



February 16, 2009

John Brooks
 Technical Director
 ZORK Pty Ltd
 7 Hackney Rd
 Hackney
 SA 5069

Re: Carbon Footprint of ZORK Closures

Dear John,

Provisor was engaged by ZORK to estimate the Life Cycle Greenhouse Gas emissions associated with the ZORK STL and ZORK SPK closures.

Provisor developed a streamlined greenhouse gas (GHG) life cycle assessment calculator for ZORK using MS Excel. The calculator evaluates the GHG emissions associated with the production of a number of ZORK closures on a cradle-to-gate¹ basis.

Using the data provided by ZORK, from both their operations and their suppliers operations, the greenhouse gas emissions associated with the ZORK closures were estimated. These results are presented in the table below in units of carbon dioxide equivalent (CO₂-e). Note that the assessment completed by Provisor does not meet the requirements of ISO 14044 as an independent review was not completed as part of this study.

ZORK Closures	Raw Materials (kg CO ₂ -e per ZORK Closure)	Box Packaging (kg CO ₂ -e per ZORK Closure)	Manufacturing (kg CO ₂ -e per ZORK Closure)	Warehouse (kg CO ₂ -e per ZORK Closure)	Production Sub Total (kg CO ₂ -e per ZORK Closure)
ZORK SPK - Premium	0.034	0.003	0.021	0.0001	0.06
ZORK STL	0.021	0.002	0.014	0.0001	0.04

These results are presented on the basis of ZORK operating at commercial production quantities for all closure types. Other non processing emissions, such as business air travel, have been calculated for ZORK, but are not included in the table above.

The emissions associated with the ZORK STL are comparable to aluminium screw cap closures, with ZORK being slightly better than screw cap closures manufactured from a high proportion of virgin aluminium.

The ZORK SPK closure exhibits approximately 40% less greenhouse gas emissions than those associated with the traditional sparkling wine closure which is made up of a technical cork, wire muselet and foil covering.

¹ Cradle-to-gate is an assessment of a partial product life cycle from manufacture ('cradle') to the factory gate (i.e., before it is transported to the consumer). The use phase and disposal phase of the product are omitted.

Carbon Footprint of Wine Closures by Type

