Originally most drinks were stored in glass bottles, and then the idea of a steel can evolved. When more research was done, it turns out the use of aluminum is more efficient and effective than the use of steel. The aluminum is lightweight, incredibly strong, and abundantly found in nature. The first aluminum can was produced in 1958. The final version of the metal can was a hybrid of a steel base with an aluminum top. This can was still very strong and cheap. Also, in the manufacturing of blending these two metals, a reaction occurred that actually made the beverage (beer) inside have a longer shelf life. Although this hybrid can was produced, many companies still use an all-aluminum can.

There are many plus-sides to using a metal can. Different companies who focus on marketing really push certain points. One of their big selling points is that the drink actually stays cooler longer when the can is made out of metal. Also, as mentioned above, companies can market their hybrid metal cans to other companies by telling them their can actually increases the shelf life of their good. Other advantages include stack ability, easy advertising right on the can, and a sleek look. An all-aluminum can is also advertised as being able to hold the carbonation longer than its counterparts.

The actual construction of the metal can starts with an aluminum ingot. From there, the ingot is rolled out into a thin sheet, and a circle is then punched out of it. This circle is formed into the bottom and sides of the can. The top of the can at this stage is not on the sides and the process of bending the circle up to form the sides leaves it jagged. The bottom of the can is then pushed inward by a machine to make the overall structure sturdier against the force of the carbonated beverage found inside the can. The inside of the can is sealed with a solution so that the liquid does not interact with the metal of the can. Once this process is finished, the company then cleans the can and the label is placed on the outside of the can. The tops of the cans are actually manufactured elsewhere, and then are shipped to the company to finish out the process. However when these cans are produced, that actually contain more magnesium and less manganese in their aluminum to make them strong enough to withstand the pressure from inside.

Overall, the lid of the can is thicker than the walls and bottom. The pull-tab is placed on a rivet in the center of the lid by machines. The last step of the process is filling the can, and then the lid is seamed onto the base of the can. Today’s cans are produced with 44% lower greenhouse gases and 30% less energy compared to a can manufactured in 1993. The can is 15% lighter and this reduced transportation fuel use and emissions.
After the cans are finished, they look at the different packaging needs from around the world. For example, America mostly buys their cans in the form of a twelve-pack but companies will package the product differently to target different consumers around the world. They focus more on the can than the actual packaging when it comes to sustainability because the packaging has a shorter life span than the actual can. The aim is to use the least amount of resources that is effective in still keeping their product safe during transportation and use.

Most big-name companies do not actually can their own product. Instead, the outsource this to dependable companies that specialize in the canning process. The canners advertise a “liquid only” wholesale price, but for first time customers they have to pay for the cans, crates, and the liquid. After this, these customers return the empty cans and crates. Once their product is canned, they are sent to MDCs where they house the product until Coca-Cola, or like company, comes to pick up the load. There is usually one visit to the MDC a week where an entire load is taken, and this is done manually. This process works well in densely populated areas where only short distances are involved. However in remote countries, the people leaving the canning plants only go a short distance and the entrepreneurs takeover.

In the solution that is used to seal the inside of the can, there is a compound called bisphenol (BPA) and is used in many containers and hard plastics. This is a toxic chemical and has been shown to cause cancer in rats, and is now banned in baby bottles but not the cans that consumers use. Aluminum in general has been found to cause brain disorders, behavioral problems, and child development issues. In almost every study done, the conclusion was made that patients with Alzheimer’s or Parkinson’s disease had elevated levels of aluminum traces in their brain. On a positive note, aluminum is thought to be the most sustainable and economic choice in the packaging industry. So far this year, there have been almost 150 million aluminum cans this year and yearly the average is close to 200 billion cans a year. This is 6,700 cans every second which is enough to go around the planet every seventeen hours.

After the beverage inside the aluminum can is used, between 50 percent and 60 percent of the can is recycled. It is one of the most recycled products with a 76% recycling rate globally. It is the most recycled beverage container in the world. Two thirds of all the aluminum ever produced is still in use today. The overall shelf-life of the can is 6-9 months generally. The average life cycle of a can is 6 weeks from the time that it is made until the time it is thrown away. Manufacturing and packaging takes about a week, distribution takes at least a week, consumer use is two-three weeks, and final disposition is about a week.