

Powertray

LIFE CYCLE CARBON FOOTPRINT ANALYSIS

The “carbon footprint” of a manufacturing process can be regarded as a quantitative measurement of the overall impact that the operation has on the environment with regard to greenhouse gas (GHG) generation. This measurement relates to the sum of specifically defined carbon compounds (greenhouse gases) that are generated or consumed in the process. Results of this measurement are typically expressed in terms of carbon dioxide equivalents.

In the case of Powertray products, the overall carbon cycle is inclusive of: 1) fiber preparation; 2) harvesting of wood; 3) paper mill production; 4) converting process; 5) transportation. The unit of measure is pounds of carbon dioxide (CO₂) per ton of product.

Fiber preparation and harvesting: **-(1760) lbs per ton.**

Paper mill production and transport: **1636 lbs per ton.**

Converting process: **88 lbs per ton.**

Net CO₂ emissions per ton: **-(36) lbs per ton.**

Notes:

- 1) Paper mill production and transport data based on independently estimated carbon sequestration data from the CPA Life-Cycle Analysis Summary Report, citing fiber production process for average USA unbleached linerboard mill. In addition, data is based on actual audited full year averages from our mill supplier at .818kg per kg. This low emissions level is due to the mill's low dependence on fossil fuels (28%), and the very abundant use of biomass fuels (72%) for energy generation.
- 2) Fiber preparation and harvesting data is derived from the positive carbon sequestration value of the trees during their life cycle. Our mill policies do not permit acceptance of wood from old-growth forests, rain forests, or forests with high conservation value. The mill has earned multiple certifications including FSC Controlled Wood and Chain of Custody; SFI Fiber sourcing and Chain of custody; PEFC Chain of Custody; and ATFS (American Tree Farm System) Group Certification.
- 3) Wood supplier operations data is independently generated from the Corrugated Packaging Life-Cycle Assessment Summary Report prepared by PE-Americas and Five Winds International. This report estimates the carbon sequestration value for fiber suppliers to typical USA containerboard mills to be .88 kg per kg product (1760 lbs carbon sequestered per ton to containerboard product manufactured).
- 4) Powertray converting emission data based on Peerless M40T machine and inside material transfer energy usage.

- 5) Average sulfur dioxide and particulate emissions from the Powertray paperboard mill source is only 20% compared to other USA coated unbleached kraft mills.

NET CARBON BALANCE- Based on the measured Powertray converting operation, the measured carbon emissions per ton from the paper mill operations, and the independently estimated carbon sequestration data from a generic mill fiber procurement cycle, the net carbon impact for the Powertray production cycle is projected to be a small reduction in GHG **-(36) lbs CO2 equivalents per ton produced.**

For additional information on the life cycle analysis of Powertray meat, poultry, and produce trays please contact:

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