Glass Recycling

Glass is one of the most popular storage and packaging products used today. Not only are glass bottles and jars 100% recyclable, but it is also one of the easiest commodities to recycle or reuse, saving on both natural resources and landfill space.

All the sand used to make new glass in South East Queensland is mined on Stradbroke Island in Moreton Bay. The sand mining operations remove many tonnes of sand from the island every day to make the glass items that we use. Therefore, the more glass that is recycled (called post consumer glass) the less raw material (sand) needs to be removed to manufacture replacement bottles and jars.

Thanks to the success and popularity of glass recycling, mixed crushed glass (called cullet) is now the main material for making glass.

Manufacturing

Glass such as bottles and jars are made from silica (from sand), soda ash (from salt) and limestone, which are non renewable resources. These materials are melted and mixed together to form glass.

The silica and soda ash are melted in a furnace at temperatures of 1700°C – this is called the batch. Limestone is added to give glass its hard, smooth texture. The batch turns into a hot, thick liquid known as molten glass.

Molten glass globules are poured into moulds and air is blown into the middle to form hollow shaped bottles. The bottles are cooled and ready to be filled. The composition of the glass, its moulding techniques, and the rate at which it is allowed to cool will vary depending on the desired end use of the glass. The bottles are then sent to various manufacturers to be filled and sent out to supermarkets.

Decomposition

Glass is not biodegradable, therefore it may never decompose at landfill. This makes it even more important to reuse and recycle glass bottles and jars where we can.

The recycling process

Only glass bottles and jars should be placed in your yellow lidded recycling bin so they can be transported to the Materials Recovery Facility (MRF, pronounced murf) and sorted.

Glass bottles and jars are sorted using infra-red optical sorting, whereby the glass is separated into the different colours - clear, brown (or amber) and green. This is why it is very important that contaminants such as ceramics, china, light globes and oven-proof glass are not placed in your recycling bin. Contaminants such as those mentioned above can compromise the quality and potential safety of the final product. As little as 25 grams of impurities (e.g. a tea cup handle) per tonne of glass can cause...
Glass Recycling continued...

a load to be rejected and sent to the landfill. The glass is then sent to the beneficiation plant where it is screened for any impurities and crushed into various sizes and sold for recycling. In the re-manufacturing process, the crushed glass (cullet) is added to the furnace with raw materials. Here the glass melts and is then blown to form new bottles and jars.

Recycling glass equates to significant energy savings. It is worth considering that for each tonne of cullet used 1.1 tonnes of raw materials are saved. Another technique of saving on resources is to produce a lightweight bottle.

What can be recycled at the kerbside?

✔ Packaging glass only – glass bottles or jars that are brown, green or clear are the only type of glass that can be recycled.

What cannot be recycled at the kerbside?

✘ Ovenproof dishes – pyrex, microwave dishes
✘ Windscreen glass
✘ Drinking glasses
✘ Window glass
✘ Spectacles/sunglasses
✘ Lightbulbs
✘ Mirrors

Glass recycling tips

✔ Remove all lids or caps
✔ Rinse out bottles and jars