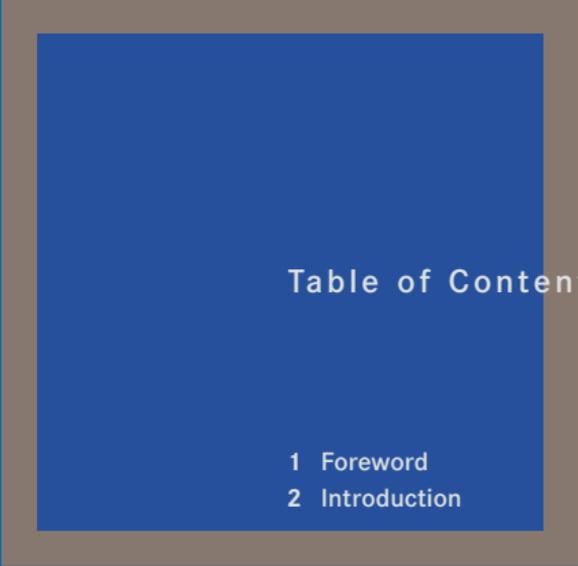


# European List of Standard Grades of Recovered Paper and Board

June 2002





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## Foreword

On 3 November 2001, CEN's Management Centre in Brussels adopted the new version of The European Standard EN 643 – The European List of Standard Grades of Recovered Paper and Board, which was finally ratified on 12 December 2001.

CEN is the European Committee for Standardisation. CEN's mission is to promote voluntary technical harmonisation in Europe in conjunction with worldwide bodies and its partners in Europe.

This revision has been prepared by CEN/TC 172, "Pulp, paper and board" and has benefited from the work done by CEPI and ERPA on the recovered paper and board grade definitions, which was published in February 1999.

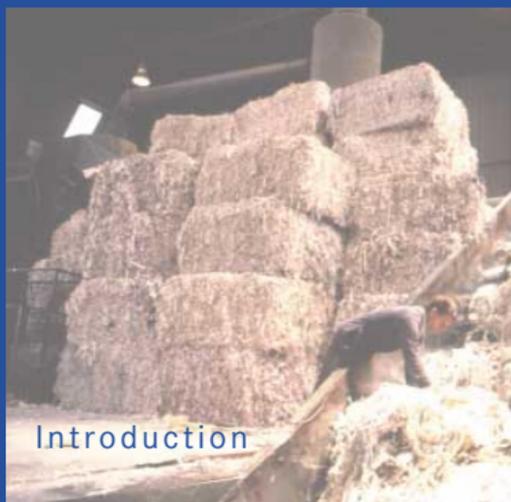
The new version of this European standard supersedes the previous version of EN 643 adopted and published in 1994. The following changes have been made:

- a) title has been changed;
- b) the classification of raw material qualities was adapted to market needs;
- c) a designation was supplemented;
- d) taking into consideration the European market, the groups were renumbered;

- e) group 5 "special grades" has been created and established to take into account recent developments on collection and recycling, i.e. household used paper collection and increased volumes of recovered paper requiring specific recycling processes;
- f) editorial updating.

According to the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

The official version of the European standard EN 643 can be obtained from the national members of CEN, whose details are available on the CEN website: <http://www.cenorm.be>



This list of European standard grades of recovered paper and board gives a general description of the standard grades by defining what they do and do not contain.

It is to be used by industry professionals, organisations and individuals with an interest in the recovered paper sector to assist them in the buying and selling of this raw material intended for recycling by the paper and board industry.

This list also provides help and support for Customs and Excise Officers who are required to classify these raw materials from waste in the context of supranational legislation on the control of waste movement.

The description of the standard grades is brief, and for this reason it is recognised that specific deals between buyer and supplier for standard grades with special specifications will still be necessary to meet individual requirements and will not be excluded by any implied regulation associated with the publication of this European Standard.

Paper and board mills may ask for a declaration from the supplier about the origin of the material, in relation to national regulations or standard requirements.

Collected paper segregated from refuse sorting stations is not suitable for use in the paper industry.

Recovered paper and board originating from multi-material collection systems, containing only material of a valuable, recyclable nature, has to be specifically marked. It is not permissible to mix it unmarked with other recovered paper and board.

This list contains a group of recovered paper grades (Group 5 "Special grades") that in most cases, can only be recycled by using specific processes, or can cause some particular constraints to recycling, as well as products from household channels. Their inclusion in the list is justified by the existence of a significant European market. Actual recycling of the qualities can only be done by a limited number of mills located in a few countries only.

Furthermore, it will be recommended that the standard is used at all national levels in all official reports and in the day-to-day running of companies. It secures the quality of the recovered paper supply to the paper mills, and improves the traceability of the paper industry's raw materials.

## Terms and Definitions

For the purposes of this European standard the following terms and definitions apply:

### Unusable materials

Material unusable in the production of paper and board consists of "non-paper components and paper and board detrimental to production". Recovered paper and board should in principle be supplied free of unusable materials, but where for specific grades a certain proportion of unusable materials is agreed between purchaser and supplier, it shall refer solely to the element described as "paper and board detrimental to production".

### Non-paper components

Consist of any foreign matter in the recovered paper and board which, during processing, may cause damage to machines or interruptions to production or may reduce the value of the finished product, such as:

- metal;
- plastic;
- glass;
- textiles;
- wood;
- sand and building materials;
- synthetic materials;
- synthetic papers.

### Paper and board detrimental to production

Grades of paper and board which have been recovered or treated in such a way that they are, for a basic or standard level of equipment, unusable as raw material for the manufacture of paper and board, or are actually damaging, or whose presence makes the whole consignment of paper unusable.

A growing number of mills have, however, adapted treatment plants to handle such grades, and the range of papers and boards capable of being recycled is increasing all the time as technology develops. The criteria for defining the percentage of "unusable materials" for these grades will be subject to individual mills' specifications.

### Moisture content in recovered paper and board

Recovered paper and board will, in principle, be supplied with moisture of not more than the naturally occurring level. Where the moisture content is higher than 10% (of air dried weight), the additional weight in excess of 10% may be claimed back - with the method of testing and sampling to be agreed between buyer and seller.

### Grade identification

Recovered paper and board is graded as follows:

- Group 1: Ordinary grades
- Group 2: Medium grades
- Group 3: High grades
- Group 4: Kraft grades
- Group 5: Special grades

### Designation (numbering system)

Recovered paper grades are systematically numbered in this list according to a numerical code system as follows:

### Example for a designation:

paper grade EN 643 2 03 01

Description \_\_\_\_\_

Standard main number \_\_\_\_\_

Group 2 (medium grade) \_\_\_\_\_

Grade 03 (lightly printed white shavings) \_\_\_\_\_

Subgrade 01 (lightly printed white shavings without glue). \_\_\_\_\_

In case no subgrade exists, add "00".

## Group 1 - Ordinary grades

- 1.01 Mixed paper and board, unsorted, but unusable materials removed**  
A mixture of various grades of paper and board, without restriction on short fibre content.
- 1.02 Mixed papers and boards (sorted)**  
A mixture of various qualities of paper and board, containing a maximum of 40% of newspapers and magazines.
- 1.03 Grey board**  
Printed and unprinted white lined and unlined grey board or mixed board, free from corrugated material.
- 1.04 Supermarket corrugated paper and board**  
Used paper and board packaging, containing a minimum of 70% of corrugated board, the rest being solid board and wrapping papers.
- 1.05 Old corrugated containers**  
Used boxes and sheets of corrugated board of various qualities.
- 1.06 Unsold magazines**  
Unsold magazines, with or without glue.  
**1.06.01 Unsold magazines without glue**  
Unsold magazines without glue.
- 1.07 Telephone books**  
New and used telephone books, with unlimited content of pages coloured in the mass, with and without glue. Shavings allowed.
- 1.08 Mixed newspapers and magazines 1**  
A mixture of newspapers and magazines, containing a minimum of 50% of newspapers, with or without glue.
- 1.09 Mixed newspapers and magazines 2**  
A mixture of newspapers and magazines, containing a minimum of 60% of newspapers, with or without glue.
- 1.10 Mixed magazines and newspapers**  
A mixture of newspapers and magazines, containing a minimum of 60% of magazines, with or without glue.
- 1.11 Sorted graphic paper for deinking**  
Sorted graphic paper from households, newspapers and magazines, each at a minimum of 40%. The percentage of non-deinkable paper and board should be reduced over time to a maximum level of 1.5%. The actual percentage is to be negotiated between buyer and seller.

## Group 2 - Medium grades

### 2.01 Newspapers

Newspapers, containing a maximum of 5% of newspapers or advertisements coloured in the mass.

### 2.02 Unsold newspapers

Unsold daily newspapers, free from additional inserts or illustrated material coloured in the mass.

#### 2.02.01 Unsold newspapers, no flexo-graphic printing allowed

Unsold daily newspapers, free from additional inserts or illustrated material coloured in the mass, strings allowed. No flexo-graphic printed material allowed.

### 2.03 Lightly printed white shavings

Lightly printed white shavings, mainly mechanical pulp-based paper.

#### 2.03.01 Lightly printed white shavings without glue

Lightly printed white shavings, mainly mechanical pulp-based paper, without glue.

### 2.04 Heavily printed white shavings

Heavily printed white shavings, mainly mechanical pulp-based paper.

#### 2.04.01 Heavily printed white shavings without glue

Heavily printed white shavings, mainly mechanical pulp-based paper, without glue.

### 2.05 Sorted office paper

Sorted office paper.

### 2.06 Coloured letters

Correspondence, in mixed papers coloured in the mass, with or without print, of printing or writing paper. Free from carbon paper and hard covers.

### 2.07 White woodfree books

Books, including misprints of books, without hard covers, mainly of woodfree white paper, black printed only. Containing a maximum of 10% of coated paper.

### 2.08 Coloured woodfree magazines

Coated or uncoated magazines, white or coloured in the mass free from non-flexible covers, bindings, non-dispersible inks and adhesives, poster papers, labels or label trim. May include heavily printed circulars and coloured in the mass shavings. Containing a maximum of 10% mechanical pulp-based papers.

### 2.09 Carbonless copy paper

Carbonless copy paper.

### 2.10 Bleached woodfree

#### PE-coated board

Bleached woodfree PE-coated board from board manufacturers and converters.

### 2.11 Other PE-coated board

Other PE-coated board. May contain unbleached board and paper from board manufacturers and converters.

### 2.12 Mechanical pulp-based

#### computer print-out

Continuous computer print-out, mechanical pulp-based, sorted by colours, may include recycled fibres.

## Group 3 - High grades

- 3.01 Mixed lightly coloured printer shavings**  
Mixed shavings of printing and writing papers, lightly coloured in the mass, containing a minimum of 50% of woodfree paper.
- 3.02 Mixed lightly coloured woodfree printer shavings**  
Mixed shavings of printing and writing papers, lightly coloured in the mass, containing a minimum of 90% of woodfree paper.
- 3.03 Woodfree binders**  
White woodfree lightly printed shavings with glue, free from paper coloured in the mass. May contain a maximum of 10% of mechanical pulp-based paper.
- 3.04 Tear white shavings**  
White woodfree lightly printed shavings without glue, free from wet-strength paper and paper coloured in the mass.
- 3.05 White woodfree letters**  
Sorted white woodfree writing papers, originating from office records, free from cash books, carbon paper and non-water soluble adhesives.
- 3.06 White business forms**  
White woodfree printed business forms.
- 3.07 White woodfree computer print-out**  
White woodfree computer print-out, free from carbonless paper and glue.
- 3.08 Printed bleached sulphate board**  
Heavily printed sheets of bleached sulphate board, without glue, polycoated or waxed materials.
- 3.09 Lightly printed bleached sulphate board**  
Lightly printed sheets of bleached sulphate board, without glue, polycoated or waxed materials.
- 3.10 Multi printing**  
Woodfree, coated, lightly printed, free from wet-strength paper or paper coloured in the mass.
- 3.11 White heavily printed multiply board**  
New cuttings of heavily printed white multiply board, containing woodfree, mechanical or thermo-mechanical pulp plies, but without grey plies.
- 3.12 White lightly printed multiply board**  
New cuttings of lightly printed white multiply board, containing woodfree, mechanical or thermo-mechanical pulp plies, but without grey plies.

- 3.13 **White unprinted multiply board**  
New cuttings of unprinted white multiply board, containing woodfree, mechanical or thermo-mechanical pulp plies, but without grey plies.
- 3.14 **White newsprint**  
Shavings and sheets of white unprinted newsprint, free from magazine paper.
- 3.15 **White mechanical pulp-based coated and uncoated paper**  
Shavings and sheets of white unprinted coated and uncoated mechanical pulp-based paper.  
3.15.01 **White mechanical pulp-based paper containing coated paper**  
Shavings and sheets of white unprinted mechanical pulp-based coated paper.
- 3.16 **White woodfree coated paper, without glue**  
Shavings and sheets of white unprinted woodfree coated paper, without glue.
- 3.17 **White shavings**  
Shavings and sheets of white unprinted paper, free from newsprint and magazine paper containing a minimum of 60% of woodfree paper; may contain a maximum of 10% of coated paper. Without glue.
- 3.18 **White woodfree shavings**  
Shavings and sheets of white unprinted woodfree paper, may contain a maximum of 5% of coated paper. Without glue.  
3.18.01 **White woodfree uncoated shavings**  
Shavings and sheets of white unprinted woodfree paper, free from coated paper. Without glue.
- 3.19 **Unprinted bleached sulphate board**  
Unprinted sheets of bleached sulphate board, without glue, polycoated or waxed materials.

## Group 4 - Kraft grades

### 4.01 New shavings of corrugated board

Shavings of corrugated board, with liners of kraft or testliner.

#### 4.01.01 Unused corrugated kraft

Unused boxes, sheets and shavings of corrugated board, with kraft liners only, the fluting made from chemical or thermo-chemical pulp.

#### 4.01.02 Unused corrugated material

Unused boxes, sheets and shavings of corrugated board, with liners of kraft or testliner.

### 4.02 Used corrugated kraft 1

Used boxes of corrugated board, with kraft liners only, the fluting made from chemical or thermo-chemical pulp.

### 4.03 Used corrugated kraft 2

Used boxes of corrugated board, with liners of kraft or testliners but having at least one liner made of kraft.

### 4.04 Used kraft sacks

Clean used kraft sacks. Wet-strength and non wet-strength.

#### 4.04.01 Used kraft sacks with polycoated papers

Clean used kraft sacks. Wet-strength and non wet-strength. May include polycoated papers.

### 4.05 Unused kraft sacks

Unused kraft sacks. Wet-strength and non wet-strength.

#### 4.05.01 Unused kraft sacks with polycoated papers

Unused kraft sacks. Wet-strength and non wet-strength, may include polycoated papers.

### 4.06 Used kraft

Used kraft paper and board of a natural or white shade.

### 4.07 New kraft

Shavings and other new kraft paper and board of a natural shade.

### 4.08 New carrier kraft

New carrier kraft, may include wet-strength paper.

## Group 5 - Special grades

- 5.01 **Mixed recovered paper and board**  
Unsorted paper and board, separated at source.
- 5.02 **Mixed packaging**  
A mixture of various qualities of used paper and board packaging, free from newspapers and magazines.
- 5.03 **Liquid board packaging**  
Used liquid packaging board including used PE-coated liquid packaging board (with or without aluminium content), containing a minimum of 50% by weight of fibres, and the balance being aluminium or coatings.
- 5.04 **Wrapper kraft**  
Poly-lined, sprayed, or laminated used kraft. Must not contain bitumen or wax coatings.
- 5.05 **Wet labels**  
Used wet labels from wet-strength papers, containing a maximum of 1% glass content, and a maximum of 50% moisture, without other unusable materials.
- 5.06 **Unprinted white wet-strength woodfree papers**  
Unprinted white wet-strength woodfree papers.
- 5.07 **Printed white wet-strength woodfree papers**  
Printed white wet-strength woodfree papers.



**ERPA** C/O BIR  
Avenue Franklin Roosevelt, 24  
B-1050 Brussels  
Tel: +32 2 627 57 70  
Fax: +32 2 627 57 73  
bir.sec@skynet.be  
<http://www.erpa.info>



**Confederation of European  
Paper Industries**  
250 Avenue Louise, Box 80  
B-1050 Brussels  
Tel: +32 2 627 49 11  
Fax: +32 2 646 81 37  
mail@cepi.org  
[www.cepi.org](http://www.cepi.org)  
[www.paperonline.org](http://www.paperonline.org)