



Recycle Glass – preserve the environment

Glass can be recycled forever. The same glass can be recycled a million times to produce bottles and jars of the same quality. However minute amounts of some materials mixed in with the glass can cause contamination. So it is important to know what types of glass can and can't be recycled.

The Problem

What is glass made of?

In its original form, glass comes from three main virgin materials: sand, soda ash and limestone. Today a large percentage of glass in Australia is manufactured using recycled glass.

How is glass made?

All of the virgin or recycled materials are melted in a furnace at a heat of about 1500 degrees Celsius. The ingredients are melted into a liquid or molten form that is then dropped into a mould. Air blowing into the mould creates the shape of a bottle or jar. Once cooled, the bottles and jars are ready to be filled.

Glass and the Environment

By making glass out of virgin materials, we destroy our land, use energy and increase the need to drill for oil and dig for minerals. This causes harm to our environment.

Resources and the land

Using virgin materials for the production of glass means we are taking an enormous amount of resources out of the ground, like bauxite, iron-ore and sand. Although the resources needed for the production of glass are not in short supply, the mining is very damaging for the land and uses natural resources such as oil and coal.

Energy use and greenhouse gases

The manufacture of glass is incredibly energy consuming with the extraction and transportation of the raw materials. The glass itself is produced by melting the materials at a very high temperature using huge amounts of energy. This produces masses of CO₂, a greenhouse gas which contributes to global warming.

Wasted Landfill Space

Australians recycle nearly 50% of their total rubbish¹, every item recycled is one less to be buried in our rapidly filling landfills. What's more - glass takes one million years to break down naturally. This means that every piece of glass that has ever been sent to landfill is still sitting there – taking up valuable space.



Photo courtesy of Stephen Eastop

Did You Know?

- Glass was discovered more than 5,000 years ago.
- Glass accounts for 13.1% of the rubbish collected on Clean Up Australia Day 2008.
- The energy saved from recycling one glass bottle will operate a 100-watt light bulb for four hours.²
- In 2002 the recycling rate for glass in Australia was only 40%.³
- Don't put broken drink ware into your recycling bins. Just 5 grams of glass from drink ware is enough to contaminate an entire ton of recyclable glass.⁴
- Recycling glass saves 74% of the energy it takes to make glass from raw materials.⁵



Recycle Glass

The Solution

Why should we recycle?

By making products from recycled materials instead of virgin materials, we conserve land, save landfill space, reduce energy use and lessen the need to drill for oil and dig for minerals.

Glass can be recycled forever. Most councils in Australia have a glass recycling system so glass can be collected and reused for glass production.

Glass recycling reduces the cost of collecting and disposing of glass mixed in with our rubbish.



How is recycled glass made?

The glass recycling process produces a crushed glass product called 'cullet'. Cullet is often mixed with virgin glass materials to produce new end products⁵. Making new glass from recycled cullet saves energy because recycled glass melts at a lower temperature than virgin raw material and therefore less energy is required in the manufacturing process.

Glass recycling

All glass can be recycled, but there are some rules about what you can put in your bin. Household glass can be returned for recycling in kerbside recycling collections or bottle bins in public places such as shopping centres. Depending on the area and state in which you live, the recycling system will be different however most urban areas in Australia have a council recycling system.

In the kerbside bin

Yes

- Clear, green or brown (amber) bottles – including wine, beer, juice, soft drink and sauce bottles
- Glass jars – such as those from jams and spreads

No - Because this material melts at a different temperature than normal glass

- Drinking glass
- Ceramics – such as pyrex and corning ware
- Oven-proof glass
- China
- Light Globes
- Mirrors
- window glass and windscreen glass
- Medical or laboratory glass
- White opaque bottles

Remember, all glass for recycling should be rinsed and have lids removed. Leaving the label on is OK.

References

- 1) Department of the Environment, Water, Heritage and the Arts, www.environment.gov.au
- 2) EPA www.epa.gov
- 3) WSN Environmental Solutions www.wasteservice.nsw.gov.au
- 4) Planet Ark, www.planetark.com.au
- 5) Sustainability Victoria www.sustainability.vic.gov.au

Taking part in recycling the waste we produce makes us think about the effect we are having on our environment and enables us to contribute towards a greater level of sustainability.

