

## Press release

November 12, 2008

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### **Beer packaging study challenges preconceptions**

**Environmental impact of cans, glass and PET bottles revealed**

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**Against all expectations the environmental performance challenge for PET bottles (3% penetration in beer packaging today) is not vs. glass bottles, but in fact vs. steel and aluminum cans. This is one of the findings of an independently reviewed study based on specific customer data and commissioned by the Sidel Group. Using data from Belgian Martens Breweries, the study assesses the environmental impact of beer production and packaging, from ingredients hop to the package at its end of use. The so-called Life Cycle Assessment (LCA) looks at the impact of the production of 100 liters of beer in 0.5 l packages in terms of energy consumption, global warming, air acidification, eutrophication and water consumption.**

“Environmental impact is an increasingly important factor when our customers decide which packaging to use for what product. Our packaging solutions must be backed by undisputable data,” says Luc Desoutter, Sustainability Officer at Sidel, describing the motivation for a “Life Cycle Assessment” the company commissioned on the different beer packaging options. Life Cycle Assessment is a well-defined methodology, and ISO standards on LCA are available. Its goal is to compare the full range of environmental impact assignable to products and services in order to choose the least burdensome one.

The study compares the production of 100 litres of beer in four different types of packaging: PET bottles with Actis™ coating, glass long-neck bottles, aluminium cans and steel cans. It considers which option is least environmentally damaging in terms of resources and pollution over the full life cycle of beer. This includes the use of resources from the time grains are grown, harvested and used to make beer, to production of its primary packaging, delivery to supermarkets and customers, and finally to the package’s end of life, be it sent to the landfill, incineration or recycling

plant. Data for the study came from Belgium (production and packaging) and the UK (distribution, consumption and disposal).

### **Primary packaging has the greatest environmental impact along with beer production**

The results of the case study show steel cans and PET bottles contribute least to global warming and air acidification. The production of steel cans uses least primary energy and water, while glass is the highest consumer. The study draws several conclusions from these results. In terms of environmental impact, primary packaging is the greatest along with beer production, while transport and secondary packaging are relatively small. Recycling rates are an important factor, especially for aluminum cans. Where aluminum can recycling rates are high, aluminium may be a good choice for packaging beer. The electric mix used for the production of packaging is an important parameter for the indicators “acidification”, “energy consumption” and “climate change”. The study also finds that if the weight of a 0.5l PET bottle can be at or below 20 grams, PET is the preferred overall choice in terms of climate change.

### **Key factors: recycling rates and packaging weight**

Luc Desoutter: “The study identified the key factors which most influence environmental assessment. They were found to include recycling rates and the weight of the packaging. These insights enable us to determine which actions to implement to minimize the environmental impact of beer packaging. We can do this, for example, by improving recycling rates and by package lightweighting. The results of the study of course reflect the situation in the countries studied (Belgium for production, UK for consumption and end-of-life), at a given moment – recycling rates, transport distance and electricity mix vary across countries and over time.”

As a result of the study, a new “LCA User” tool has been developed to enable beer producers from everywhere in the world to make an informed decision regarding the most environment-friendly packaging solution for their products based on different scenarios.

The LCA assessment, which took its data from Martens Breweries industrial activities, was performed by RDC-Environment. Its conclusions and this press release were independently reviewed by Rene van Gijlswijk, an LCA expert from TNO in the Netherlands and Yvan Liziard, an LCA expert specializing in packaging. The LCA tool is available through Sidel.



### **The Sidel Group**

With over 30,000 machines installed in 190 countries and annual sales of 1.22 billion euros in 2007, the Sidel Group is one of the world leaders in solutions for packaging liquid foods including water, soft drinks, milk, sensitive beverages, edible oil, beer and other alcoholic beverages. The packaging solutions include PET bottles, glass bottles and cans. Sidel currently has production facilities in a total of twelve countries as well as sales and service branches centrally located in some 28 countries. Worldwide, more than 5,500 Sidel employees supply customers with equipment and expertise including package design, line engineering, machinery and related services. Learn more at [www.sidel.com](http://www.sidel.com)

### **RDC-Environment**

Founded in 1992, RDC-Environment specializes in conducting complex studies that require a new approach to resolve environmental problems and to establish sustainable development strategies. RDC has worked in all three Belgian regions, in France and with the European Commission. Its main areas of activity are: Life Cycle Assessment (LCA) and cost-benefit analyses for waste management, environmental impact studies, assistance with eco-construction (HQE), energy audits and advice. More information at [www.rdcenvironment.be](http://www.rdcenvironment.be)

### **Martens Brewery**

Martens Brewery is the oldest brewery in Limburg, Belgium. Building on 250 years of experience it is the most dynamic brewery in the country. Since 1758, eighth generations of Martens brewers continued to modernise the company while respecting the ancient traditions of beer brewing. For more information, visit [www.martens.be](http://www.martens.be)

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