

Steel for Packaging Recycled Content

Approach & formula

1. Executive Summary

Steel is a permanent and circular material that can be recycled multiple times without loss of its intrinsic properties. Unlike other materials, the European steel industry is structured as a material-network, so the steel for packaging industry assumes an integral approach in defining recycled content.

Steel is 100% recyclable without losing quality. Steel is ideal for a **closed material-loop** because it can be recycled indefinitely. This closed material loop minimises waste and reduces the need to extract virgin materials by continuously recycling and reusing materials. Around 75% of steel products ever made are still in use today.

Steel for packaging incorporates a number of application specificities within the highly specialised steelmaking process, which uses over **200 integrated steel recycling plants in Europe** of which **10 produce steel for packaging**.

**# OF STEEL FOR PACKAGING
PLANTS: 10**



**# OF STEEL PLANTS:
200+**



**CIRCULAR
MATERIAL LOOP**



2. Unique Characteristics of Steel for Packaging

Unlike other materials, steel's ability to be recycled multiple times without quality loss makes it an exceptional product material.

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The high recycling rate of steel for packaging (80,5% in 2022) ensures that it can be repeatedly used again in manufacturing processes. 100% of this high-quality steel packaging scrap is repurposed to produce new steel products.

3. The Recycled Content Approach

There are just ten major steelmaking sites in Europe that manufacture hot-rolled strip for packaging steel. Recycled steel packaging therefore is not solely introduced directly into the unique steel production process used for packaging, but used for a wide variety of steel products. Steel scrap is, for both environmental and economic reasons, taken to nearby steel plants (proximity principle). Every of the 200 steel plants in Europe is a recycling plant.

In nearly every phase of the market, there is a greater demand for steel scrap than there is supply. Steel scrap does not need to be artificially marketed by the steel for packaging industry.

That is why steel for packaging follows a model value approach for recycled content to demonstrate its circularity performance.

4. Methodology for Recycled Content Calculation

In the context of the recycled content approach for steel for packaging, the numerator corresponds to the recycled tonnages in Europe while the denominator corresponds to the steel for packaging production data in Europe. A rolling average 5 years is used, which is revised every 3 years, and the current underlying value is calculated on data generated from 2018 to 2022.

5. Policy and Regulatory Considerations

The necessity of increasing recycled content in specific steel products should not be the steel industry's primary focus. This would limit European steel production, interfere with the scrap market, and increase the environmental impact of the steel-making process overall. As a result, recycled content is not the right indicator for the circularity of the steel for packaging sector.

Consequently, steel scrap is taken to nearby steel plants, for both environmental and economic reasons, following the proximity principle and is utilized in a broad range of new steel products. Over 90% of the European population lives within 200 km of a steel plant, which makes recycling of all steel products practical, sustainable and local.

6. Conclusion - The recycled content model value of steel for packaging in Europe

Recycled content (RC) in EU for steel for packaging =

Steel packaging scrap used in European steel plants (sum of 2018-2022) / Steel packaging produced in Europe (sum of 2018-2022)

RC% = 13,535,601 tonnes / 20,127,330 tonnes = 67%*

**We calculate that the recycled content rate of steel for packaging in Europe is 67%. This value has been calculated based on average steel for packaging production and scrap consumption and figures for five years (2018-2022). The calculation is based on the same methodology used in 2020, certified by CE Delft and validated by the European Commission (but based at that time on 2017 data).*