

Altex

Developed by the Lazarus Consortium and used throughout the LSDF, Altex is a combination of simplified structol made non-caustic and [picojelly](#) (both microscopic machines). Altex is a highly versatile, rugged stretchy material. It is described as feeling like leather, spandex or latex depending on its configuration and can vary in both its reflectiveness or thickness and in some cases, can be made to drip or ooze like hot tar. In addition, the material can change shape in many areas - making the entire thing a strapping system, whether or not plugs or straps are included. When a bespoke altex suit is made, common practice is to paint it onto a person and allow it to set, then clean and polish the suit's exterior, glue in any specific components (which are then painted over to seal them in) and make any special adjustments.

The material can be worn loosely and have a set density or be ordered into a variable density configuration in which it becomes stretchy, adhering to the shape of the wearer's body. Importantly, this property can differ over different components of the same garment. Generally, any altex garment is one-size-fits-all. Its effective use as a protector involves knowing which configuration it needs to be in and when. However, this defensive type of hardening can only last a few seconds at a time if the altex is not doped. By default, altex is by no means protection for personnel in the traditional sense.

- **Standard Altex:** 0 SP
- **Hardened Altex:** 2 SP

See: [Damage Rating](#) for an explanation of the damage system

Electrical Properties

Altex' inner layers can conduct electrical signals and the inside of the suit is designed to act as a farraday cage. The added bonus here is that it is ideal for wearable technologies since there is little need for cabling. The suit can also warm or cooler using inductive heating or conduct heat outward and then use the peltier effect as a form of thermoelectrical cooling pump. The same effect can be used to fill the suit with air as an insulator or remove air to adhere to the body for better cooling. If split, Altex can also self-knit, meaning after being cut or shot, the material can seal over the gap in question - ideal for the construction of environmental suits.

Doped Altex

While vanilla altex offers very little in terms of physical defense, it can be doped with other materials during its manufacturing process and inherit their strengths to a limited degree. The doping process puts carefully shaped components of the material on the microscopic level into the muscle-fibre like outer parts of the altex suit called elements. Properly expressed, these elements lock together into a single hardened plate which can be made to break in layers as a form of lossless ablation without discarding any elements.

This plate can also be made to yield, to act like hardened rubber or to bend and remember its original

shape. Connected to systems which anticipate trauma, the altex can then be programmed to respond preemptively to a strike to become a body-armor which does not limit bodily movement unless a given position requires protection - and the exact nature of that protection will differ based on the incoming strike.

Unfortunately this type of altex has more problems re-knitting successfully and tends to diverge from its original "pattern", retaining scars over time. It is also thicker and often much heavier and can be less flexible. As such, common practice is to make cuts of doped altex which are then added as part of the second layer of a garment and then painted over again, sealing them inside the middle, avoiding joints. Sometimes, mount-holes are left in, allowing an external source of plate to be fitted directly to the suit, serving as the first layer of protection and then the hardened sandwiched parts a second layer of protection.

Unlike standard altex, doped versions may maintain their protective properties indefinitely.

Other Uses

Other materials with harder less yielding properties can be laminated in this defensive form of altex which then create a cheap composite armor. Even better, altex can be used as a type of artificial muscle in some cases, replacing complex hinges and joints by chemically bonding with the components it is expected to move with.

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