

Framing Materials Of Your Mountain Bike

The cost of a mountain bike frame is proportionate to its material, as well as the treatment that material has received. Currently, there are five types of material used in mountain bikes - high tensile steel, chromoly steel, aluminum, titanium, and carbon fiber. Oversized diameters, heat treating, and butting are tubing material treatments that will increase the cost of a frame as well.

High tensile steel This is a very durable alloy that's found in lower priced mountain bikes. It offers a high carbon content which makes it less stiff than chromoly steel, so more materials are needed to make it stiff enough for bicycle frames, which will in turn make it that much heavier.

Relatively inexpensive to produce, you'll find this material in trail bikes, city bikes, and even entry level mountain bikes. There are some bikes that come with a chromoly seat tube, while the rest is high tensile steel.

Chromoly steel Short for steel alloy, chromoly is best described by its major additives - chromium and molybdenum. This is probably the most refined framing material, giving over 100 years of dependable service.

Depending on the type of heat treating and butting, you can find this material in bikes as low as 400 dollars all the way up to 1,500 and beyond. The chromoly steel material offers very good durability and a compliant ride characteristic.

Aluminum For the past 15 years, aluminum has been refined in pretty much the same way as chromoly. There have been various alloys developed, as well as heat treatment, oversizing, and butting. With dual suspension bikes, aluminum is the preferred material as it's the stiffest and most cost effective.

Aluminum is stiffer than chromoly, and therefore it will crack before chromoly. Of course, this depends on how you ride and how much abuse you give the frame. The advantages of aluminum is that the frame is very light and very stiff through oversizing or butting.

Titanium Even though it's somewhat exotic, the prices for this material have come down over the last few years. Frames made of titanium remain expensive because it takes longer to weld the tubes to the frame.

Titanium is considered an alloy, normally mixed with small amounts of vanadium and aluminum to give it better weldability and ride characteristics. More compliant than chromoly, it offers better fatigue and corrosion properties.

The material you choose for your bike, all depends on where you ride and what style you use. Almost all materials will last you for years, as long as you take care of your bike and treat the frame with some respect.

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About the Author

Having spent months of research on different subjects, for independant companies, Andrew Manifold has decided to publish his articles on many subjects at his own website, visit to learn more. <http://www.qualified-publishing.co.uk/mountain-biking>