

# ENVIRONMENTAL PRODUCT DECLARATION

## UPM FRAY BENTOS pulp mill

PRODUCTS: UPM Euca



Information gathered from 1.1.2018 to 31.12.2018

Date of issue: 30.03.2019



### ENVIRONMENTAL MANAGEMENT & CERTIFICATION

- Certified environmental management system at the mill: ISO 14001 (2009), EMAS (2012)
- The traceability of the origin of wood is ensured by FSC® and PEFC™ Chain of Custody and EU Timber Regulation compliance
- Copies of certificates are available in our Certificate Finder ([www.upm.com/EN/RESPONSIBILITY](http://www.upm.com/EN/RESPONSIBILITY))
- FSC and PEFC certified pulp products on request and based on availability.
- Pulp products approved for use in EU Ecolabel and Nordic Ecolabel paper products.
- Copies of certificates are available in our [Certificate Finder](#).

### ENVIRONMENTAL PARAMETERS

The figures are calculated according to the requirements of the national environmental authorities. Figures are average data of the total chemical pulp production of the site.

### PRODUCT FEATURES

**Product:**

Bleached Eucalyptus Kraft Pulp (ECF)

**Raw material:**

100% Eucalyptus from responsibly managed plantations

### OTHER MANAGEMENT SYSTEMS

- ISO 9001 Quality
- OHSAS 18001 Health and Safety
- ISO 22000 Food Safety (scope: food contact)
- ISO 50001 Energy Efficiency

Water		Air	
COD	4.1 kg/ADt	SO <sub>2</sub>	0.05 kg/ADt
AOX	0.027 kg/ADt	TRS	0.008 kgS/ADt
N <sub>Tot</sub>	0.043 kg/ADt	NO <sub>x</sub>	1.41 kg/ADt
P <sub>Tot</sub>	0.014 kg/ADt	CO <sub>2</sub> (fossil)	120 kg/ADt
TSS	0.25 kg/ADt	CO <sub>2</sub> (biogenic)	2 110 kg/ADt
Effluent flow	16.8 m <sup>3</sup> /ADt	Solid waste landfilled	26.6 BDkg/ADt

### ENERGY MANAGEMENT

Steam and electricity for the pulp mill is produced in the mill's own recovery boiler, by using renewable fuels from own process. Surplus heat and electricity is sold.

Surplus heat	123 kWh/ADt
Surplus electricity	302 kWh/ADt

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# UPM CARBON FOOTPRINT INFORMATION

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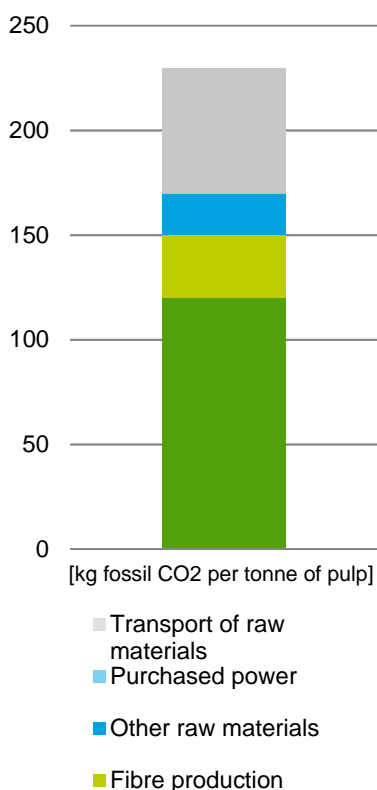


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### CARBON FOOTPRINT

- 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](http://www.cepi.org).
- The data used in the calculation are based on annual averages for the pulp mill, including bleaching chemicals production on-site.
- GHG = greenhouse gas. UPM figures refer only to emissions of fossil CO<sub>2</sub>.



Ten elements of the CEPI Framework (See next page for remarks and explanations)	Fossil CO <sub>2</sub> (kg/ADt of pulp)	Biogenic CO <sub>2</sub> (kg/ADt of pulp)
1. Carbon sequestration in the forest		1520
2. Carbon stored in the product		1560
<b>Net sequestration of biomass carbon</b>		<b>3080</b>
3. GHG emissions from pulp production	120	2110
4. GHG emissions associated with producing virgin or recovered fibre	30	-
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)	50	-
<b>Total CO<sub>2</sub> emissions</b>	<b>220</b>	<b>2110</b>
8. GHG emissions attributable to product use (e.g. printing)	-	-
9. GHG emissions attributable to end-of-life-management of products	-	-
10. Avoided emissions	10	-

\*) Fray Bentos produces surplus electricity.

Remarks and explanations to the ten elements of CEPI Framework

**1. Carbon sequestration in the forest**

- For UPM, forest certification and traceability of fibre supply using certified Chain of Custodies ensures the sustainable management of forests. This ensures that carbon stocks in forests remain stable or even improve over time. In many cases it is difficult to isolate this effect attributable to a specific product and to specific forest area. However, for Fray Bentos a detailed assessment has been done.

**2. Carbon stored in the product**

- Due to the capacity of forests to bind CO<sub>2</sub>, biogenic carbon is stored in pulp produced from wood fibre. The IPCC (International Panel on Climate Change) formula is used to determine the amount of CO<sub>2</sub> that is stored in the pulp product. Recycling of further processed products delays this CO<sub>2</sub> from returning to the atmosphere

**3. GHG emissions from pulp production**

- UPM includes data on CO<sub>2</sub> emissions from combustion of fossil and biomass based fuels separately at pulp manufacturing facilities.

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

- This includes fossil CO<sub>2</sub> 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 CO<sub>2</sub> 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 CO<sub>2</sub> emissions associated with purchased electricity, steam and heat used for pulp and paper production.
- Usually pulp mills are more than self-sufficient in energy generation, thus this toe is zero.

**7. Transport-related GHG emissions**

- Includes fossil CO<sub>2</sub> emissions associated with inbound transports of main raw materials.
- CO<sub>2</sub> emissions from transportation of pulp to the customer are 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. If the surplus electricity is used on-site for the production of other products, we have not considered this as a carbon offset.