



paper  
profile

A voluntary Product  
Environmental Datasheet  
which aims to help the pulp,  
paper and paperboard buyer  
to make responsible choices



# *The sustainable way to make responsible paper decisions*

## ABOUT PAPER PROFILE

In co-operation with distributors and industry associations, leading pulp, paper and paperboard manufacturers have developed a uniform datasheet of vital environmental product information. This product datasheet format, which is continually being developed, is called Paper Profile. Issued for individual products, the single-page datasheet gives essential information regarding the composition of the product, key environmental parameters, environmental management and wood procurement.

## CONTINUAL IMPROVEMENTS

The pulp, paper and paperboard manufacturers who participate in Paper Profile are committed to minimise the environmental impact of their activities. Measures taken include significant improvements in the production process as well as emission control to air and water. Biofuels and production residues are to a large extent used for energy in the production process.



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*“Pulp, paper and paperboard products are made of renewable and biodegradable raw materials and are recyclable.”*

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## UNIFORM ENVIRONMENTAL REPORTING

The key idea behind Paper Profile is to provide pulp, paper and paperboard buyers with relevant and uniform environmental information, enabling more conscious choices. The pulp and paper industry has a long tradition of open environmental reporting to national authorities and other stakeholders. In today's increasingly internationalised pulp, paper and paperboard markets, this requires a uniform approach to reporting variables and measuring principles. To a large extent, these are also strictly regulated by national and international environmental bodies.

## LIMITS OF COMPARABILITY

Environmental matters are complex and specific figures can not always be compared without taking other environmental aspects into account on a larger scale e.g. site specific considerations. Furthermore, different pulp, paper and paperboard manufacturing processes have different environmental impacts and therefore cannot always be directly compared.

Use *change picture* command  
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PRODUCT \_\_\_\_\_

COMPANY \_\_\_\_\_

MILL \_\_\_\_\_

Information gathered from \_\_\_\_\_ to \_\_\_\_\_ Date of issue \_\_\_\_\_

## PRODUCT ENVIRONMENTAL DATASHEET FOR PAPER / PAPERBOARD

### ENVIRONMENTAL MANAGEMENT

Certified environmental management system at \_\_\_\_\_

Company systems ensure traceability of the origin of wood: YES \_\_\_ NO \_\_\_ 100% RECOVERED PAPER \_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### 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 pulp and paper / paperboard production.

**Water** COD \_\_\_\_\_ kg/tonne  
AOX \_\_\_\_\_ kg/tonne  
NTot \_\_\_\_\_ kg/tonne  
PTot \_\_\_\_\_ kg/tonne

**Air** SO<sub>2</sub> \_\_\_\_\_ kg/tonne  
NO<sub>x</sub> \_\_\_\_\_ kg/tonne  
CO<sub>2</sub> (fossil)\* \_\_\_\_\_ kg/tonne

\*This figure does not represent a full scope 1,2 & 3 of CO<sub>2</sub> footprint and neither of carbon offsetting emissions.

Solid waste landfilled \_\_\_\_\_ BDkg/tonne

Purchased electricity consumption\*  
/tonne of final product \_\_\_\_\_ kWh

\*Any CO<sub>2</sub> fossil emissions related to the purchased electricity are not reported.

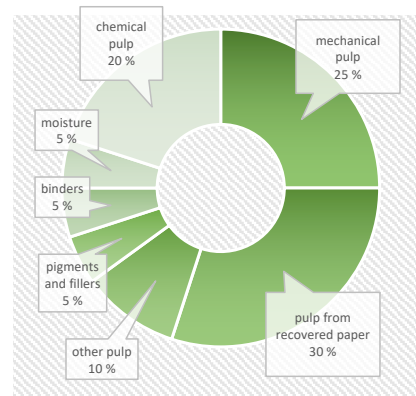
### MORE INFORMATION

Contact \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

### PRODUCT COMPOSITION



This product contains biogenic carbon, equivalent to \_\_\_\_\_ kg of CO<sub>2</sub> per tonne of product.

Phone \_\_\_\_\_

e-mail \_\_\_\_\_



## ENVIRONMENTAL MANAGEMENT SYSTEMS

Environmental management systems are useful tools which ensure a systematic approach to environmental monitoring and continual improvement. They are today regarded as integral to overall business performance.

The certified environmental management systems used by participants in the Paper Profile programme are the ISO 14001 standard and/or the Eco-Management and Audit Scheme (EMAS), which is regulated by the European Union. Both systems cover organisational procedures, procurement, product development, production and distribution. They include both the current status and methods for continuous improvement. In this way, company management can systematically monitor environmental performance, initiate early corrective action, keep track of actions taken and document results.

## ENVIRONMENTAL ASPECTS OF WOOD PROCUREMENT

Environmentally-conscious forest industry companies continually strive to ensure sustainability and the preservation of biodiversity.

Forest certification is a tool to guarantee that the wood used for pulp, paper and paperboard production originates from sustainably managed forests and legal sources.

Currently, the most widely used forest certification systems are the Programme for the Endorsement of Forest Certification schemes (PEFC) and the Forest Stewardship Council (FSC®). Pulp, paper and paperboard industry uses both systems equally.



## ENVIRONMENTAL PARAMETERS

The key parameters declared in the Paper Profile primarily relate to the production of pulp and paper: Emissions to air and water, solid waste landfill and the consumption of purchased electricity. The information provided in the single Paper Profile sheet is based on figures reported to environmental authorities. All the items in the datasheet are explained in detail in the Paper Profile Manual.



The standard parameters (per tonne of paper) reported in the Paper Profile are:

**COD** = *Chemical oxygen demand. The amount of oxygen consumed in complete chemical oxidation of matter present in wastewater.*

Organic substances released from industrial or agricultural activities consume oxygen in water during degradation. Low oxygen content in fresh and sea water can have an adverse effect on plant and animal life.

**AOX** = *Adsorbable organic halogen compounds, reported as the total amount of chlorine bound to organic compounds in wastewater.*

Such compounds occur naturally, but are also formed in conjunction with the bleaching of chemical pulp. Excess AOX must be limited to a level where it has no environmental impact.

**N<sub>Tot</sub>** = *Total amount of organic and inorganic nitrogen.*

**P<sub>Tot</sub>** = *Total amount of organic and inorganic phosphorus.*

Nitrogen and phosphorus are chemical elements essential for plant and animal life. Both substances occur naturally in wood and are often added in biological treatment plants. Excessive levels released into water can cause nutrient enrichment (eutrophication) and suppress normal oxygen supply.

**SO<sub>2</sub>** = *Sulphur dioxide.*

This gas is generated by burning sulphur-containing fuels and as a by-product in chemical pulping. On contact with moist air, SO<sub>2</sub> forms sulphuric acid, which contributes to acid rain and acidification.

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**NO<sub>x</sub>** = *Nitrogen oxides (NO and NO<sub>2</sub>)*

These gases are produced during combustion. In moist air, nitrogen oxides can form nitric acid which, in turn, is precipitated as acid rain. This nitrogen-containing rain also has a fertilising effect (eutrophication).

**CO<sub>2</sub>** = *In the context of papermaking, fossil carbon dioxide is generated from the combustion of fossil fuels during the production of pulp and paper.*

Increased amounts of carbon dioxide and other greenhouse gases in the atmosphere are gradually reducing the radiation of heat from the surface of our planet. Carbon dioxide is naturally produced through the biological degradation of organic substances, but also through the combustion of fossil fuels such as oil, coal and natural gas. It is mainly the latter that contributes to the greenhouse effect. **Note:** This figure does not represent a full scope 1,2 & 3 of CO<sub>2</sub> footprint and neither of carbon offsetting emissions.

**Solid waste** = *non-liquid waste landfilled (on site and/or elsewhere).*

Organic and inorganic waste materials are defined, calculated and declared as completely dry matter. If not properly managed and controlled, leaks from landfills can contaminate ground water.

**Purchased electricity consumption** = *amount of purchased electricity per produced tonne of paper.*

**Note:** Emissions of SO<sub>2</sub> and NO<sub>x</sub> resulting from external electricity suppliers are not included in the figures reported in the Paper Profile. Also any CO<sub>2</sub> fossil emissions related to the purchased electricity are not reported.

## PRODUCT COMPOSITION

The composition of the pulp, paper and paperboard is declared in a standardised Paper Profile graph. The main raw material used in pulp, paper and paperboard production is wood fibres, originating from own forests or purchased from external sources. Varying amounts of binders, pigments and fillers are also used to provide the required paper characteristics.

Depending on the required product properties, paper or paperboard is produced from fresh fibres (chemical and/or mechanical pulp) and/or recycled fibres (deinked pulp). The terms used for the respective pulping method refer to how the wood fibres are separated.

Pigments and fillers (usually chalk or clay) are used to enhance the print properties and other key parameters. Binders are added to the pulp to join the fillers and pigments to each other and to fibres. Binders also prevent dusting, a phenomenon that can cause significant disturbance in today's sophisticated office and printing systems.

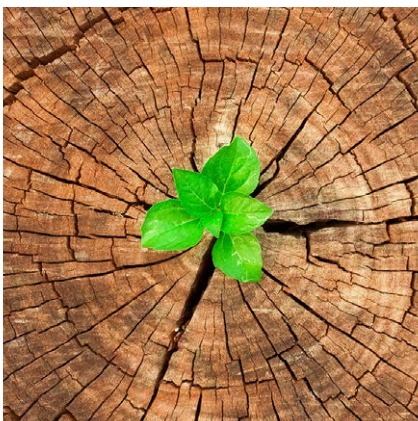


# The members of Paper Profile

The pulp, paper and paperboard manufacturers that participate in Paper Profile are committed to minimising their environmental impact.

Paper Profile is an internationally-harmonised way of communicating environmental performance. A uniform format of an Product Environmental Datasheet throughout the supply chain enhances the basis for a conscious product choice.

For further information, please visit us at [www.paperprofile.com](http://www.paperprofile.com). Regarding the practical implementation of Paper Profile and on-going environmental efforts, please contact the Paper Profile member companies.



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