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## **LCA reveals positive environmental impact of aluminium closures for bottled wine**

A Lifecycle Assessment (LCA) commissioned by the Aluminium Closures Group (ACG) showed how aluminium closures can help mitigate the environmental footprint of bottled wine.

The Assessment, based on PEF (Product Environmental Footprint), was undertaken by Quantis in 2022, on behalf of the ACG. It explores ways to optimise the impact of the aluminium closure itself, although it accounts for just 2% of the overall climate impact of a bottle of wine.

Recycling of aluminium at its end-of-life is widely recognised to offer a beneficial impact on the environmental performance of the closure, since credits are given for the consequent avoidance of producing primary material. Recycling of aluminium needs about 95% less energy compared with its primary production, with the corresponding significant reduction in the climate change impact. The study reveals that, while a significant reduction of environmental footprint is already being achieved with current recycling performances in Europe, there is room for further improvement. Increasing the recycling rate of the aluminium closure from the current 69% (according to Product Environmental Footprint Category Rules (PEFCR) for wine) to 100%, leads to a reduction of its climate change impact by 18% and to a climate change reduction of the whole bottle by 0,4%. In this connection, it must be pointed out that aluminium closures can easily be sorted and recycled, whether collected with glass or together with other light aluminium packaging.

Another parameter of the aluminium closure studied by the Assessment was its weight. Reducing the amount of aluminium used in the closure by 15% (from 4,2g to 3,6g) leads to a reduction of its climate change impact by 14% and to a climate change reduction of the whole bottle by 0,3 percent.

All things considered, the area where the aluminium closure can make a major contribution to the environmental footprint of the bottled wine is the reduction in wine waste. Wine loss at the consumer stage has a relevant influence on the overall climate change impact of a wine's life cycle. For the study, an average wine loss rate of 5% was considered (according to PEFCR for wine, irrespective of the type of closure). Aluminium closures are recognized as minimising the risks of wine losses at consumer level, potentially decreasing the loss rate to below 2%. This means aluminium closures can help mitigate the climate change impact of a bottle of wine, reducing it by at least 3%, which represents more than the impact of the closure itself. This potential wine loss reduction is especially relevant when taking into consideration the global trade volume of bottled wine, says ACG.

Commenting on the new LCA, Jean-Paul Duquet, Director Sustainability for ACG said, “Small things can make a big difference. At ACG we continue to strive to make a positive contribution to reducing climate change. Although the aluminium closure does not represent a significant share of the footprint of a bottle of wine, the study has explored the possible options to further diminish the environmental impact of the closure.”

For more information, please visit [lca.aluminium-closures.org](https://lca.aluminium-closures.org).

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***Aluminium Closures Group***

*The Aluminium Closures Group consists of the leading manufacturers of aluminium closures and their aluminium strips and sheets suppliers. They represent about 75 % of the global aluminium closure production which is mainly used in the wine, spirits, water and oil & vinegar markets. The group's core tasks are market research, sustainability and recycling as well as promotion of aluminium closures. For more information visit: [www.aluminium-closures.org](https://www.aluminium-closures.org)*