

FEFCO Technical Information Sheet - "Carbon Footprint" of Corrugated Packaging

Introduction

The "carbon footprint" of a product is understood as the sum of all the greenhouse gas emissions occurring at each stage of the life cycle of that product. There is considerable interest, particularly in the retail sector, in providing information to consumers on this environmental aspect. Reducing greenhouse gas emissions and hence mitigating the effects of climate change is seen as the pre-eminent environmental objective. Provision of consumer information on this specific environmental aspect is seen as consistent with this objective, linked with the aim of furthering sustainable production and consumption.

However in the context of an approach based on life cycle thinking, the carbon footprint is still only one element of the environmental impact of a product and in making comparisons other aspects, such as resource efficiencies achieved through recycling, should also be considered.

The Development Process

FEFCO members wish to play their part in the provision of appropriate and accurate information in a coordinated manner. For this reason they have participated with all sectors of the paper and board industry at European level in work coordinated by CEPI to produce the "*Framework for the development of Carbon footprints for paper and board products*". FEFCO then further collaborated with paper and board converters at European level through their trade association CITPA to produce a common methodology for the converting sector. Based on the CEPI Framework and the CITPA methodology it has now been possible to calculate an average carbon footprint for corrugated packaging produced in Europe.

We consider that the methodology used is in line with BSI PAS 2050.

Use of the Carbon Footprint Data

The key to the development of meaningful and accurate data for the corrugated packaging producing sector is the use of the FEFCO/CCB European Database for Corrugated Board Life Cycle Studies (latest report 2009). This widely used and well-respected database covers European production of corrugated packaging and the papers, both virgin and recycled, used in its manufacture. Given that packaging will only form a relatively minor element of the total "footprint" of a product, it is considered that the provision of soundly-based average data is by far the best approach for this element. Calculating carbon footprints for specific constructions of corrugated board involves making decisions on allocations which may be arbitrary and lead to misleading results, a problem which the use of the European Database avoids. Note that the basis of the database is "cradle to gate" and transport from corrugated plant to the customer is not included.

Key Aspects of the Carbon Footprint of Paper and Board Products

All paper and board products have two unique positive aspects:

- they are based on a renewable raw material, using as a starting point the capacity of forests to bind CO₂;
- they store carbon and, furthermore, the recycling of paper and board products prevents this carbon from returning to the atmosphere as CO₂.

These aspects are a vital part of the CEPI Framework used to calculate the carbon footprint of corrugated products.

Provision of Data

The results of the calculation are now available and can be used by those in the supply chain who are directly involved in generating carbon footprint data for packed products involving corrugated packaging.

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