



RingCycles™ vs. Paperboard:



# WHICH PACKAGE IS MORE SUSTAINABLE?



**RingCycles™**  
A PCR Solution From Hi-Cone

show sustainable advantages  
in every impact category studied!

50% post-consumer recycled (PCR) carrier (4g) vs. Open Format Paperboard (30g)



## Substantially Lower Climate Impact

RingCycles™ contributes  
**71% LESS**  
Greenhouse Gas (GHG)  
to climate change



## Lower Power Requirements

**89% LESS**  
energy is consumed during  
RingCycles™ manufacturing and use



## Lower Fossil Fuel Consumption

RingCycles™ uses  
**51% LESS**  
non-renewable energy  
in production and use



## Important Water Savings

**72% LESS**  
water is needed to  
manufacture and  
use RingCycles™



## Less Waste for Landfills

RingCycles™ contributes  
**86% LESS**  
solid waste to landfills



## Savings Continue During Transport

RingCycles™ are  
**87% LIGHTER**  
than paperboard and reduce  
fuel costs and transport emissions



**RingCycles™**  
A PCR Solution From Hi-Cone

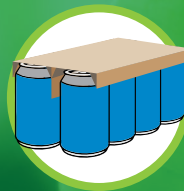
# Overall, RingCycles™ are substantially more sustainable than Paperboard!

\*Analysis performed per 1,000 retail units for the packages described, in this case 8-pks of 33cl cans. Results provided by Franklin Associates, a Division of Eastern Research Group, Inc.; LCA Study.

[hi-cone.com](http://hi-cone.com)



vs.



**50% post-consumer recycled (PCR) carrier (4g) vs. Open Format Paperboard (30g)**

**GLOBAL WARMING POTENTIAL**



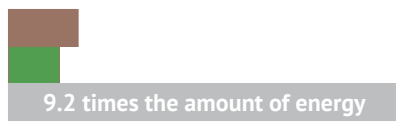
Greenhouse gases / GHG



**TOTAL ENERGY DEMAND**



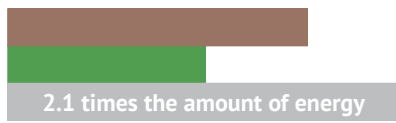
Cumulative energy used



**NON-RENEWABLE ENERGY DEMAND**



Cumulative non-renewable energy used



**WATER CONSUMPTION**



Cumulative water usage



**SOLID WASTE**



Total of all solid waste generated by life cycle processes



**SAVINGS CONTINUE DURING TRANSPORT**



Total weight in transit



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**We have found a way to make a great product even better.**

Hi-Cone has adopted a science-based approach to evaluating different packaging types. Life Cycle Assessments (LCA) are the standard for quantifying environmental impacts. Working with LCA industry expert, Franklin Associates, we commissioned a study to compare our standard Hi-Cone carrier products to the new RingCycles™ made with 50% PCR. We then compared RingCycles™ to other packaging formats.

**The Right Choice!**

RingCycles™ are made using 50% post-consumer recycled resin. Compared to virgin, PCR production uses:

- 90% less non-renewable energy
- 83% less water consumption
- emits 75% less greenhouse gases
- creates 43% less solid waste vs. virgin plastic

**What's Included in an LCA?**

An LCA takes into account the cradle-to-grave journey of the material. In the case of our carrier, that is the raw material extraction (oil), raw materials production (at our resin supplier or PCR resin supplier), carrier converting (production at Hi-Cone) and carrier application (at our customer using Hi-Cone equipment). To compare the impact of using PCR, the raw materials extraction (or in this case, collection) and production elements were recalculated.

Considerations are also made on how the carrier is treated at end-of-life, using country-level disposal statistics on whether the carrier is recycled, landfilled, incinerated with energy recovery, etc. At every stage, the inputs of petroleum, water, electricity and natural gas are considered along with the process air emissions, water discharges and solid waste.

**Hi-Cone carriers now made with 50% recycled content have advantages over competitive offerings in every environmental impact category. RingCycles™ is the best choice for sustainable packaging!**