

From Bauxit to premium packaging: the production of the aluminium tube

It starts with the production of the metal aluminium, which is one of the youngest metals, developed in the late 19th century. Besides the main resource Bauxit, a lot more materials are needed to produce this light metal, that is used in a broad variety of industries. The range of possible products is almost endless: from the aircraft industry to the automotive industry aluminium is used wherever light and flexible metals are needed.

Talking of the packaging industry, aluminium is manufactured to foils, cans, tubes and many other packaging.

Focussing on the production of the aluminium tube, the basic material is a round piece of aluminium, with the size of a coin. In most cases, the production of tubes is handled in one giant machine, starting with giving it the characteristically shape and ending with the printing process.

Depending on whether the tube is to be produced with a membrane or not, the aluminium-coin has a hole or not. Being placed in the tube-production-machine, the first basic tube is pressed into shape. In that technical process called impact extrusion the aluminium is not melted and poured, but extruded out of the coin. Therefore several tons of pressure is needed. In the next step the machine passes the raw tube over to the next mechanical process, the tube-lathe. In this lathe, the tube is levelled and the thread is cut in the nozzle. After the tube left the lathe, it is heated – what makes the aluminium more flexible – and the inner coating is applied. Following the inner coating, the tube is delivered into the printing machine, where the individual appearance is imprinted, following the customers instructions. In a last step, the cap is screwed on the thread. Now the tubes are ready for usage in the different industries. Packed into boxes, the tubes reach the customer, who uses tubes to fill up liquid or pasty contents. After the filling process, the aluminium tubes' bottom is folded, what makes this excellent packaging material 100% airtight.