

Where does stuff come from?

Aluminium

- Aluminium is a light metal often used in bike frames.
- Derived from Bauxite (an ore of aluminium).
- Mainly comes from Africa, West Indies, South America, Australia
- Bauxite has to be refined into alumina and then reduced to metallic aluminium. To this takes a lot of energy so factories producing aluminium are usually built in areas where energy can be made cheaply (or example by hydro electricity which harnesses the energy of water in reservoirs).
- Factories creating aluminium from bauxite have produced problems of deforestation and pollution of water courses in Jamaica.
- At the moment a hydro electric scheme is being built in a wilderness area of Iceland just to power a processing plant for imported bauxite. The aluminium produced at this factory will then be transported long distances to its market areas.

Natural Rubber

- Columbus bought back the first natural rubber (in the form of bouncy balls) from the West Indies in 1496
- Dunlop's first pneumatic tyres were developed in 1888
- 70% of all natural rubber today goes in to the production of tyres (cars, bikes, planes etc)
- Thailand, Malaysia and Indonesia are the main areas of natural rubber production. Once it has been produced it has to be transported to other factories where it is made in to tyres.
- 'Continental' bike tyres are made in Germany
- Many bike tyres have a Kevlar layer in the rubber. Kevlar is the material put in bullet proof vests! This makes them extra hardwearing

Steel

- Steel is a strong metal frequently used for car parts
- To make steel you need iron ore, coking coal and fluxes to help chemical process (usually limestone)
- Iron ore and coke tend to be imported from the USA, Canada, Brazil, Australia and Scandinavia on freight ships.

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Paint

There are three basic ingredients in car and bike paint:

- Resin (often linseed oil based)
- Pigment
- Solvent
- The resin is the component that holds together the pigment in suspension, provides adhesion to the surface applied, and determines the quality and paint durability.
- The pigment makes up the colour in the paint and is added as a powder.
- The solvent is what makes the mixture runny enough to paint on
- The largest vehicle paint producer is Standox in Wuppertal, Germany.

Synthetic Rubber

- Synthetic rubber (rubber that's not made from natural rubber but in factories from a mixture of chemicals) is used for the soles of most shoes because
- It's hard wearing
- Flexible
- Waterproof
- Most shoe soles are made from a mixture of natural rubber and synthetic rubber. Synthetic rubber is plastic based and therefore is a product of crude oil.