural strength and strong between layer bonding High versatility with form, fit, color and functional applications Ideal for general applications to lower weight and reduce components
ABS-M30i (acrylonitrile butadiene styrene)	Biocompatible ABS material (ISO 10993 USP Class VI)* Sterilizable using gamma radiation or ethylene oxide (EtO) Ideal for medical, pharmaceutical and food applications
ABSi	Translucent material available in natural, red and amber colors Good blend of mechanical and aesthetic properties Ideal for semi-transparent, translucent and lighting applications
PC-ABS (polycarbonate-acrylonitrile butadiene styrene)	Superior mechanical properties and heat resistance of polycarbonate Excellent feature definition and surface appeal of ABS, with highest impact strength Ideal for durable consumer products and high strength tooling
PC (polycarbonate)	Accurate, durable and stable for strong parts; most widely used industrial thermoplastic Superior mechanical properties, high tensile strength and heat resistance Ideal for general applications with high temperature and strength requirements
PC-ISO	Biocompatible polycarbonate material (ISO 10993 USP Class VI)* Sterilizable using gamma radiation or ethylene oxide (EtO) Ideal for medical, pharmaceutical and food applications
ULTEM 9085	FST (flame, smoke, toxicity) certified thermoplastic High heat and chemical resistance; high tensile and flexural strength Ideal for transportation, automotive and aerospace applications
PPSF/PPSU (polyphenylsulfone)	Highest heat and chemical resistance, mechanically superior and greatest strength Sterilizable with steam autoclave, EtO, plasma, chemical and radiation Ideal for chemical, caustic and high temperature environments

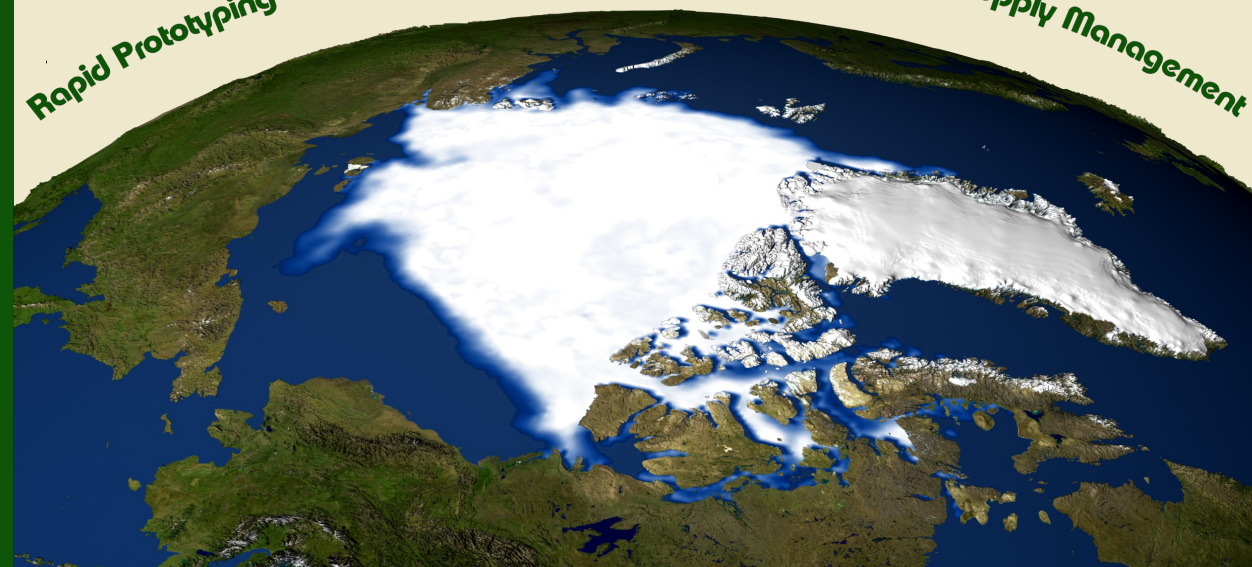
Metals:

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Aluminum (AlSi10Mg)	Aluminum alloy with silicon and magnesium Ideal for high load, heat and low weight; replaces thin-walled and complex cast parts
CobaltChrome MP1	Cobalt-chromium-molybdenum superalloy; nickel free Ideal for implants, high temperature stress relief and hot isostatic pressing
CobaltChrome SP1	Biocompatible cobalt-chromium-molybdenum superalloy Ideal for biocompatibility and cytotoxicity requirements of dental applications
DirectMetal 20	Bronze based alloy Ideal for injection mold tooling and functional metal applications with high accuracy
MaragingSteel MS1	Steel that is martensite-hardenable in post process Ideal for mechanical and tooling applications; easily heat treated to add hardness
NickelAlloy IN625	Heat resistant nickel-chromium alloy Ideal for high corrosion resistant needs; excellent fatigue and thermal-fatigue properties
StainlessSteel GP1	Basic stainless steel Ideal for small series products, individualized products and spare parts
StainlessSteel PH1	Stainless steel with high strength and hardenable Ideal for the same applications of StainlessSteel GP1 that requires higher strength
Titanium Ti64	Ti6Al4V titanium alloy Ideal for low weight and biocompatible applications; high corrosion resistance

Consultation Guide

This block contains three 3D CAD models. On the left is a complex mechanical assembly featuring a large flywheel and various internal components. In the center is a tall, grey control cabinet with a screen and control panel. On the right are three individual components: a coiled spring, a star-shaped impeller, and a rectangular mounting plate with a central hole.

Rapid Prototyping - Part Conversion - Custom Design - Small Batch Supply Management





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Additive Manufacturing Solutions

Overview

Real Products and Parts

TAILORING TO YOUR NEEDS FROM CONCEPT TO END PRODUCT

Rapidmade is an additive manufacturing (AM) and 3D design firm that specializes in providing four distinct, but focused services to industrial and commercial clients. These services include: **Rapid Prototyping, Part Conversion, Custom Design, and Small Batch Supply Management.**

In these four focus areas, the capabilities of RapidMade can help you quickly bring a new product to market, lower your production and operating costs, reduce waste and simplify supply chain management.

RAPID PROTOTYPING

Rapid Prototyping is the most commonly used application for additive processes to date. Many companies have fantastic ideas for new products but do not have the R&D budgets to realize them. Others have the budgets but waste money on obsolete prototyping practices. With RapidMade, designs can be fully tested first virtually and then printed from the STL file directly in far less time and for a fraction of the cost.



PART CONVERSION

Achieving unique specifications of some parts used in the manufacturing process are either impossible, inconvenient, or just plain costly when handled by subtractive processes.

Switching the production of such parts to AM makes attaining desired density, material purity, surface finish, and design intricacy cheaper and more efficient. Fewer parts means less assembly costs and dealing with competitive local manufacturers makes business run more smoothly, both huge advantages of choosing RapidMade.



CUSTOM DESIGN

Rapid Prototyping helps streamline the engineering process, but many smaller companies cannot afford to keep engineers on staff to even get their product ideas rolling. RapidMade's dedicated team of engineers is at the disposal of those businesses. They can design every part of a product line to unique specifications and a myriad of customizations. Designing with both the end use and the costs to produce in mind is what we do best. You will benefit from our expertise.

SMALL BATCH SUPPLY MANAGEMENT

Many times businesses are saddled with difficult decisions regarding economies of scale. With AM technologies, the need for large scales and their limitations can be completely eliminated, whether it be unreasonably sized order requirements that must be also shipped from offshore foundries or too much money tied up in inventory. RapidMade is ideal for providing small batch orders at frequent intervals and far more competitive rates than big factories that must operate on high volume orders. This added flexibility can improve any business.



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Advantages

