

The Many Flavors of Dyneema – Breaking Down the Unbreakable Fiber

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It's no secret we like things around here that last a good, long time. Heavyweight cotton denim is one of the longest lasting, but a new player in the denim world is proving it can stand up to the harshest of abuse. [Dyneema](#) fibers are fifteen times stronger than steel, more abrasive resistant than Kevlar, and coming to a jean near you.



Technically speaking, Dyneema is an Ultra High Molecular Weight Polyethylene and currently the reigning champ for the [world's strongest fiber](#). You can currently find it on ship sails, mooring oil rigs, and even stopping bullets.

When it comes to jeans, though, this industrial grade material is often hidden in plain sight. Dyneema doesn't take a dye, so it's blended with other fibers like cotton or wool to keep the same hand and feel but with the added durability. Whether you want to avoid a crotch blowout or blowing out your knee across thirty feet of asphalt, Dyneema/cotton blends come in a variety

of strengths to suit your needs and your budget. So follow along as we walk through what the world's strongest fiber has to offer your pants.

Lower Weight (5%-15% Blend)

Right: The Levi's 501 Strong with 7% Dyneema.

At this point, you probably won't even notice it's there. Even a marginal amount of Dyneema blended into a garment like 5% already doubles its tensile strength and abrasion resistance. This means you can walk longer without blowing out the crotch, shove your phone in your front pocket more often without busting out the leg, or work longer on your knees without losing the knees on your jeans.



By that same function, it means producers can produce a lighter weight fabric that has the same strength as a heavier one, like you're wearing 9oz. jeans that pack the punch of 12oz. This is by far the most common application you'll find of Dyneema on the market, and the price isn't much different than standard cotton. Our favorite, [Cone Mills](#) makes a variety in USA that's got a healthy 8%.

Far Right: Chrome's Wyatt Five Pocket Jean with 8% Dyneema.

There are already a variety of brands on the market using lightweight blends including [Chrome](#), [Taylor Stitch](#), [Saint](#), and [Levi's](#).

Higher Weight (20%-50% Blend)

At this point, things make a big step up. Here's where the Dyneema starts to become more visible and more effective. Remember when I said Dyneema can't take a dye? Higher blends of the fiber will most likely have white interiors and be cool to the touch as the fiber is highly thermally conductive.



The fabric made with over half Dyneema is referred to as “unbreakable” for a reason. Designed primarily for motorcycle riders, the high concentrated denim can withstand an Impact abrasion of 3.5-4.5 seconds.



It's important to remember though that the fabric at this level isn't any heavier than what's at the bottom of the rung, the [Saint Unbreakable jean](#) has 60% Dyneema and it's only 13oz. But you'd probably need to replace your hip before you replaced the crotch via normal wear and tear.

Currently, the only makers at this level are Australia's [Saint](#) and France's [Esquad](#), and it's expensive, but so are skin grafts.

Left: The Saint “Unbreakable” Denim Jacket with 66% Dyneema.