
PAPER RECYCLING

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DEFINITION

- Paper recycling is the process of recovering paper that has already been created or used to turn it into new paper products.

PAPER CATEGORIES

- There are three categories of paper that can be used as raw material for recycled paper: **soil, pre-consumer waste** and **post-consumer waste**. Pre-consumer waste is material that has already passed through the paper mill and is disposed of before it is ready for consumption. However, waste after the consumer is paper materials that are discarded by the consumer, such as *old magazines or newspapers, office supplies, telephone books, etc.*



RECYCLING PROCESS

- The paper is recycled by **pulping** and **combining it with new wood pulp**. As the recycling process causes the fibers to break down, each time the paper is recycled, its quality decreases, which means that a high percentage of new fibers must be added, or it will be synonymous with lower quality products. Any writing or coloring on the paper must first be removed by fading.
- Almost any type of paper can be recycled today, although some are more difficult to handle than others. Plastic or aluminum coated papers and certified or glued papers are usually not recycled due to the high cost of the process.



WHY DO WE HAVE TO RECYCLE?

- When it comes to paper, saving raw material through recycling is a significant **environmental benefit**, as it reduces the cutting of trees that would become paper. Recycling helps produce and reuse paper and protects forests, which are important oxygen lungs and trap carbon dioxide.

THE 5 STEPS OF PAPER RECYCLING

- 1) **Collection** - The collection of used paper is done on the initiative of public or private bodies, while there is no official national collection system. Many businesses and industries collect paper in special bins, which are then taken to paper mills for recycling. The paper from the households is currently collected in the blue bin (although this bin concerns packaging) and then through the Recycling Centers is taken to paper mills.
- 2) **Mash** - The paper, after being collected and separated, is transferred to pulping machines. There it is chopped and immersed in water, so that its fibers can be separated and cleaned. Cleaning initially involves large foreign impurities such as staples and traces of plastic and glass. The paper fibers are gradually cleaned and the pulp is filtered several times to make it suitable for processing.

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- 3) **Demelanization** - In the second phase, the paper is cleaned of any inks. This process is called demelanization and aims to increase the whiteness of the mixture. Air is introduced into the paper-water solution and so the ink adheres to the air bubbles and rises to the surface from where it is collected.
- 4) **Preparation of the pulp** - With the above procedures, the paper fibers are progressively cleaned and after they are filtered and their purity is ascertained, the final product (pulp) is ready for the creation of new paper. Depending on the type of paper to be produced, some new raw material is used. Indicatively, newspapers and packaging cartons can be produced from 100% recycled paper
- 5) **Format the sheet of paper** - With the help of machines, the paper is shaped into sheets, pressed and dried. The final formatting of the paper is done according to the requirements of the buyer.

WHAT CAN WE RECYCLE?

The most important categories of paper that can be recycled are:

- White office paper
- Newspapers, magazines, telephone directories and brochures
- School book
- Cardboard
- Mixed or colored paper
- Printing paper

