

Project Zon

27 May 2008



Products in perspective

- Pouch
- Tetra Pak
- Aluminium can
- PET bottle

(Samples collected; 200 to 330 ml volume. Normalised for 200 ml before calculations.)

	Volume ml	Total Actual weight gm	Normalised weight for 200ml gm
Tetra Pak- Budgens'	200	9.5	9.5
Aluminium can - Red Bull	250	12.0	9.6
Pouch	200	7.7	7.7
Bottle- ASDA still water	330	20.1	12.2

Red Bull Can

Can weight	11.5gm
Opener with rivet	0.5gm
Height	13.5cm
Outer diameter	5.2cm
Actual volume	250ml
Total Weight	12 gm
Normalised weight for 200ml	9.6gm



Budgen's Tetra Pak for orange juice

Tetra Pak	9.3gm
Straw	0.2gm
Outer secondary packing	2.4gm
Carton for packing 9x3x200ml	70gm
Dimensions	12cmx5cmx3.6cm
Weight actual/normalised	9.5gm
Actual volume	200 ml



ASDA still water

Bottle weight	16.6 gm
Label	0.1 gm
Cap	3.1 gm
Liner seal	0.3 gm
Height	15 cm
Outer diameter	3.5 cm
Inner diameter	3.2 cm
Secondary packing film for six bottles	9.3 gm
Actual volume	330 ml
Actual weight	20.1 gm
Normalised weight	12.2 gm



IPN pouch

Boat	1.18 gm
Cap	0.84 gm
Spout	0.61 gm
Film	5.03 gm
Dimensions	150x110x30* mm
Display box	60 gm
Carton box	400 gm
Volume	200 ml
Total Weight	7.7 gm

Pictures here do not represent the actual pouch that was tested

* Bottom gusset



Analysis and interpretation of results

Pack Form	Carbon Dioxide (gms CO ₂)	All Greenhouse Gases (gms CO ₂ equivalent)
Tetra Pak	143	150
Pouch	60	67
PET Bottle	83	95
Aluminium Can	80	100

Disclaimer and Main Caveats

1. This fast track study has been made using information available from the public domain, SimaPro software and that provided by IPN Holdings - research on the life cycle of any of the four pack forms included in this study has been limited
2. None of the materials used, manufacturing and any other processes, secondary raw materials and processes have been audited. All the calculations are based on notional processes and general information available in the industry.
3. All numbers and results of this study are high level and only for directional purpose. Such numbers are meant only for internal use within IPN Holdings and not for any declaration, publications or making claims of any nature.
4. Entire data for energy consumption, transportation and disposal etc has also been drawn from general information available in the industry or from standard databases where available.
5. As agreed, the disposal route for the pouch, Tetra Pak and PET bottle and their secondary packaging was chosen as incineration. The disposal route for aluminium cans was chosen to be recycling. This was agreed with IPN Holdings BV in advance.
6. In the interest of time and to the extent the information was made available, some materials consumed in very small quantities (e.g. some adhesives, colourants and inks etc.) and other things such as exact process energy consumption and emission etc. (e.g. for lamination) for pouches were not included except for tetra Pak where most of such information was available through standard sources.
7. Due to absence of reliable information relating with the washing, printing & coating during the production of Aluminium Cans, these steps were not taken into LCA Calculations.
8. Although generally indicating trend and relative carbon and green house gas emissions open for extrapolation, the exact numbers generated relate only with the set of samples used for physical analysis.
9. Fixed transportation distances were assumed for all the pack forms under the study as follows: Mode: 32t Euro truck, Inbound: 1000km ; Outbound: 500km

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