

Synthetic fence

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A **synthetic fence**, **plastic fence** or (when made of vinyl) **vinyl** or **PVC fence** is a fence made using synthetic plastics, such as vinyl (PVC), polypropylene,^[1] nylon,^[2] polythene (polyethylene) or from various recycled plastics. Synthetic fencing was first introduced to the agricultural industry in the 1980s as a low cost/durable solution for long lasting horse fencing. Now, synthetic fencing is used for agricultural fencing, horse racing and residential use. Synthetic fence is generally available preformed, in a wide variety of styles. It tends to be easy to clean, resists weathering and has low maintenance requirements. However, it also can be more expensive than comparable materials, and cheaper products can be less sturdy than more traditional fence materials. Some types may become brittle, faded or degrade in quality after long exposure to extreme hot or cold conditions. Recently, titanium dioxide (TiO₂) has proven to be a beneficial additive in the manufacturing process of vinyl. This has greatly improved the durability of vinyl by providing essential UV protection from the sun's harmful rays, preventing premature aging and cracking of the product, making it more durable than other materials such as wood.^[3]



A horse behind a vinyl fence of flexible "rail" and coated wire

Synthetic materials used for residential fences can be in a solid cast form, or a reinforced hollow rail design that resembles sawn timber, Most commonly extruded profiles. Higher quality vinyl fence components are ribbed or include reinforcements, often of aluminum, for added strength. For agricultural use, synthetic fencing can consist of a heavy synthetic strapping product inlaid with cable, synthetic-coated high-tensile wire, or a synthetic coating over a wood or metal rail or plank. Residential synthetic fencing products are usually hollow, and thus too fragile to contain livestock, but some designs may be suitable for containing dogs or other pets. Residential grade rails are also made of a thinner material.

Synthetic fences are used as the side-rails along horse racecourses, because they make a good visual barrier for the horses, but are unlikely to cause injury if horses break through them.

Synthetic fence profiles are made in a wide range of sizes and shapes. They come in many different colors which are integrated during the extrusion process, which means they do not require painting. Usually this ability to resist discoloration leads many manufacturers to offer very long warranties, from decades up to "lifetime" for some brands.

Synthetic fence posts are placed into pre-dug holes, or sometimes the synthetic post is fitted over a pre-set post of wood, rebar, or pipe for additional sturdiness. Rails or pickets are inserted into specifically designed slots and grooves within the rails.

Synthetic fence materials are often in the form of rigid rails or posts, but flexible forms are also used, including mesh for hazard fencing or deer fencing, or string, rope or tape of polypropylene interwoven with stainless steel wires for electric fences ("electric braid").

See also

- Crowd control barrier

References

- [1] (http://www.invisible-deer-fence.com/options/options2.htm)
- [2] (http://uk.alibaba.com/products/nylon-fence.html)
- An Introduction to Vinyl Fencing (http://www.osceolafencesupply.com/installation-orlando/vinyl-fencing)

Sources

- "ch 6. Vinyl fences", *Ultimate Guide to Fences, Arbors & Trellises*, 2008, ISBN 978-1-58011-390-8

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