

ENVIRONMENTAL PRODUCT DECLARATION

UPM RAUMACELL

PRODUCTS: **UPM BioBright**, **UPM BioBright Treated**
UPM BioBright Airlaid, **UPM BioBright Airlaid Treated**
UPM BioKraft



Information gathered from 1.1.2018 to 31.12.2018

Date of issue: 17.4.2019



ENVIRONMENTAL MANAGEMENT & CERTIFICATION

- Certified environmental management system at the mill: ISO 14001 (2000), EMAS (2001)
- 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)
- FSC and PEFC certified pulp products on request and based on availability.
- Products fulfill EU Ecolabel and all Nordic Ecolabel criteria

ENVIRONMENTAL PARAMETERS

The figures include fluff pulp production at Rauma mill and production of purchased chemical pulp.

Water		Air	
COD	13.6 kg/ADt	SO ₂ (incl. TRS)	0.44 kg/ADt
AOX	0.09 kg/ADt	NO _x	1.99 kg/ADt
N _{Tot}	0.10 kg/ADt	CO ₂ (fossil)	160 kg/ADt
P _{Tot}	0.008 kg/ADt	CO ₂ (biogenic)	2970 kg/ADt
TSS	0.43 kg/ADt		
Effluent flow	44 m ³ /ADt	Solid waste landfilled	8.5 BDkg/ADt

PRODUCT FEATURES

Product:

ECF bleached fluff pulp

Raw material:

Chemical pulp from responsibly managed forests

Other information:

- ISO 9001 Quality Management
- OHSAS 18001 Health and Safety

UPM CARBON FOOTPRINT INFORMATION

UPM RAUMACELL

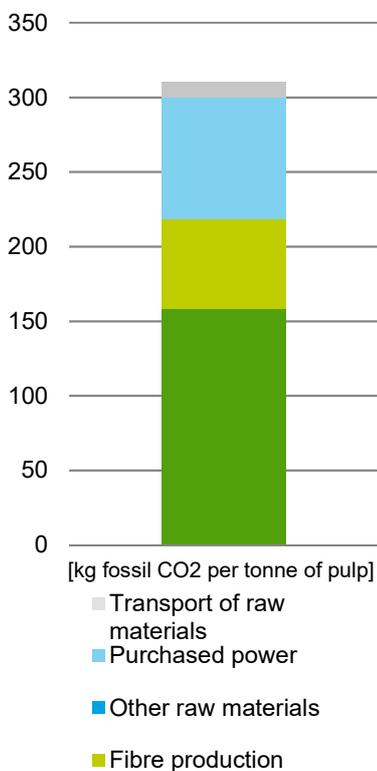
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Carbon footprint of fluff pulp



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 is based on annual averages for the fluff pulp production and production of purchased chemical pulp.
- GHG = greenhouse gas. UPM figures refer only to emissions of fossil CO₂.

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		0
2. Carbon stored in the product		1690
Net sequestration of biomass carbon		
3. GHG emissions from pulp production	160	
4. GHG emissions associated with producing virgin or recovered fibre	60	
5. GHG emissions associated with producing other raw materials	0	
6. GHG emissions associated with purchased electricity and steam *)	80	
7. Transport-related GHG emissions (excl. delivery to customer)	10	
Total fossil CO₂ emissions	310	
8. GHG emissions attributable to product use (e.g. printing)	–	
9. GHG emissions attributable to end-of-life-management of products	–	
10. Avoided emissions	–	

*) Due to possible sales of guarantee of origin related to pulp suppliers' electricity generation, the CO₂ emissions have been calculated using the national residual mix.

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 overtime. However in many cases it is difficult to isolate this effect attributable to a specific product and to specific forest area.

2. Carbon stored in the product

- Due to the capacity of forests to bind CO₂, 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 CO₂ that is stored in the pulp product. Recycling of further processed products delays this CO₂ from returning to the atmosphere.

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.
- In case the mill or the external pulp mill is selling Guarantees of Origin related to its green electricity production, this amount of electricity is multiplied with the national residual CO₂ factor for grid electricity and included in toe 6.
- Usually pulp mills are more than self-sufficient in energy generation, thus this toe is zero.

7. Transport-related GHG emissions

- Includes fossil CO₂ emissions associated with inbound transports of main raw materials.
- CO₂ 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 is not currently included in UPM's scope.