



## Recycled content and metal packaging in the context of LCA modelling

External position

### HOW TO DEAL WITH RECYCLED CONTENT IN LCAs FOR METAL PACKAGING – USING THE END OF LIFE RECYCLING RATE APPROACH AS PROXY<sup>1</sup>

Metals, such as aluminium and steel, are permanent materials. They can be recycled again and again with no loss of quality, as there is no structural degradation during recycling<sup>2,3,4</sup>. Recycling metal packaging brings an environmental benefit no matter for which metal application the recycled material is subsequently used – the material loop is working. Whatever the next application or product (automotive, construction, packaging etc.), the environmental benefit occurs at the time of re-melting the collected metal packaging (when scrap substitutes primary material) and not at the point of re-shaping the secondary material.

Thus, the most important criterion is metal conservation along its full life cycle and End of Life recycling. Every effort should be made to collect and sort used metal packaging to make it available again.

Consequently, the End of Life recycling allocation method is the most adequate method to model metal packaging and should be used in LCA (contrary to the recycled content allocation method)<sup>1</sup>.

The End of Life allocation method uses the metal recycling rate as the right metric to measure the benefits resulting from recycling: the latest End of Life recycling rate for steel for packaging is 79.5% (2016)<sup>5</sup>, and for aluminium beverage cans it is 74% (2015)<sup>6</sup>.

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<sup>1</sup> This is recommended by CE Delft. For further scientific explanation see Geert Bergsma, Maartje Sevenster, 2013. *End-of-Life best approach for allocating recycling benefits in LCAs of metal packaging*. CE Delft. (<http://www.ce.nl/publicatie>). It has also been endorsed by Öko-Institut.

<sup>2</sup> Flora Conte, Fredy Dinkel, Thomas Kägi, Thomas Heim, 2014. *Permanent Materials*, Carbotech. (<https://carbotech.ch/en/projekte-ub/permanent-materials/>).

<sup>3</sup> Sabrina Neugebauer, Matthias Finkbeiner, 2012. *Ökobilanz nach ISO 14040/44 für das Multirecycling von Stahl*, TU Berlin.

<sup>4</sup> Günter Dehoust, Cornelia Merz, 2011. *Methodischer Ansatz zur Bilanzierung des Aluminium-Recyclings in Ökobilanzen*, Öko-Institut e.V.

<sup>5</sup> See [www.apeal.org](http://www.apeal.org)

<sup>6</sup> See [www.european-aluminium.eu](http://www.european-aluminium.eu)

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