

Waste Separation

Only sorted recyclables can be recovered, reprocessed, and used in the manufacture of new products. This way, we can protect the environment, conserve natural resources, and reduce harmful greenhouse gas emissions.

The **United States** makes up only 4 percent of the world's population, yet it produces 35 percent of the planet's total waste. Despite the dramatic increase in curbside recycling, the U.S. only recycles and composts about 34.6 percent of its material waste.

Sorting is one of the most important steps in the process of recycling – putting items in the wrong places could hurt the recycling stream. The unrecyclable items will arrive at recycling centers and they could damage the equipment. After their arrival, they must get sorted, which raises the costs for the facility. That is why it is important to check with your local recycling provider to ensure that they will accept certain items before placing them into a bin. Some items may also be accepted at retail locations or other at local recycling centers.

The United States of America sorts their waste with the following order. This is for residential cases.

Usually, the plastic bags or wraps do not get recycled in curbside bins. They must be returned to participating drop-off locations such as retail stores for recycling. People can get their items such as plastic, metal, and glass materials recycled in their local area. There are local carriers who are sorting the waste in the right way.

The waste is sorted through different recycle bins. Local organizations are involved in this process, and that makes the sorting more manageable. Below in this text, you can see the most common types of items that are being sorted & recycled differently.

Paper – makes up 25 percent of municipal solid waste (trash) generated each year, more than any other material. This recovered paper is used to make new paper products, saving trees and other natural resources.

Batteries – Dry-Cell Batteries are used in a variety of electronics and include alkaline and carbon zinc (9-volt, D, C, AA, AAA), mercuric-oxide (button, some cylindrical and rectangular), silver-oxide and zinc-air (button), and lithium (9-volt, C, AA, coin, button, rechargeable) batteries. They can be disposed of at some in-store recycling bins or community collection events.

Plastics – more than 35 million tons of plastics were generated in the United States in 2017, which was greater than 13 percent of the waste stream. Only 8.4 percent of plastics were recycled in 2017. Some types of plastics are recycled much more than others. The local markets are usually the centers for plastic disposal.

Glass – especially glass food and beverage containers, can be recycled over and over again. In the United States in 2017, 11.4 million tons of glass were generated, 26.6 percent of which was recovered for recycling. Making new glass from recycled glass is typically cheaper than using raw materials. Most curbside community recycling programs accept different glass colors and types mixed, and then the glass is sorted at the recovery facility.

Used Oil – by recycling used oil USA citizens to keep their water supply clean and help reduce American dependence on foreign oil. It takes 42 gallons of crude oil, but only one gallon of used oil,

to produce 2.5 quarts of new motor oil. Many garages and auto-supply stores that sell motor oil also accept oil for recycling.

Household Hazardous Waste – Leftover household products that contain corrosive, toxic, ignitable, or reactive ingredients are considered to be a household hazardous waste (HHW). Products such as paints, cleaners, oils, batteries, and pesticides that contain potentially hazardous ingredients require special care when you dispose of them. HHW may be dangerous to people or bad for the environment if poured down the drain, dumped on the ground, or thrown out with regular trash.

Tires – Disease-carrying pests such as rodents may live in tire piles. Tire piles can also catch on fire. Most garages are required to accept and recycle used tires when users have new ones installed. They can be returned to either a tire retailer or a local recycling facility that accepts tires. Some communities will hold collection events for used tires.

Contrast the U.S. recycling rate with that of European countries and you will see a dramatic difference. Both Germany and the Netherlands have eliminated their landfill usage by recycling or composting 62 percent of their waste. The remaining 38 percent is turned into energy from waste. In the European Union, 74 percent of glass containers, 71 percent of all paper, and 76 percent of beverage cartons are recycled.

Trash, garbage, and rubbish – whatever you call it, waste disposal is an important part of one's everyday household chores. In **Switzerland**, there's more to putting out the trash than just filling a rubbish bin. In **Switzerland**, there are bottle banks at every supermarket, with separate slots for clear, green, and brown glass. Every town has a free paper collection once a month and that does not mean just old newspapers. Most people recycle everything made of cardboard or paper, from cereal packets to old telephone bills. There is also green and organic waste. If you have a garden, all the trimmings can be put out on the street (neatly bundled of course) every two weeks and they will be collected. Read more about the recycling methods for paper, cardboard, and glass below.

Paper and Cardboard are collected from households either as mixed or separated materials. The collection system differs for each municipality. The mixed material is either sorted by recyclers or paper recycling industries or used in cardboard production.

Glass is collected in the municipalities is either color-separated (70%) or, to facilitate logistics, collected as mixed-colored waste glass (29%). The collection not only includes glass bottles but also packaging glass as jars. The remaining 1% of the collected glass is for reuse (returnable bottles).

In **Germany**, waste separation starts with the consumer, i.e. households sort their trash and put it in separate bins and containers.

Glass – any kind of bottle or glass jar that is non-returnable and on which you did not pay a deposit or “*Pfand*“, belongs in the designated glass bins. This includes wine bottles, jam/preserve jars, oil bottles, juice bottles, and even bath-salt bottles. Ceramics, china, mirrors, and wine corks do not belong in the glass bins. Glass is sorted by color. There are different slots for depositing green, brown, and clear glass.

Paper is also entry-level recycling: all packaging made of paper and cardboard, newspapers, magazines, waste paper, paper bags, belong in the blue bins. Tissues, however, do not belong here. If you don't have a blue bin at your home, you will certainly find one somewhere in your neighborhood.

On to the more advanced level: the yellow Bins and the Green Dot. **Cans, plastic, polystyrene, aluminum, tinplate**, and “**composite**” materials like beverage

cartons made of a mixture of materials belong in the yellow bin or should be put in the yellow bags. Empty **spray cans** are also allowed here. You are not supposed to put stuff inside each other, like the yogurt cup inside the baked beans tin.

Biological waste, which by the way, makes up almost 50 percent of the total garbage produced in Germany. Bio stuff is anything destined for the compost heap is a good gardener's back yard. This includes kitchen scraps, peels, leftover food, coffee filters, tea bags, and garden waste. If you live in a house, you probably will have a separate brown bin for this.

Hazardous waste, which includes fluorescent tubes, batteries, and acids, cans of paint still containing paint, thinners, adhesives, corrosives, disinfectants, insecticides, and so forth, has to be treated as hazardous waste. You will receive a notice from your local town council on when and where the truck collecting this kind of waste, will be. You need to bring your stuff to the site for them to dispose of it properly.

A large part of the waste generated in Germany is reused and composted, which saves resources and protects nature. Germany is even set to become the world champion of waste separation. However, the recycling industry and the combustion manufacturers benefit from the waste and also compete in their businesses. That is why there are people who doubt the purpose of waste separation. To avoid creating waste is, therefore, still the easiest way to prevent the rise of waste piles.

If you fail to dispose of the trash in the right container, the employees or sorting personnel at the recycling facilities have to re-sort the waste. If we all separate waste properly, this extra effort can be avoided, the costs will decrease, and the environment benefits.

Austrian consumers are really good at sorting waste: 96 % of them separate their packaging waste from general waste. Taken together, Austrian households sort and collect more than 1 million tons of packaging and paper waste each year, so they can be sent for recovery.

They provide consumers with around 1.8 million bins for the collection of waste packaging made of paper, plastic, metal, and glass. Besides, they organize a pick-up service for 1.6 million households (yellow bag/yellow bin scheme).

ARA – Alstoft Recycling Austria has been a driving force in the Austrian recycling economy since 1993. Originally conceived as a packaging compliance scheme, ARA has long since established itself as a recycling expert, a driver of innovation in resource management, and the go-to partner for bespoke waste management solutions.

ARA organizes and finances the collection, sorting, and recovery of packaging waste throughout Austria. Together with their partners, they provide households and businesses with a countrywide and well-developed collection infrastructure as well as convenient and cost-efficient waste management solutions that facilitate efficient collection and environmentally friendly recovery.

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Every year, more than one million tons of packaging and waste paper is collected separately this way. Around 90 % of the packaging waste is sent for material recovery and turned into new products. The rest is utilized as a valuable industrial fuel or converted into energy (district heating).

The separate collection and recovery of packaging waste in Austria saves more than 500,000 tons of CO₂ per year. This corresponds to around 6 % of the annual emissions caused by all passenger cars registered in Austria.

In the **Netherlands**, every city has its own system when it comes to separating waste. In most cities, there are different waste containers available for waste separation. This differs from the municipality. However, the bins most often encountered are:

- Greenwaste – Green bin
- Paper – Blue bin
- Plastic, metal & drink packaging (PMD) – Orange bin
- All remaining waste – Grey or black bin

Most neighborhoods have different bins used for different types of waste. Amsterdam has bins for the following types of waste: glass, paper, plastic packaging, and drinks cartons, shoe textiles, and 'residual waste'.

People separate their waste and place it in their corresponding bins. Some neighborhoods do not have bins, and people take out their trash for collection on specific days no earlier than 21:00. Doing it before can result in a fine.

Specific types of waste like household chemicals/waste (leftover paint, expired medicine, and/or used light bulbs), can be taken to places like supermarkets or pharmacies for proper disposal. Lastly, bulky waste like kitchen and washing appliances can be left out in specific locations for pick up, on specific days as well.

Countries with the highest rate of recycling are **Germany** at 56 percent; **Austria** at 54 percent; **Wales** at 52 percent and **Switzerland** at 50 percent.