

## Overview

### Coast Paper's Product List & Green Guide:



Our guide can help you find out all you need to know about specific paper grades.

It includes stock information regarding these environmental attributes. >

### CHOOSING THE RIGHT SHADE OF GREEN

There are several ways a company may choose to express their green side:

- Addressing issues of sustainable forestry by choosing a paper certified by a **forest management program**.
- Addressing landfill issues by choosing papers with **post consumer waste**.
- Addressing water and air quality issues by choosing papers processed **chlorine free**.
- Addressing global warming issues by purchasing paper manufactured **carbon neutral**.
- Addressing the environmental impacts of paper manufacturing by choosing an **ISO14001** approved mill.

**Want to understand paper options that can help you think and be green?  
Here you will learn about:**

#### I. Forest Management/Certification Programs

These organizations oversee certified forests to ensure their renewability for generations to come. Chain of custody numbers protect the source integrity by tracking the product from forest to end user.

[FSC](#) · [PEFC](#) · [SFI](#) · [CSA](#)

#### II. Recycled Content

Recycled papers may contain either **pre** or **post consumer waste**. The **möbius loop** (three arrow symbol) is commonly used on recycled and recyclable materials, but its usage is not monitored.

#### III. Bleaching Process

Wood pulp is naturally discoloured and must be bleached to make white paper. There are methods that minimize harmful side effects on the environment.

[Elemental Chlorine Free \(ECF\)](#) · [Totally Chlorine Free \(TCF\)](#) · [Processed Chlorine Free \(PCF\)](#)

#### IV. Carbon Management

Reducing and offsetting addresses harmful carbon emissions that lead to global warming. Being **carbon neutral** refers to counteracting (offsetting) emissions with **carbon offsets** - investments in projects such as renewable energy, energy efficiency, methane capture, and forest restoration/ reforestation.

#### V. Green Energy

Green energy is electricity generated by renewable resources (e.g. solar, hydro, wind power, biogas).

[Green-e](#)

#### VI. Environmental Management Systems (EMS)

An EMS is designed to evaluate, audit and monitor environmental policy on an ongoing basis.

[ISO 14001](#) · [Green Seal](#) · [EcoLogo™](#) · [Environmental Protection Agency \(EPA\)](#)

## I. Forest Management/Certification Programs

### RESPONSIBLE MANAGEMENT OF FORESTS FOR TODAY AND TOMORROW

Forest certification is an assurance given to a purchaser of wood/paper products that the timber used originates from well managed forests. This means the forest is managed in an environmentally, socially and economically sustainable manner according to the specific organization's standards.

#### Responsible forestry is about:

- Balancing society's increasing demands for forest products and the preservation of forest health and diversity.
- Maintaining forest biodiversity.
- Ensuring regeneration capacity.
- Not causing damage to other ecosystems.

#### Certification programs require two components:

- A **Certified Fibre Supply** which consists of certified forests that have been independently audited to the requirements of a forest certification standard.
- A **Chain of Custody** (COC) number which tracks the certified fibre from the forest to the end user through all stages of processing. This ensures the integrity of the source material and prevents foresters with environment-damaging practices from putting their products into the supply chain. Each member in the supply chain - e.g. the forest, the paper mill, and the printer - must be certified with a COC number to be able to label the product with the certification program logo.



#### FSC - Forest Stewardship Council

- International non-profit organization founded in 1993 in Germany.
- Accredits independent third party organizations (e.g. Smartwood, SGS) to certify forest managers and forest producers to FSC standards.
- Also incorporates elements of social interest, economic viability and indigenous land claims.
- Great North American awareness.



#### PEFC - Program for the Endorsement of Forest Certification schemes

- Independent, non-profit, non-government organization founded in 1999 in France.
- Global umbrella organization which assesses and endorses national forest certification programs such as CSA and SFI.
- Promotes well managed forests through independent third party certification, similar to FSC.
- Greater European awareness.



#### SFI - Sustainable Forestry Initiative

- Established in 1994 by the American Forest & Pulp Association.
- Endorsed by PEFC (requirements set by PEFC and applied for/met by SFI).
- Growing awareness in North America.



#### CSA - Canadian Standards Association

- Not-for-profit membership-based association serving Canada and the global marketplace.
- Forest harvesting standards formed in 1994 by Canadian foresters wanting to establish independent standards for responsible forestry in Canada.
- Meets PEFC standards for forest practices for sustainable growth and development.
- No chain of custody as it encompasses forestry harvesting practices only.

## II. Recycled Content

### CRADLE TO CRADLE AND BACK AGAIN

Recycled content is a blanket term referring to materials that have been reused in the production of a new product. Not all recycled content is created equal. For maximum positive environmental impact, the reused material should have been originally destined for a landfill before being re-appropriated.

**Post Consumer Waste (Post or PCW)** refers to paper that has completed its life cycle to the end user and has re-entered the production process through recycling bin collection.

**Pre Consumer Waste** includes manufacturing waste from envelope converters, binderies, and printed paper that never reached the consumer. Although the material is being recycled, it was not originally destined for a landfill as it had not reached the end user; it was already in the manufacturer's best interest to reuse the material from the perspective of good business sense.



Contains  
recycled content



Product is  
recyclable

#### The Möbius Loop

The **möbius loop** three arrow symbol is the most well known icon of the recycling movement. It is, however, not monitored by any organization. Due to its recognizability, forest certification programs usually offer label variations where any recycled content can be indicated in a möbius loop.

In terms of commonly accepted usage of the möbius loop, a paper must contain recovered materials. The amount may vary considerably, from small percentages of pre consumer waste to 100% post consumer waste. Ideally the amount of post consumer waste should be noted in an accompanying tagline.

A variant of the möbius loop logo indicates that the product is **recyclable**. This simply means that the product is able to be recycled and does not necessarily mean the product contains any recycled content.

## III. Bleaching

### MAKING PAPER WHITE IN A GREEN WAY

When wood is pulped, it is naturally discoloured. The environmental challenge is to bleach the pulp white while minimizing harmful side effects on the environment.

#### Elemental Chlorine Free (ECF)

Pulp is bleached using processes that do not use elemental chlorine gas, significantly reducing the amount of toxins released.

#### Totally Chlorine Free (TCF)

A pulp bleaching process that avoids the use of all chlorine, in elemental or compound form.

#### Processed Chlorine Free (PCF)

Recycled fibers are bleached using this process which is chlorine free. The pulp cannot be called totally chlorine free since the recycled fibres could have been chlorine bleached in their initial use.

## IV. Carbon Management

### FIGHTING CLIMATE CHANGE BY BEING AWARE OF OUR EMISSIONS

Climate change is a result of the accumulation of **greenhouse gases (GHGs)** in the atmosphere. Similar to the way a greenhouse traps air to create a hot and humid environment, GHGs stop heat from radiating into space, thus creating global warming.

Six GHGs identified by the Kyoto Protocol and some of their common sources are:

- **Carbon Dioxide (CO<sub>2</sub>)** - Fossil fuel combustion, deforestation, industrial processes.
- **Methane** - Livestock (e.g. cattle farming), natural gas leakage, organic waste decay in landfills.
- **Nitrous Oxide (N<sub>2</sub>O)** - Nitrogen-based fertilizers, nylon production, burning fossil fuels/wood.
- **Hydrofluorocarbons (HFCs)** and **Perfluorocarbons (PFCs)** - Using or discarding refrigeration equipment, fire extinguishers and air conditioners.
- **Sulphur Hexafluoride (SF<sub>6</sub>)** - Installing, servicing and disposing of circuit breakers, gas-insulated substations and switchgears. It is also used to fill casting forms in the magnesium industry.

Some greenhouse gases have stronger warming potential, so for consistent accounting, emissions are reported as carbon dioxide equivalents or **CO<sub>2</sub>e**. A **carbon footprint** is a measure of the amount of greenhouse gases produced by an activity, an organization or an individual.

#### You can reduce GHGs by:

##### Fuel Switching

Find green energy alternatives.

##### Energy Efficiency

Reduce energy used in manufacturing processes.

##### Closing Assets

Get rid of old, inefficient equipment and facilities.

#### Be Aware!

**Forestry** carbon offsets can be controversial.

Trees are carbon sinks and release CO<sub>2</sub> into the air when they die.

They also do not address the issue of finding alternatives to fossil fuel usage.

#### What is Carbon Neutral?

**Carbon neutral** describes activities with "net zero" emissions, which thus do not increase the greenhouse gases in the atmosphere. This can be done by operating without releasing any GHGs, or by offsetting GHGs released through equivalent reductions elsewhere. Three steps to being carbon neutral are:

**MEASURE** existing emissions · **REDUCE** wherever possible · **OFFSET** any remaining emissions

#### Carbon Offsets

A carbon offset is a credit for a carbon emission. They are investments in initiatives such as the following:

- **Renewable energy** projects include wind farms, hydro or solar energy installations. This can include **methane capture** projects that capture and convert biogas (see V. Green Energy).
- **Energy efficiency** projects replace carbon intensive energy equipment and/or processes with low carbon alternatives.
- **Forestry** projects include protection and restoration of forests as well as reforestation.

By purchasing these credits, you can apply them to your own emissions and reduce your net climate impact. Carbon offsets are bought and sold through brokers, online retailers, and trading platforms. In this evolving market you need to be sure you purchase guaranteed offsets from reputable providers.

#### To find out more...

**Information:** [www.davidsuzuki.org](http://www.davidsuzuki.org) · [www.wbcsd.org](http://www.wbcsd.org) · [www.eccm.uk.com/httpdocs/index.htm](http://www.eccm.uk.com/httpdocs/index.htm)  
[www.myclimate.org/en.html](http://www.myclimate.org/en.html)

**Offsetting organizations:** [www.carbonneutral.com](http://www.carbonneutral.com) · [www.carbonzero.ca](http://www.carbonzero.ca) · [www.econeutral.com](http://www.econeutral.com)  
[www.offsetters.ca](http://www.offsetters.ca) · [www.treecanada.ca](http://www.treecanada.ca) · [www.zerofootprint.com](http://www.zerofootprint.com)

## V. Green Energy

### SUSTAINABLE AND RENEWABLE SOURCES OF ENERGY

Many mills are seeking ways to conserve energy. A small number generate their own green energy; some supplement their power by investing in offsets generated by other companies. Green energy sources include **solar** (sunlight), **hydro** (falling water, **tidal, wave**), and **geothermal** (heat extracted from the earth). **Wind** and **biogas** are two of the sources most commonly employed by mills.

- **Wind power** uses turbines that convert mechanical energy into electricity with a generator. This is the fastest growing energy resource, and is more economical compared to other methods. A large amount of land is required (17 acres to power up to 1,000 homes), but multiple use of land (e.g. farming) is possible.
- **Biogas** captures natural gases (e.g. methane) created by bacteria during the oxygen-less decay of organic matter. The extraction process can convert manure into even higher quality fertilizer.

As a point of interest, **biomass** (combustion of recently dead organic matter such as wood) is technically a renewable source of energy, but it contributes to global warming by releasing carbons into the air.



green-e.org

**Green-e Program** is an independent certification/verification for renewable energy and GHG emission reductions. Companies must purchase a qualifying amount of renewable energy and pass standards.

## VI. Environmental Management Systems (EMS)

### CONTINUOUS IMPROVEMENT

External certification and ongoing monitoring systems are designed to assure continuous reduction of environmental impacts. An EMS is designed to identify, evaluate, plan, manage, improve and monitor the environmental policy throughout an organization.



**ISO 14001**

- A formal international certification of environmental management systems.
- Covers planning, environmental performance, evaluation and auditing.



greenseal.org

**Green Seal**

- An independent, nonprofit organization providing science-based environmental certification standards to help manufacturers, purchasers, and end users make responsible choices.
- Products can only become certified after significant evaluation, including onsite plant visits.
- Minimum requirements for certified papers specify that uncoated printing/writing papers must contain at least 30% post consumer content, or be manufactured without chlorine derivatives.



ecologo.org

**EcoLogo™**

- Provides public/corporate/consumer customers with assurance that products and services bearing logo meet stringent standards of environmental leadership.
- Criteria for printing/writing paper covers energy, forest management, emissions, global issues.



**Environmental Protection Agency (EPA)**

- American government agency mandated to protect human health, air, water, and land.
- Sets standards and regulations regarding environmental programs, most notably emissions.