

ENVIRONMENTAL PRODUCT DECLARATION - PULP

Product	UPM FRB Euca (BEKP)
Company	UPM-Kymmene Corporation
Site	Fray Bentos

Information gathered from **1.1. 2010** to **31.12.2010**

Environmental Management

- Certified environmental management system at the mill: **ISO 14001**
- Company systems ensure traceability of the origin of wood by **FSC Chain of custody**
- **100%** FSC certified pulp (mixed sources): **81%** FSC certified wood raw material and **19%** controlled wood from non-controversial sources.

Copies of certificates are available upon request.

Environmental indicators

The figures are calculated according to the Environmental Monitoring Plan approved by the national environmental authorities.

Water	COD	5.0	Kg/ADt
	AOX	0.04	Kg/ADt
	N _{Tot}	0.04	Kg/ADt
	P _{Tot}	0.019	Kg/ADt
	TSS	0.3	Kg/ADt
	Effluent flow	20.5	m ³ /ADt

Solid waste landfilled **25** BDKg/ADt

Air	SO ₂	0.07	Kg/ADt
	TRS	0.003	KgS/ADt
	NO _x	1.8	Kg/ADt
	CO ₂ (fossil)	108	Kg/ADt

Contact information

Name: Inés Eluén
 Phone: +598 56 20100 int. 412
 e-mail: ines.eluen@upm.com

Product features

Product: Bleached Eucalyptus Kraft Pulp (ECF bleaching)

Raw material: 100% Eucalyptus from sustainably managed plantations

Other certificates:

- ISO 9001 Quality Management
- OHSAS 18001 Health and Safety
- ISO 22001 Product safety
- EN 16001 Energy efficiency



Electricity use

Pulp mill electricity consumption	465	kWh/ADt
Net electricity sales (*)	382	kWh/ADt
from which, net sales to grid	177	kWh/ADt

(*) On annual balance, the mill is a net electricity producer. Net electricity sales include national grid and sales for bleaching chemicals production (both for pulp mill use and export).

UPM CARBON FOOTPRINT INFORMATION - PULP

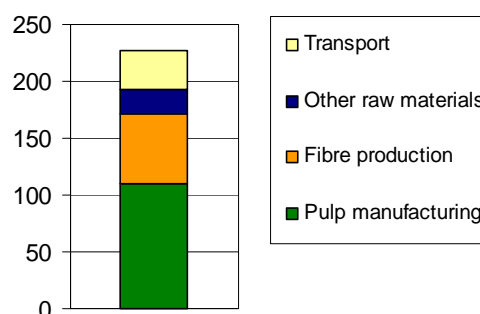
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Carbon Footprint

- UPM calculates the Carbon Footprint of its pulp products based on the ten elements of the Carbon Footprint Framework for Paper and Board Products developed by CEPI (the Confederation of European Paper Industries). Detailed information on the CEPI Framework can be found at www.cepi.org.
- The data used in the calculation are based on annual averages for the pulp mill, including bleaching chemicals production in-site.
- GHG = greenhouse gas. UPM figures refer only to emissions of fossil CO₂.

Carbon Footprint of Fray Bentos mill
[kg fossil CO₂ per tonne of pulp]



Ten elements of the CEPI Framework (See next page for remarks and explanations)	Fossil CO ₂ (kg/ADT of pulp)	Biogenic CO ₂ (kg/ADT of pulp)
1. Carbon sequestration in the forest		1.490
2. Carbon stored in the product		1.650
Net sequestration of biomass carbon		
3. GHG emissions from pulp production	110	
4. GHG emissions associated with producing virgin or recovered fibre	60	
5. GHG emissions associated with producing other raw materials	20	
6. GHG emissions associated with purchased electricity and steam *)	0	
7. Transport-related GHG emissions (excl. delivery to customer)	40	
Total fossil CO₂ emissions	230	
8. GHG emissions attributable to product use (e.g. printing)	-	
9. GHG emissions attributable to end-of-life-management of products	-	
10. Avoided emissions *)	70	

*) Fray Bentos produces surplus electricity. The CO₂ factor used for avoided emissions is 247 g CO₂ per kWh.

Remarks and explanations to the ten elements of CEPI Framework

1. Carbon sequestration in the forest

The IPCC (International Panel on Climate Change) formula is used to determine the amount of CO₂ sequestered in the forest.

For UPM, forest certification and traceability of fibre supply using certified Chain of Custodies ensures the sustainable management of forests, and the long-term sequestration of carbon in them via the process of photosynthesis.

2. Carbon stored in the product

Biogenic carbon is stored in products produced from wood fibre. The IPCC (International Panel on Climate Change) formula is used to determine the amount of CO₂ that is stored in the pulp product.

3. GHG emissions from pulp production

UPM includes data on fossil CO₂ emissions from combustion of fossil fuels at pulp manufacturing facilities.

4. GHG emissions associated with generating the supply of wood or recovered fibre

This includes fossil CO₂ emissions from all forestry operation, including nursery, silviculture and harvesting, and the production of purchased chips.

5. GHG emissions associated with producing other raw materials

Includes fossil CO₂ emissions generated during the manufacturing of non-wood-based raw materials: chemicals which are used in an amount above 10 kg per tonne of pulp.

6. GHG emissions associated with purchased electricity and steam

Includes fossil CO₂ emissions associated with purchased electricity, steam and heat used for pulp and paper production.

Due to differences in fuel mix used to produce electricity there are significant differences in the emission factors used to convert grid electricity to its equivalent CO₂. UPM uses country specific emission conversion factors which are based on the real power supply to UPM mills in each respective country. If relevant, the factor used is given below the table on the previous page.

7. Transport-related GHG emissions

Includes fossil CO₂ emissions associated with inbound transports of main raw materials and final products from the pulp mill to the export harbour.

CO₂ emissions from transportation of pulp from export harbour to the customer is not included since this depends on the transportation modes used and distances to specific customer locations. This part of the element can be calculated for a specific case on request.

8. GHG emissions attributable to product use (e.g. printing)

This element is not included within UPM's scope as a pulp manufacturer.

9. GHG emissions attributable to end-of-life-management of products

This element is not included within UPM's scope as a pulp manufacturer.

10. Avoided emissions (e.g. superior energy efficiency or carbon offsetting measures)

This element includes avoided emissions from the pulp mill surplus electricity sold to the grid, according to the country specific emission conversion factor.