paper profile

UPM

VERIFIED BY kiwa

Product	**WFU paper** (New Future Premium, New Future Multi, New Future Laser)
Company	**UPM-Kymmene Corporation**
Mill	**Nordland Papier**

Information gathered from 1.1.2018 to 31.12.2018

Date of issue 11.4.2019

Environmental product declaration for paper

Environmental Management

Certified environmental management system at the mill (since)**:** **ISO 14001** (1998), **EMAS** (1998)

Company systems ensure traceability of the origin of wood **x** **yes** __ **no** __ **100% recovered paper**

Mill has certified Chain of Custody for FSC and PEFC in place. Certified paper based on request and availability. Other certified management systems: ISO 50001 (Energy)**, OHSAS 18001** (Health&Safety), **ISO 9001** (Quality). **Products granted with the EU Eco-label.**

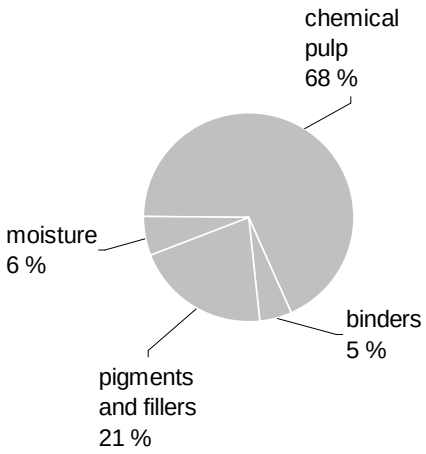
Copies of certificates available at www.upm.com

Environmental parameters

The figures are based on methods and procedures of measurement approved by the local (or national) environmental regulators at the production site.
The figures include both paper and pulp production.

Water	**COD**	**6.1**	kg/tonne
	AOX	**0.03**	kg/tonne
	N_{Tot}	**0.056**	kg/tonne
	P_{Tot}	**0.031**	kg/tonne
Air	**SO_2**	**0.17**	kg/tonne
	NO_x	**1.21**	kg/tonne
	CO_2 (fossil)	**370**	kg/tonne
Solid waste landfilled		**16.2**	BDkg/tonne
Purchased electricity consumption			
/tonne of final product		**560**	kWh

Product composition



This product contains biomass carbon, equivalent to 1250 kg of CO2 per tonne of product.

More information

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UPM CARBON FOOTPRINT INFORMATION

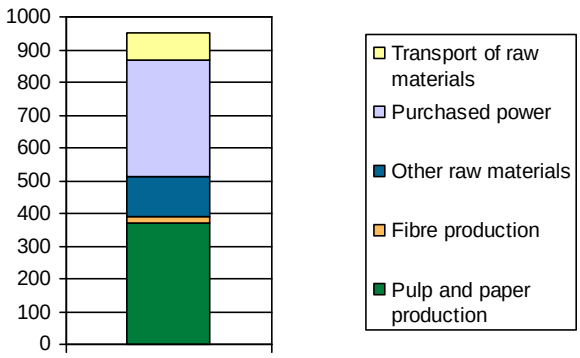
Product	**WFU paper** (New Future Premium, New Future Multi, New Future Laser)
Company	**UPM-Kymmene Corporation**
Site	**Nordland Papier**

Information gathered from **1.1.2018** to **31.12.2018**

Carbon Footprint

- UPM calculates the Carbon Footprint of its paper 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 a paper machine line.
- GHG = greenhouse gas. UPM figures refer only to emissions of fossil CO_2.

Carbon footprint of Nordland WFU
[kg fossil CO2 per tonne of paper]



Ten elements of the CEPI Framework (See next page for remarks and explanations)	Fossil CO_2 (kg/tonne of paper)	Biogenic CO_2 (kg/tonne of paper)
1. Carbon sequestration in the forest		0
2. Carbon stored in the product		1250
Net sequestration of biomass carbon		**1250**
3. GHG emissions from pulp and paper production	370	
4. GHG emissions associated with producing virgin or recovered fibre	20	
5. GHG emissions associated with producing other raw materials	120	
6. GHG emissions associated with purchased electricity and steam *)	360	
7. Transport-related GHG emissions (excl. delivery to customer)	80	
Total fossil CO_2 emissions	**950**	
8. GHG emissions attributable to product use (e.g. printing)	-	
9. GHG emissions attributable to end-of-life-management of products	-	
10. Avoided emissions	-	

*) The CO_2 factor used for purchased power is 646 g CO_2 per kWh.

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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. 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 paper 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 paper product. Recycling of further processed products delays this CO2 from returning to the atmosphere.

3. GHG emissions from pulp and paper production

- UPM includes data on fossil CO_2 emissions from combustion of fossil fuels at pulp and paper manufacturing facilities, including that for external pulp production (production of purchased pulp).

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

- For wood fibre, this includes fossil CO_2 emissions from forest management and harvesting activities.
- For recovered fibre, this includes fossil CO_2 emissions from the collection, sorting and processing of recovered fibre before it enters the recycling process.

5. GHG emissions associated with producing other raw materials

- Includes fossil CO_2 emissions generated during the manufacturing of non-wood-based raw materials (pigments or chemicals which are used in an amount above 10 kg per tonne of paper) and fuels.

6. GHG emissions associated with purchased electricity and steam

- Includes fossil CO_2 emissions associated with purchased electricity, steam and heat used for pulp and paper production, including that for external pulp production (production of purchased pulp)
- 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.
- Due to differences in fuel mix used to produce electricity there are significant differences in the emission factors used to convert grid electricity to it's equivalent CO_2. UPM uses country specific emission conversion factors which are based on the real power supply to UPM mills in each respective country. The factor used is given below the table on the previous page.

7. Transport-related GHG emissions

- Includes fossil CO_2 emissions associated with in- and outbound transports of raw materials and final products from the paper mill, along the value chain.
- At UPM, this figure includes the transportation of wood, pulp, recovered paper and pigments to UPM mills.
- CO_2 emissions from transportation of paper 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 paper manufacturer.

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

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

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

- This element is not currently included in UPM's scope.