

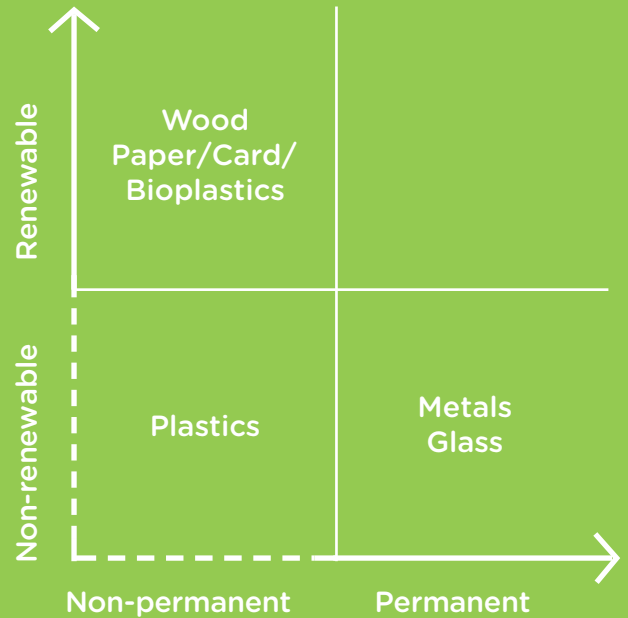
The permanent materials concept

Definition of 'permanent materials'

Materials in general can be classified as renewable or non-renewable or as permanent or non-permanent.

Renewable materials such as wood, paper/card or bioplastics are made from natural resources that can be re-built by biological processes.

Permanent materials are classified as materials that once produced can be recycled or reused without the loss of quality, regardless of how often the material is recycled.



Reuse
Recycle



Empac link

(Source: British Standard Institution (BSI) standard 8905:2011)



“Permanently available materials are **those for which efforts are made** to retain for use in society the energy and raw materials invested in their production at the end of the product life, either through reuse or recycling, with no loss of quality no matter how many times the material is recycled.”



Why are 'permanent materials' important?

Permanent materials now have a greater focus because of increased consumption and growing populations. This brings the need for materials that are infinitely recyclable in order to serve these demands and this concept is known as a 'circular economy'.

How does the 'permanent materials' concept work?

Different materials can be recycled in different ways. Some materials become degraded during recycling and so quality is lost during the process. This is known as an 'open loop' material cycle. Ardagh Group's steel, aluminium and glass packaging is recycled by melting processes and can be re-used for packaging or other applications. This process is referred to as a 'closed loop' material cycle, as the material can be recycled repeatedly - without loss of quality or functionality.

The relevance of the permanent material concept in European legislation

Permanent materials now have a greater focus because of increased consumption and growing populations. This brings the need for materials that are infinitely recyclable in order to serve these demands and this concept is known as a 'circular economy'.

[Europe 2020 link](#)

The roadmap explicitly refers to a 'circular economy of metals, where waste metal becomes a resource and this closed material loop supports the idea of a circular economy (paragraph 4.3).

The importance of a circular economy and this concept of 'permanent materials' is also acknowledged in the roadmap by not only distinguishing between non-renewable and renewable materials but now between permanent materials too.

[Europarl link](#)

(2008/98/EC) introduces the so-called 'waste hierarchy', outlining the most important ways of treating waste.

[WFD Link](#)

In this waste hierarchy, material recycling is regarded as a key solution (after 'prevention' and 're-use') for treating waste. Again, this adds relevance to the concept of permanent materials and their inherent recyclability as an ideal base for a circular economy.

