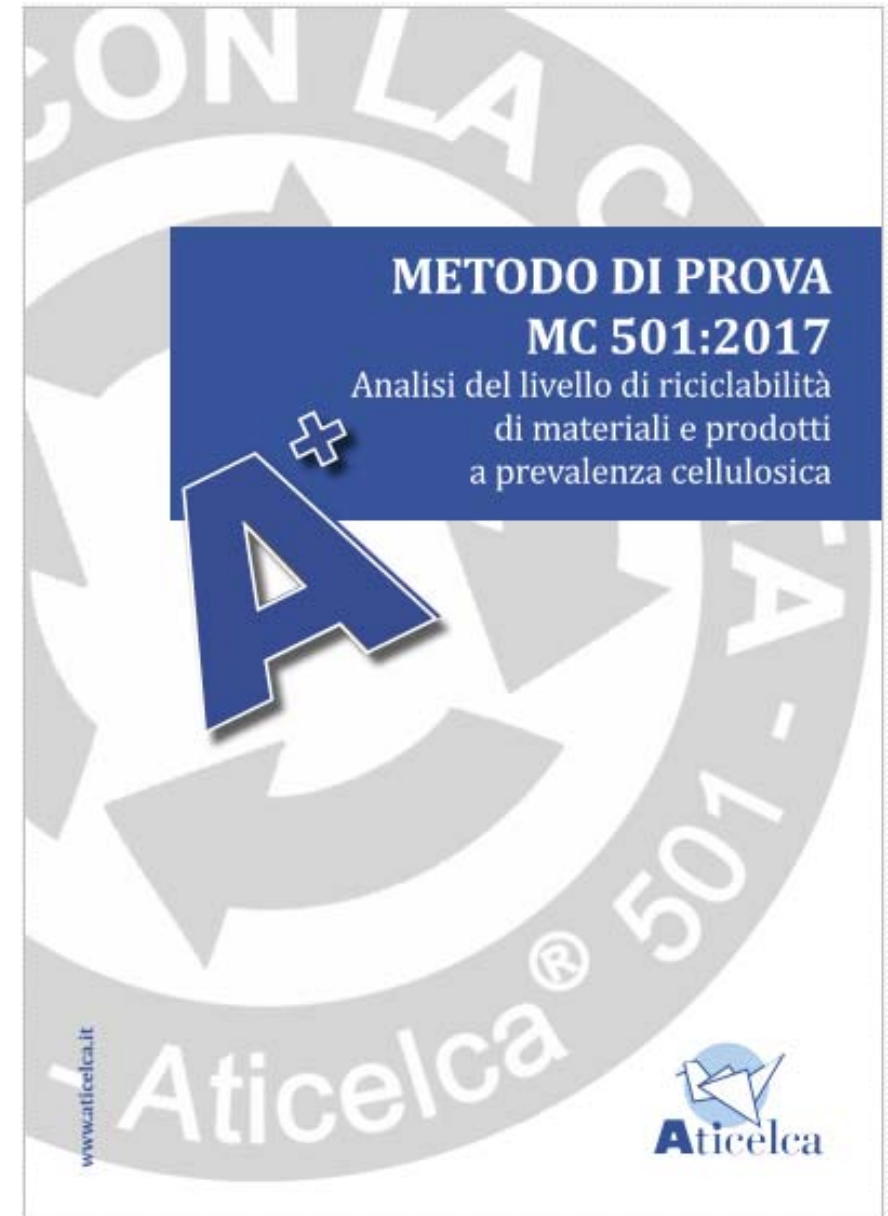


# Recyclability of paper and paper products. The Aticelca standard 501-17

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## WHY

Comieco and Innovhub were the first to highlight a growing need to have a tool to provide objective and measurable elements to **eco-design**.

This first driver was followed by a growing request to demonstrate **compliance to EN13430**.

In a later stage it comes the request to better **inform the consumer**.

## HOW AND WHEN

A **technical standard** was considered the best way to provide a tool addressing those issues.

**Aticelca, Comieco, Assocarta, Assografici, Innovhub** and **Lucense** established a drafting team, followed by **open consultations**.

The first standard was issued in 2011, followed by small amendments in 2013.

Practice and **Ecopaperloop** project in the meantime provided new experiences.

**Major revision in 2017** edition, providing a better alignment with the practice in industrial plants, introduce a differentiation between plastics and flakes and a new icon.

## WHAT

The technical standard reproduces at laboratory scale what happens at industrial scale when a paper mill recycle the paper for recycling.

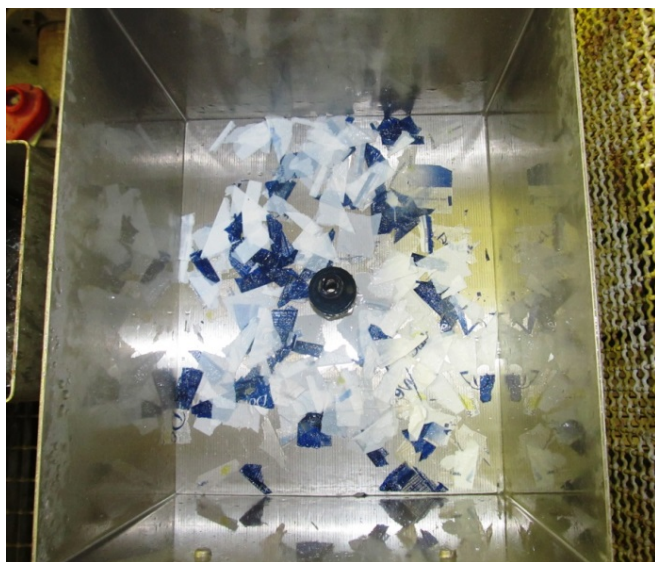
Pulping, fibre cleaning and sheet formation are performed.

The following parameters are measured:

- Coarse rejects
- Flake content
- Macrostickies area
- Sheet formation and adhesiveness
- Optical inhomogeneities
- Ash content (optional)

Results are scaled in 4 levels of recyclability: **A+**, **A**, **B**, **C** (and not recyclable)

# FEW PICTURES





## FEW DEFINITIONS

Paper and board for recycling: definition form 643, includes both paper material and paper products.

Definition of recyclability: when the **fibre content** of paper and paper products can be used to produce, in an efficient and effective way (on a **technological** and an **economical** point of view) using **commonly technologies**, new paper having a **quality suitable for the market**.

Paper material: **sheets or reel of paper** (>50% cellulose fibre).

Paper product: **finished products** as boxes, books, napkins, etc (>50% paper material).

## RESULTS

	Recyclable with paper				Not recyclable with paper
	Level A+	Level A	Level B	Level C	Not recyclable with paper
<b>Coarse rejects ( % )</b>	<b>&lt; 1.5</b>	<b>1.5 – 10.0</b>	<b>10.1 – 20.0</b>	<b>20.1 – 40.0</b>	<b>&gt; 40.0</b>
<b>Macrostickies area <math>\phi &lt; 2000 \mu\text{m}</math>. (mm<sup>2</sup>/kg)</b>	<b>&lt; 2.500</b>	<b>2.500 - 10.000</b>	<b>10.001-20.000</b>	<b>20.001 – 50.000</b>	<b>&gt; 50.000</b>
<b>Flakes (%)*</b>	<b>&lt; 5.0</b>	<b>5.0 – 15.0</b>	<b>15.1 – 40.0</b>	<b>&gt;40.0</b>	<b>-</b>
<b>Adhesiveness</b>	<b>Not detectable</b>	<b>Not detectable</b>	<b>Not detectable</b>	<b>Not detectable</b>	<b>Detectable</b>
<b>Optical inhomogeneity</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 3</b>	<b>-</b>

Laboratory report must clearly specify the sample (e.g. used or unused).

Ash content and macrostickies > 2000  $\mu\text{m}$  are optional.

If flakes contain micro-plastics it counts as coarse rejects.

Optical inhomogeneity is based on comparison with standards.

Homogeneous colored paper level is minimum 2.

## POSSIBLE USES and ICONS

The laboratory report shows the level of recyclability with paper.

Results can be used for eco-design, support the compliance with EN 13430, support self-declaration or declaration using Aticelca icons.

Declaration of recyclability must be always accompanied by the level.





**THANKS**



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