



Sustainability

Eco-Friendly Paper Virgin fiber versus recycled paper

Did you know that...

...paper made with virgin fiber can be considered entirely ecological?

Paper is in itself an environment-friendly product: 100% recyclable and made with natural and renewable raw materials. This is even more the case when the sustainable origin of the wood is guaranteed and it has been manufactured according to standard and controlled environmental guidelines, which assure the use of clean technologies. Torraspapel is proud to produce only paper that meets these standards.

It is important to note that recycled paper, the same as paper made with virgin fiber, requires a non-contaminating production process in order to be truly respectful to the environment: treatments requiring the disposal of large quantities of inks composed of varnishes, oils, solvents, pigments, anilines and other components can have a negative impact on the environment.

... the addition of virgin fiber is always required to manufacture recycled paper?

When pulp fiber is used for the first time in the paper manufacturing process it is called virgin fiber; when it is re-used consecutive times, it is called recovered or recycled fiber. The life cycle of pulp fiber is able to be maintained thanks to the continuous addition of a certain amount of virgin fiber. This is necessary because pulp fiber deteriorates with consecutive use (it is estimated that it can be re-used an average of six times) and because 19% of the paper that we use cannot be recycled due to the simple fact that we keep it, as occurs with books, documents and photographs, or because in the process of being used it is destroyed or damaged, as in the case of tissue or sanitary paper.

Torraspapel manufactures all of its products...

...with wood from responsibly managed forests...

Torraspapel has obtained Chain of Custody certification for all its mills in accordance with the most widely-recognized certification systems, **PEFC** and **FSC**, guaranteeing the sustainable origin of the wood it uses as raw material in the production of its entire range of paper.

...under the strictest environmental management standards...

All Torraspapel mills have **ISO 9001** quality certification and **ISO 14001** environmental management certification, attesting to the criteria of environmental sustainability underlying its operations. Moreover, all of the Group's coated and uncoated paper, cellulose pulp, and self-adhesive mills, which account for more than 80% of Torraspapel's production, have successfully completed the strict audits required by **EMAS** environmental regulation. Other Group mills are in the process of obtaining EMAS certification.



...minimizing its impact on the environment:

- Water consumption: - **28%**
- COD and TSS disposal in waste: - **50%**
- Specific energy consumption: - **8%**
- Specific CO₂ emissions: - **9%**
- Sludge disposal: - **45%**

Torraspapel is a company firmly committed to respecting the environment, and our paper is a clear example of sustainable development: it is made with natural and renewable raw material, is 100% recyclable, and is produced using clean technologies.

In its daily activity and through the numerous initiatives it carries out, Torraspapel demonstrates its commitment to environmental stewardship:

- **ISO 14001 Certification** for all Torraspapel mills. Obtaining ISO 14001 certification testifies to the continuous improvement of processes, with emphasis on waste management, energy use, control and prevention of contamination, and the use of the measures necessary to assure that Torraspapel's activity actively contributes to sustainable development.
- **EMAS environmental certification** for Torraspapel's cellulose pulp, coated paper and self-adhesive mills. In the coming months, this certification is scheduled to be extended to all Torraspapel production sites, including our specialty paper mills currently in the process of becoming certified.
- **PEFC and FSC Chain of Custody certification** for the entire range of Torraspapel products. One of the focal points of Torraspapel's environmental activity consists in Chain of Custody certification of all its operations, thereby guaranteeing the sustainable origin of the wood used in the pulp and paper production.
- **Elimination of more than 90% of the odors of Torraspapel's pulp mill in Zaragoza, Spain.** Close to 3 million euros have been invested in the installation of a treatment plant for odor-producing gases, resulting in the elimination of odorous gases and enabling them to be used as an energy source, thus increasing the efficiency and sustainability of the manufacturing process.
- **Elimination of the use of fuel-oil** at all mills, replaced by natural gas, thereby contributing to the reduction of CO₂ emissions.
- **Reduction of specific CO₂ emissions by 9%** over the past two years. The significant reduction in specific CO₂ emissions, to 0.40 t.CO₂/t, is the result of various measures such as replacing fuel-oil by natural gas, process improvements, implementing plant-specific energy-saving projects, and giving priority to railway over road transport.
- **Reduction of the amount of water needed for paper manufacturing by 28%** and by 12.5% for pulp production, in the last five years. The process of reducing water usage began with the implementation of internal measures to avoid water loss and was completed with investments in equipment and systems to increase the amount of recycled water.



- **Significant improvements in the quality of water returned to the environment**, the result of substantial investments in new water purification processes at the Group's factories. Over the past five years, Torraspapel has drastically reduced the COD values of its wastewater, **achieving a reduction of approximately 50%** in the manufacture of both pulp and paper. Values dropped from 16.3 to 8.4 COD per ton of pulp manufactured and from 2.2 to 1.1 COD per ton of paper manufactured. As for Torraspapel's suspended solid disposal by ton, the amount in paper production has been reduced by 50%, from 0.52 TSS in 2002 to 0.26 TSS in 2006. Furthermore, since 2001, **100% of the pulp manufactured by Torraspapel is ECF (Elemental Chlorine Free)**. By eliminating chlorine gas in the pulp bleaching sequence, we eliminate dioxins from the wastewater discharged, substantially improving its quality.
- **Torraspapel's total specific energy consumption** (the amount of energy consumed per ton produced) **has fallen 8%** since 2004, from 2.83 MWh/t in 2004 to 2.60 MWh/t in 2006. In 2005, Torraspapel implemented an **energy conservation** plan at all its mills, identifying the points in the production process most susceptible to improvement and taking action that quickly translated into a reduction in energy consumption, particularly electricity consumption.
- **Torraspapel has reduced sludge being sent to waste disposal sites by 45%** over the last five years, by reducing waste generated during paper production, partially recovering waste and reintroducing it into production processes thanks to water recovery from the coating machine and waste recovery from cyclone separators. It is worth noting that all sludge generated during the paper-making process has been analyzed and classified as non-hazardous.

Updated information on all of Torraspapel's environmental initiatives can be found at www.torraspapel.com