

Glossary of

Paper, board, pulp and related terms

[ISO title: Paper, board, pulp and related terms — Vocabulary]

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Cooperating organizations

The Paper Standards Committee, under whose direction this British Standard was prepared, consists of representatives from the following Government department and scientific and industrial organizations:

- British Paper and Board Industry Federation (PIF)*
- British Printing Industries Federation
- Envelope Makers' and Manufacturing Stationers' Association*
- Her Majesty's Stationery Office*
- Institute of Trading Standards Administration
- National Association of Paper Merchants*
- Pira (The Research Association for the Paper and Board, Printing and Packaging Industries)*
- Royal Institute of Public Health and Hygiene

The organizations marked with an asterisk in the above list were directly represented on the committee entrusted with the preparation of this British Standard.

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National foreword

This British Standard has been prepared under the direction of the Paper Standards Committee. It is identical with ISO 4046 “*Paper, board, pulp and related terms — Vocabulary*” which was developed by Technical Committee ISO/TC 6, Paper, board and pulps, of the International Organization for Standardization (ISO).

BS 3203, formerly entitled “*Glossary of paper, stationery and allied terms*”, was first published in 1960 and revised in 1964. The present version has been extensively revised, including the addition of some new terms. This standard supersedes the edition published in 1964, which is therefore withdrawn from publication.

References are made to CIE definitions 45.20.035, 45.20.201 and 45.20.195 in the notes to 7.15, 7.25 and 7.26 respectively. These definitions are contained in CIE Publication CIE 17:1970, published by Commission de l’Eclairage International (International Illumination Committee) and obtainable from the Hon. Librarian (National Illumination Committee) c/o Thorn Lighting Limited, Great Cambridge Road, Enfield, Middlesex EN1 1UL.

Terminology and conventions. The text of the International Standard has been approved as suitable for publication, without deviation, as a British Standard. Some terminology and certain conventions are not identical with those used in British Standards: attention is especially drawn to the following.

Wherever the words “International Standard” appear, referring to this standard, they should be read as “British Standard”.

Wherever the word “vocabulary” appears, referring to this standard, it should be read as “glossary”.

The French text of ISO 4046, referred to under “Scope and field of application”, has been deleted from this British Standard.

Cross-reference

International Standard	Corresponding British Standard
ISO 2471:1977	BS 4432 <i>Methods for determining optical properties of pulp, paper and board</i> Part 3:1975 <i>Determination of opacity (paper backing) of paper and board by the diffuse reflectance method</i> (Technically equivalent)

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 26, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

Scope and field of application

This International Standard defines terms, in English and French, relating to paper, board, pulp, their properties and processes.

1 Pulp — general terms

1.1 pulp: Fibrous material, generally of natural vegetable origin, made ready for use in further manufacturing processes.

NOTE The term “pulp” is commonly used in many industries. If used unqualified in this vocabulary, it refers only to types of pulps used in papermaking, man-made cellulosic fibres and films, and in related industries.

1.2 papermaking pulp: Pulp (see 1.1) intended for the manufacture of paper and board (see 5.8).

1.3 dissolving pulp: Pulp (see 1.1) intended primarily for conversion into chemical derivatives of cellulose.

1.4 unbleached pulp: Papermaking pulp (see 1.2) that has not been subjected to any treatment intended primarily to brighten it.

1.5 semi-bleached pulp: Pulp (see 1.1) bleached to an intermediate degree of brightness (see 1.7 and 1.4).

1.6 bleached pulp: Pulp (see 1.1) which has been subjected to bleaching (see 2.4).

1.7 fully bleached pulp: Pulp (see 1.1) bleached to a high degree of brightness (see 1.4 and 1.5).

1.8 dry pulp: Pulp (see 1.1) of approximately the moisture content of air-dry pulp (see 1.10).

1.9 wet pulp: Pulp (see 1.1) with a moisture content considerably higher than that of dry pulp (see 1.8).

1.10 air-dry pulp:

- 1) Technically, pulp (see 1.1) of which the moisture content is in equilibrium with the ambient atmosphere.
- 2) Commercially, pulp (see 1.1) at a theoretical moisture content agreed between the buyer and the seller (otherwise known as “theoretical commercial dryness” — see 1.12).

1.11 air-dry mass (of pulp): The mass of the pulp (see 1.1) when its moisture content is in equilibrium with the ambient atmosphere.

1.12 theoretical commercial dryness (of pulp): Commercially, a conventional equilibrium value has been accepted which is the theoretical commercial dryness. It is 88 or 90 % according to the country and/or commercial agreements.

NOTE If the air-dryness is 90 %, the pulp (see 1.1) contains 90 parts of absolutely dry fibres and 10 parts of water. For an air-dryness of 88 % the corresponding figures are 88 and 12. All parts are by mass.

1.13 saleable mass (of pulp): The gross mass multiplied by the absolute dryness, divided by the theoretical commercial dryness. Usually it approximates to air-dry mass.

1.14 invoiced mass (of pulp): The saleable mass indicated by the vendor on the invoice.

1.15 pulp and paper contraries: Any unwanted matter that is present in the pulp (see 1.1), stock (see 5.8), paper or board under consideration.

NOTE In North America the term “pulp impurities” is used.

1.16 shives: Coarse fragments of fibrous materials present in pulp (see 1.1) or paper.

2 Pulp manufacture

2.1 cooking: Treatment of fibrous raw material by heat in the presence of water, usually with added chemicals.

2.2 pulp cleaning: An operation intended to eliminate by physical means from the raw material matter unwanted in pulp (see 1.1), for example cleaning by gravity, centrifugal cleaning, cleaning by passing through orifices of specified size (see note 2 to 5.8).

2.3 screening: Operation intended to separate any material into graded sizes by the use of a screen or screens (see 5.54).

NOTE The terms “sifting” and “sieving” are deprecated.

2.4 bleaching: Removal or modification to a greater or lesser extent, of the colour of the components of pulp (see 1.1) with a view to improving its brightness.

2.5 fluorescent whitening: Incorporation in a pulp (see 1.1), stock (5.8), surface sizing or coating of an almost colourless substance that can convert ultra-violet radiation into visible light making an apparent improvement in the whiteness of paper or board.

NOTE The term “optical bleaching” is deprecated.

2.6 chip refining: The mechanical treatment of wood chips by processing through a refiner (see 5.55) to produce refiner mechanical pulp (see 3.19).

2.7 waste paper: Pieces of paper or board that may be reclaimed after use or from a converting process for re-pulping and making again into paper or board.

NOTE In North America, paper or board rejected during sorting (see 5.39) is classified as waste paper.

2.8 sorting (1): The classification of rags or waste paper into groups according to quality for use in the manufacture of paper or board.

2.9 black liquor: Liquor recovered by separation of the chemical pulp (normally sulphate or soda) from the products resulting from the cooking (see 2.1) process.

2.10 potcher, washer: A type of breaker (see 2.11) in which washing and bleaching of the pulp (see 1.1) suspension can be carried out. For washing, a perforated cylinder is partially immersed in the pulp to allow the continuous extraction of liquid.

2.11 pulper: Apparatus intended for slushing pulp or paper.

2.12 breaker, breaker beater: Pulper (see 2.11) with or without a bedplate and with a roll fitted with blunt bars. It is used to break down sheets of pulp (see 1.1), waste paper, broke, rag pulp, rags or other textile scraps into a suspension.

3 Types of pulp

3.1 woodpulp: Pulp (see 1.1) obtained from wood.

NOTE In French, this term should not be confused with the terms “bois” or “pâte de bois”, which are often used to designate “pâte mécanique” (see 3.17).

3.2 softwood pulp: Pulp (see 1.1) obtained from the wood of coniferous trees.

3.3 hardwood pulp: Pulp (see 1.1) obtained from the wood of hardwood trees. The fibres are generally shorter than those of softwood pulp (see 3.2).

3.4 esparto pulp: Papermaking pulp (see 1.2) generally obtained from esparto grass (*Stipa tenacissima* L.) or albardin grass (*Lygeum spartum* L.).

NOTE In some countries a distinction is made between pulps from these two species of grass.

3.5 strawpulp: Papermaking pulp (see 1.2) obtained from cereal straws.

3.6 bamboo pulp: Pulp (see 1.1) obtained from bamboo stems.

3.7 rag pulp:

- 1) Pulp (see 1.1) obtained from new textile cuttings; cotton linters, or used textile rags of materials made from flax, hemp, ramie, cotton.
- 2) Pulp (see 1.1) obtained directly from the following natural textile plants: flax, hemp, ramie or cotton (excluding all others).

NOTE In some countries these pulps are known by the name of the particular plant, for example ramie pulp.

3.8 leather pulp: Pulp (see 1.1) obtained from leather scraps by mechanical or by a combination of mechanical and chemical processing.

3.9 chemical pulp: Pulp (see 1.1) obtained by removal from the raw material of a considerable part of those non-cellulosic components that can be removed by a chemical treatment, for example cooking (see 2.1); subsequent mechanical treatment is not necessary to achieve defibration.

3.10 semi-chemical pulp: Pulp (see 1.1) obtained by partial removal from the raw material of those non-cellulosic components that can be removed by a chemical treatment, for example cooking (see 2.1). To achieve defibration a subsequent mechanical treatment is necessary.

3.11 sulphite pulp: Pulp (see 1.1) obtained by cooking (see 2.1) the raw material with a bisulphite liquor.

3.12 neutral sulphite pulp: Chemical pulp (see 1.1) obtained by cooking (see 2.1) the raw material with a liquor essentially containing a monosulphite.

3.13 sulphate pulp: Pulp (see 1.1) obtained by cooking (see 2.1) the raw material in a liquor containing essentially caustic soda, sodium sulphides and possibly other compounds, such as black liquor (see 2.9).

NOTE 1 The term “sulphate” derives from the use of sodium sulphate as the source of sodium sulphides in the liquor recovery process.

NOTE 2 In the strict technical sense the term “kraft pulp” (see 3.14) is more restrictive than “sulphate pulp”, and in some countries this distinction is also maintained commercially. In many countries, however, the two terms are regarded as synonyms commercially, the term “kraft pulp” being preferred in order to avoid confusion with “sulphite”.

NOTE 3 The danger of confusion between the terms “sulphite” and “sulphate” does not exist in French.

3.14 kraft pulp: A variety of sulphate pulp (see 3.13) of high mechanical strength used especially for the manufacture of kraft papers (see 6.25).

NOTE 1 In the strict technical sense of the term “kraft pulp” is more restrictive than “sulphate pulp”, and in some countries this distinction is also maintained commercially. In many countries, however, the two terms are regarded as synonyms commercially, the term “kraft pulp” being preferred in order to avoid confusion with “sulphite”.

NOTE 2 The danger of confusion between the terms “sulphite” and “sulphate” does not exist in French.

3.15 soda pulp: Pulp (see 1.1) obtained by treating the raw material successively with a liquor containing caustic soda as the sole active agent.

3.16 soda/chlorine pulp: Pulp (see 1.1) obtained by treating the raw material successively with caustic soda and chlorine.

3.17 mechanical pulp: Papermaking pulp (see 1.2) made entirely by mechanical means, from various raw materials, but usually wood.

3.18 brown mechanical pulp: Mechanical pulp (see 3.17) made from steamed or boiled wood.

3.19 refiner mechanical pulp: Mechanical pulp (see 3.17) made by processing wood chips or sawdust through a refiner (see 5.55).

NOTE Hitherto commonly, but incorrectly known in English as “refiner groundwood pulp”.

3.20 groundwood pulp: Mechanical pulp (see 3.17) made by grinding wood against an abrasive surface, for example a stone.

4 Paper and board — general terms

4.1 broke: Paper or board which is discarded at any stage during its manufacture; it is usually repulped. There are two kinds:

- 1) **wet broke:** Broke accumulated on the wet end of the making machine.
- 2) **dry broke:** Broke accumulated at any stage on the dry end of the making machine, trimmings (see 5.6) from the reeling, slitting and cutting operations, as well as paper or board rejected during sorting.

NOTE In North America paper or board rejected during sorting (see 5.39) is classified as waste paper.

4.2 paper: A generic term for a range of materials in the form of a coherent sheet (see 4.14) or web (see 4.9) — excluding sheets or laps of pulp as commonly understood for papermaking or dissolving purposes and non-woven products — made by deposition, of vegetable, mineral, animal or synthetic fibres, or their mixtures, from a fluid suspension onto a suitable forming device, with or without the addition of other substances. They may be coated, impregnated or otherwise converted, during or after their manufacture, without necessarily losing their identity as paper. In conventional papermaking processes, the fluid medium is water; new developments, however, include the use of air and other fluids.

NOTE 1 In the generic sense the name “paper” may be used to describe both paper and board as defined in 4.2 and 4.3 respectively.

NOTE 2 For some purposes, materials of grammage less than 225 g/m² are considered to be paper, and materials of grammage of 225 g/m² or above are considered to be board (see 4.3).

However, distinction between paper and board is primarily made on the basis of the characteristics of the material and, in some cases, its use. Many materials of grammage of less than 225 g/m² such as certain grades of folding box board and corrugating raw materials are generally referred to as “board” and many materials of grammage greater than 225 g/m² such as certain grades of blotting paper, felt and drawing paper, are generally referred to as “paper”.

NOTE 3 “Nonwovens” will form the subject of a separate definition.

4.3 board (paper board): A generic term applied to certain types of paper (see 4.2) frequently characterized by their relatively high rigidity.

NOTE 1 In the generic sense the name “paper” may be used to describe both paper and board as defined in 4.2 and 4.3 respectively.

NOTE 2 For some purposes, materials of grammage less than 225 g/m² are considered to be paper, and materials of grammage of 225 g/m² or above are considered to be board (see 4.3).

However, distinction between paper and board is primarily made on the basis of the characteristics of the material and, in some cases, its use. Many materials of grammage of less than 225 g/m² such as certain grades of folding box board and corrugating raw materials are generally referred to as “board” and many materials of grammage greater than 225 g/m² such as certain grades of blotting paper, felt and drawing paper, are generally referred to as “paper”.

4.4 machine direction: That direction in a paper or a board corresponding to the direction of travel of the web (see 4.9) on the paper or board machine.

4.5 cross direction: That direction in the plane of a paper at right angles to the machine direction (see 4.4).

4.6 top side: The face of a web (see 4.9) or sheet (see 4.14) of paper or board opposite to the wire side (see 4.7).

NOTE This term is not necessarily relevant to paper formed between two wires.

4.7 wire side: The face of a web (see 4.9) or sheet (see 4.14) of paper or board which was in contact with the forming wire during manufacture.

NOTE This term is not necessarily relevant to paper formed between two wires.

4.8 formation: The manner in which the fibres are distributed, disposed and intermixed to constitute the paper (see also 7.9).

4.9 web: The continuous length of paper or board during manufacture or conversion.

4.10 roll (of paper or board): Continuous length of paper or board rolled around itself.

NOTE In some countries a roll may be wound around a core and the word may thus be synonymous with reel.

4.11 reel (of paper or board): Continuous length of paper or board wound on a core.

NOTE In North America the term “reel” is used to describe a continuous length of paper rolled around a metal roll at the end of the paper machine. After rewinding it is called a roll, whether it is wound on itself or on a core.

4.12 width (of a reel or roll of paper or board): The dimension of the web (see 4.9) of paper or board measured in the cross-direction (see 4.5).

4.13 length (of a reel or a roll): The length normally expressed in metres of the paper or board forming a reel or a roll.

4.14 sheet (of a paper or board): A piece of paper or board generally rectangular.

4.15 outturn sheet: A sheet of paper or board, taken during manufacture serving as a reference for the mill or client.

4.16 side-run: A reel, generally narrow, but wide enough to permit its use for purposes other than re-pulping, deliberately produced in addition to the main order to ensure that the machine fill (see 5.69) is as close as possible to the maximum trimmed machine width (see 5.83).

4.17 offcut: That part of a sheet (see 4.14) removed during processing, the size of which is smaller than the size ordered but is large enough to permit its use for purposes other than re-pulping.

4.18 composition (of paper or board): Nature and proportions of the component fibrous and non-fibrous constituents of the paper or board.

4.19 fibre composition: The fibrous constituents of a paper or board and their proportions in it. The fibre composition is usually expressed as percentages of the total mass of fibrous material.

4.20 furnish: Nature and proportions of the fibrous and non-fibrous component constituents of the stock (see 5.8) other than water of a given paper.

4.21 furnish layer: Stratum of paper or board made up of one or more plies (see 4.22) of the same furnish (see 4.20) combined by pressure while still moist, without the use of adhesive.

4.22 ply (of paper or board): Fibrous web of consistent composition (see 4.18) formed on the wire of the paper or board making machine.

4.23 underliner (of board): Furnish layer (see 4.21) of a board situated between an external furnish layer and the middle (see 4.24).

4.24 middle (of board): Furnish layer (see 4.21) of a board situated between the two external furnish layers, or between the underliners (see 4.23) or between an underliner and the opposite external furnish layer.

NOTE In North America the term “filler” is also used.

4.25 recto:

- 1) of a book: The page on the right of an open book, the following or second page being the verso. Also applies to newspaper, etc.
- 2) of postal documents: The face on which the addressee's address is written.
- 3) of a processed sheet: The first side in use of a processed sheet as distinct from the verso, which is the reverse side.

NOTE The word “processed” in this context means converted by, for example, the printer or stationer.

- 4) of a board: The side with the better appearance.

4.26 verso: The reverse side from the recto (see 4.25).

4.27 linting, dusting, fluffing: The release from a paper or board of fluff or dust, consisting mainly of individual fibres or particles of loading or sizing agents, or very small aggregates of these materials during the printing process. These particles may be completely loose on the surface, or loosely bonded into it, but capable of being released at some stage in the printing operation.

4.28 picking: The rupture of the surface layer of a paper or a board during manufacture or during printing, which occurs when an external tensile force applied to the surface is greater than the cohesion of the paper or board.

4.29 white:

- 1) **applied to radiation from a primary source:** Characteristic of a radiation close to that of daylight.
- 2) **applied to a body:**
 - A diffuser with no absorption in the visible spectrum.
 - By extension, a relatively opaque body, highly diffusing and uniformly and highly reflecting at all wavelengths in the visible spectrum.
- 3) **applied to the field of sensations:** Any sensation comparable with that caused by a white primary source or by the light reflected by a white body illuminated by white light.

4.30 black:

- 1) **applied to a body:**
 - A perfectly black body is a body which absorbs all incident light and reflects none.
 - By extension, a body which unselectively absorbs an extremely high proportion of all radiations incident upon it such as, for example, a cavity lined with a near-black material and receiving the incident light through a small aperture.
- 2) **applied to the field of sensation:** Absence of luminous sensation because the stimulus is below the threshold of sensitivity of the eye.

4.31 whiteness: Complex attribute of visual sensation by which a body seems to approach white due to high lightness, high diffusion and minimum perceivable hue.

4.32 size (of a sheet): In the ISO series of paper sizes, dimensions of a sheet (see 4.14) of paper or board expressed in the following order: width, length, the width being the smaller dimension.

4.33 untrimmed size: Dimensions of a sheet (see 4.14) of paper or board sufficiently large to allow a trimmed size (see 4.34) to be obtained from it, as required.

4.34 trimmed size: The final dimensions of a sheet (see 4.14) of paper or board.

4.35 paper or board in the flat: Paper or board supplied in sheets, not folded, lapped or rolled.

4.36 ream: A pack of 500 identical sheets (see 4.14) of paper.

NOTE In many countries it has been common practice to use the word “ream” for other quantities, for example 480 sheets [thus affecting the “quire” (see 4.37)]. For quantities other than 500 sheets, terms such as “pack” should be used.

4.37 quire: The twentieth part of a ream (see 4.36) i.e. 25 sheets.

4.38 flute: The configuration of the undulations in fluted paper or in a corrugated fibreboard.

5 Paper making

5.1 filler (loading): Fine pigment, generally white and usually of mineral origin, incorporated in the stock (see 5.8) during the manufacture of paper or board (see also 4.24).

5.2 alum: A term commonly but incorrectly applied by papermakers to various qualities of aluminium sulphate.

NOTE 1 The material is known as alum, because it is used for purposes for which alum was formerly used.

NOTE 2 This term is not used in France.

5.3 slip: Liquid suspension containing pigments.

5.4 clay slip: A slip (see 5.3) in which the pigment is china clay and the liquid is water.

5.5 coating slip: A slip (see 5.3) in which the pigment is generally a white mineral of very small particle size, and which contains an adhesive or binder. Other additives such as colouring matter, dispersants or viscosity modifiers, may also be present. This slip is intended for coating the surface of paper or board.

NOTE Also known in North America as “coating color”.

5.6 trimmings: Pieces of paper or board other than off-cuts (see 4.17) removed during processing.

5.7 waste paper contraries or impurities: Any material in waste paper or board (see 2.7) that might be detrimental to the paper or board being manufactured from the waste paper or board or which might damage papermaking equipment or render repulping difficult.

5.8 stock: An aqueous suspension of one or more paper-making pulps (see 1.2) and other material from the stage of disintegration of the pulp to the formation of the web or sheet of paper or board.

NOTE 1 Also known in English as “stuff”.

NOTE 2 In French the word “pâte” is normally used unqualified as the equivalent of the English terms “pulp” and “stock”. For this reason cross-references are inserted to the appropriate definition wherever necessary in this vocabulary. Particular attention is drawn to this as the distinction may be significant in certain circumstances.

5.9 accepted stock: That part of the stock (see 5.8) which is not rejected by cleaning (see 5.15) and/or screening (see 2.3).

NOTE See also “accept” (5.10).

5.10 accept: A generic term for any material which is not rejected by cleaning (see 5.15) and/or screening (see 2.3).

5.11 free stock: Stock (see 5.8) that, when drained under gravity, parts easily with the water of the suspension. The condition of any given stock may be measured and expressed numerically as the drainability (see 7.27) or the freeness value (see 7.28). The opposite of “free” is “wet” (often termed “slow”) (see 5.12).

5.12 wet stock: Stock (see 5.8) that, when drained either under gravity or suction, parts with the water of the suspension with difficulty. The condition of any given stock may be measured and expressed numerically as the drainability (see 7.27), or as the freeness value (see 7.28). The opposite of “wet” (often termed “slow”) is “free” (see 5.11).

5.13 stock preparation: A collective term for all treatment necessary for the preparation of the stock (see 5.8) before it reaches the papermachine.

NOTE In English, “stock preparation” includes cleaning (see 5.15).

5.14 slushing: Operation of making a suspension of fibres in a liquid by disintegration from papermaking pulp (see 1.2) or paper.

5.15 stock cleaning: An operation intended to eliminate by physical means from the stock (see 5.8) matter unwanted in paper or board, for example cleaning by gravity, centrifugal cleaning, cleaning by passing through orifices of appropriate size.

5.16 beating or refining: The mechanical treatment of fibrous materials in a beater (see 5.56) or refiner (see 5.55).

1) **beating:** A treatment which consists in submitting the stock (see 5.58) to the action of a beater (see 5.56).

2) **refining:** A treatment which consists in submitting the stock (see 5.8) to the action of a refiner (see 5.55).

5.17 fibrillation: Freeing of the fibrils by partial rupture of the fibres submitted to an appropriate treatment, for example beating (see 5.16).

5.18 fluorescent whitening: Incorporation in a pulp (see 1.1), stock (see 5.8), surface sizing or coating of an almost colourless substance that can convert ultraviolet radiation into visible light making an apparent improvement in the whiteness of the paper or board.

NOTE The term “optical bleaching” is deprecated.

5.19 sizing: The addition of materials either to the stock (see 5.8) (internal sizing) or to the surface of a paper or board (surface sizing), generally in order to increase its surface strength, and its resistance to the penetration and spreading of aqueous liquids, for example writing ink.

5.20 calendering: Operation carried out by means of a calender (see 5.74) on the at least partially dried paper or board, with the aim of improving the finish (see 7.1), the process permitting some control of the thickness of the paper.

5.21 reeling or winding: Operation of rolling-up a web (see 4.9) of paper with or without the use of a core (see 4.10 and 4.11).

5.22 reel-up: The last section of the paper machine where the reeling (see 5.21) operation of the continuous web takes place.

5.23 glazing: The operation of imparting a lustre to paper or board by means of any appropriate drying or mechanical finishing process.

5.24 creping: Operation of crinkling paper in order to increase its stretch and softness.

5.25 off-machine creping: A wet creping (see 5.103) process performed as a separate operation.

5.26 on-machine creping: A wet or dry creping (see 5.102 and 5.103) process performed on the papermachine.

5.27 surface application: Any operation consisting of the application of an appropriate material to the surface of a paper or board to change certain of its characteristics.

NOTE In the French language, the term “enduction” is employed only when the material used is not a coating slip (see 5.5).

5.28 air-drying: Method used for drying paper. Air-drying in sheets (see 4.14) is generally carried out in contact with freely circulating air. Air-drying in the web (see 4.9) is generally carried out by contact with heated air either in a room or in a tunnel (festoon dryers).

5.29 supercalendering: Accentuated calendering (see 5.20) on a supercalender (see 5.79) usually off-machine, which produces a paper of high smoothness, density and gloss.

5.30 friction glazing: The operation of imparting a glossy finish (see 7.1) to the surface of paper or board, generally coated (see 5.42) by means of a friction glazing calender (see 5.80).

5.31 plate glazing: The operation of imparting smooth, polished surfaces to sheets of paper or board by means of a plate glazing calender (see 5.81).

5.32 splicing: The operation of making a splice (see 5.99).

5.33 slitting: Dividing a web (see 4.9) of paper or board in the longitudinal direction into two or more narrower webs.

5.34 guillotining: Dividing a sheet or sheets (see 4.14) of paper or board by means of a rigid knife.

5.35 guillotine trimming: The operation of cutting away the edges of a pile of sheets of paper or board so as to produce sheets (see 4.14) with clean edges, exactness of angle and of a specific size.

5.36 cutting: Dividing one, or simultaneously more than one, web (see 4.9) of paper or board in the cross direction (see 4.5) to produce sheets (see 4.14).

5.37 squaring: Operation in which sheets of paper or board are produced to the desired sheet size with clean edges and four 90° angles (see for example 5.35).

5.38 angle cutting: Dividing one or simultaneously more than one web (see 4.9) of paper or board at an angle other than a right angle (see 5.37) to the machine direction (see 4.4) to produce sheets, in particular for envelope making.

5.39 sorting (2): The examination of sheets of paper or board individually, in order that the defective ones may be rejected.

5.40 conditioning of paper or board: Operation of bringing paper or board to a state of moisture content and temperature in equilibrium with a specified surrounding atmosphere.

5.41 maturing: Evolution, generally favourable, of the characteristics of paper or board during storage under suitable conditions.

5.42 coating: The process of applying to the surface of a paper or board one or more layers of coating slip (see 5.5) or other materials in fluid form.

5.43 blade coating: A method of coating a continuous web of paper or board in which the amount of coating is controlled by means of a flexible metal blade which bears upon the coated surface of a roll-supported web immediately after application of the coating slip (see 5.5) by any convenient coating process.

5.44 roll coating: Any method of coating a continuous web of paper or board in which the coating is applied directly to the paper by transfer from an applicator roll which carries the coating slip (see 5.5) upon its surface. The applicator roll may rotate in the same direction as the paper web or in the reverse direction (reverse roll).

5.45 gravure coating: A roll coating method in which the applicator roll is supplied with coating material by (or alternatively consists of) a metal roll engraved with small closely spaced cells or depressions.