

## Basic Paper Information

### Quantities

1 quire = 25 sheets

1 ream = 500 sheets (480 sheets for acid free tissue)

1 millpack = The size of the pack as shipped from the mill (usually 100 sheets, but will vary according to the paper).

### Paper Sizes

Paper	Size (millimetres)
4A0	2378 x 1682
2A0	1682 x 1189
A0	1189 x 841
A1	841 x 594
A2	594 x 420
A3	420 x 297
A4	297 x 210
A5	210 x 148
A6	148 x 105
A7	105 x 74
A8	74 x 52
A9	52 x 37
A10	37 x 26
Antiquarian	1350 x 730
Atlas	864 x 660
Cartridge	661 x 534
Colombier	876 x 597
Crown	510 x 380
Demy	570 x 440
Double Crown	760 x 510
Double Demy	900 x 570
Double Elephant	1020 x 690
Double Foolscap	680 x 430
Double Medium	920 x 580
Eagle	1067 x 730

Emperor	1829 x 1219
Extra Large Atlas	889 x 689
Foolscap	430 x 340
Hand	559 x 406
Imperial	760 x 560
Large Post	530 x 420
Large Post Double	840 x 530
Medium	580 x 480
Pott	394 x 317
Quad Crown	1020 x 760
Quad Foolscap	680 x 680
Quad Medium	1160 x 920
Royal	675 x 510
Royal Hand	635 x 508
Super Royal	710 x 510

### Paper Weight

Metric (GSM)	Imperial (LB's)
150- 160	72
180 - 200	90
240 - 250	120
285 - 300	140
410 - 425	200

### Paper Surfaces

Rough	Natural surface of paper when dry.
Not (or cold pressed)	Between Hot Pressed and Rough (pressed between cold rollers)
Hot Pressed (HP)	Smooth finish sometimes pressed between hot rollers.

## Glossary

"A" series	ISO range of paper sizes reducing from A0 (841 x 1189mm) by folding in half to preserve the same proportions at each reduction.
acid free	Free from any acid content of other substances likely to have a detrimental effect on the paper or its longevity.
antique	A general term applied to a surface which imitates the laid character of an old sheet. Today the term is often used to denote a rough finish.
archival paper	A term loosely used to indicate paper with long lasting qualities, is acid free, lignin free, usually with good colour retention.
B series	ISO range of paper sizes, falling between the A and C series, designed for items such as wall charts and posters.
bast fibre	The inner bark of such plants as flax, hemp, gampi, mitsumata and kozo, separated from the outer bark and suitable for papermaking.
beater	A machine which alters or modifies the properties of fibres.
beating	Hand or mechanical maceration of fibres to modify their characteristics and prepare them to become pulp.
board	A general term for thick, stiff paper over a certain weight; on average 250-300 gsm.
bonding strength	The ability of fibres on the surface of a paper to adhere to one another and to others below the surface.
brightness	Paper's ability to reflect white light. Brightness values are a measure of the reflectivity of paper to light under controlled conditions, on a scale of 0 - 100; most white papers have brightness values of 75-90.
brittleness	The tendency of paper to crack or break when bent or embossed.
BSI	British Standards Institution. Standards co-ordinating body (cf. ANSI).
buffering agent (also called 'alkaline reserve')	An alkaline substance, usually calcium carbonate or magnesium carbonate, occurring naturally in a water supply or purposely added by the papermaker to help counteract acidity in paper.
bulk	The volume or thickness of a paper in relation to its weight.
C series	ISO range of sizes for envelopes.

calcium carbonate (Chalk)	A pigment, which can be used as a filler, a white coating substance and a buffering agent.
calendering	The process of pressing paper through rollers (usually of hardened, polished metal) to increase its surface smoothness.
caliper	The thickness of a single sheet of paper measured with a micrometer in 1/1000 in., millimetres or microns.
cellulose	The basic substance of papermaking: the main part of the cell wall of the plant. Cellulose fibres are not pure enough (except for cotton) to be used directly for papermaking.
chain lines, chain wires	Heavier, more widely spaced lines (or wires) which run at right angles to lines on the surface of a laid mould.
chemical pulp	Wood reduced to pulp by a variety of chemical processes all of which involve the cooking of the fibrous raw material with chemicals in order to extract the cellulose fibre.
china clay	A filler or loading agent.
coated paper	Paper coated with china clay or other filler to give a smooth surface making it suitable for the printing of fine detail.
cockling	Wavy edges (or wrinkling or buckling) caused by unequal expansion due to paper being damper or drier than the atmosphere.
cold pressed (CP)	Same as NOT.
contraries	Unwanted pieces of material which have become embedded in a sheet, e.g. dust, hairs, string, buttons, etc.
cotton	The purest form of cellulose produced in nature, requiring the least amount of processing before it can be used for papermaking.
cross direction	Paper cut at right angles to the direction of the paper machine. Paper is weaker and expands more across the cross direction than along the machine direction.
curing	The maturing of paper for an amount of time, before packing and selling.
curling tendency	A curl caused by unequal shrinkage which develops either when the moisture content of the paper is changed by atmospheric conditions or when the paper comes into contact with moisture.
deckle	The removable wooden frame that fits over the mould to contain the pulp.
deckle edge	The wavy, feathered or ragged edge on the sides of a sheet of handmade paper caused where the pulp seeps under the deckle frame during formation.
deflocculant	A substance which disperses fibres and prevents them from entangling in the pulp.
endpaper	Strong paper used for securing the body of a book to its case.

felt	A rectangular sheet of absorbent woven material, usually of wool, cut larger than the paper, onto which newly formed sheets are couched.
felt finish	A finish to the top surface of paper created by the texture of the felt; often with a special weave.
felt mark	A mark in the paper caused by the impression of a defect in the felt, such as a worn patch.
felt side	The top surface of the pulp, as distinct from the wire side.
Fourdrinier	The standard type of machine on which paper is made at high speed in a continuous web. Sheets produced in this way are called 'machinemade'.
gelatine	A type of sizing obtained from animal tissues, which is applied to the surface of paper to make it impervious to water and to aid resistance to bleeding during printing. Can affect colour.
grain, grain direction	The alignment of fibres in a sheet of paper caused by the flow of the web of wet paper in a cylinder-mould or Fourdrinier machine.
gsm or g/m <sup>2</sup>	The weight of paper and board when expressed in metric terms as grammes per square metre.
Hot Pressed (H.P.)	One of the three traditional surface finishes of handmade paper. Today this term denotes the smoothest surface, achieved by passing sheets between heavy metal rollers (occasionally heated).
hygroscopic	Said of the nature of a material which tends to make up the moisture content of the atmosphere.
Imperial	1. A large sized sheet, 762mm x 559mm. 2. The traditional system of weights and measures set up in Britain in 1836, in which the basis weight of a sheet of paper is expressed in pounds (lbs.).
India paper	Very thin, high-quality opaque rag paper often used for printing Bibles.
ISO sizes	Range of paper and envelope sizes established by the International Standards Organisation, including notably the A, B and C series.
linting	The process by which clumps of fibres are released from the paper surface during printing due to the tackiness of the ink, especially in lithography.
moisture content	Amount of moisture in paper, expressed as a percentage of weight.
mordant	A substance used to fix a dye to a fibre.
NOT, not	Short for 'Not Hot Pressed'. One of the three traditional surface finishes of handmade paper (between Rough and Hot Pressed), produced by passing between felts. Called Cold Pressed (C.P.) in the U.S.

paper mulberry (mulberry tree)	This is a broad term for a number of trees from whose inner bark paper is made; <i>Broussonetia papyrifera</i> is probably the most widely used; in Thailand it is called saa, in Japan kozo.
pH	The pH value describes the acidity or alkalinity of a paper; it is a measure of the availability of free hydrogen ions. 0pH is very acid; 14pH is very alkaline; 7pH is neutral.
quire	A twentieth part of a ream; today a quantity of 25 sheets of paper.
rag	Indicates that a paper has been produced from cotton linters. The term 'rag content' describes the amount of cotton fibres relative to the total amount of material used in the pulp.
rattle	The sound produced by shaking a piece of paper, indicating the hardness of the sheet.
ream	An old word for a quantity of paper. Today taken to refer to 500 sheets of good paper.
relative humidity (RH)	The amount of water vapour present in the atmosphere expressed as a percentage of saturation, measured with a hygrometer.
rosin	A commonly used internal sizing agent; occasionally also used for surface sizing. It is acidic in nature, and is detrimental to the permanence of paper.
Rough	One of the three traditional surface finishes of handmade paper; a rough surface is properly obtained by loft drying in natural air.
shives	Specks of impurities in the raw fibre discernable in the finished sheet.
sizing	A solution, or process of applying such a solution, intended to make paper moisture-resistant to varying degrees. Size can be added at two stages of the paper-making process. 1. In internal sizing (also called beater- or engine-sizing), size is added to the beater. 2. In surface sizing (also called external- or tub-sizing), dried papers are passed through a solution of gelatine (or glue, casein or starch) traditionally contained in a bath or a tub; surface size can also be applied by brushing or rubbing.
smalt	Deep blue pieces of glass pulverized and used as a colouring agent.
smoothness	Essentially the surface flatness of a paper. It is not the same as 'gloss' (which is an optical property) and is not related to porosity.
spur	A group of sheets dried naturally together.
substance	The weight or grammage of a sheet of paper expressed in gsm or lbs per ream.
surface finish	The surface character of a sheet of paper, described in terms of its texture, e.g. Rough, NOT, H.P., burnished, hammered.
texture	The surface detail or finish of a paper, which can be a natural

	result of the quality of the pulp, processing or drying, or a contrived impression.
tooth	Describes a surface texture that grips a drawing pigment.
traditional	A term used to refer to accepted, established and valued techniques customary to papermaking processes of the past.
vellum	1. The prepared inner side of calfskin or kid skin. 2. A paper surface which imitates true vellum, notably any matt wove type; often used to describe mouldmade and Japanese papers.
waterleaf	Used to describe a paper that contains no sizing and is therefore generally very absorbent.
watermark	A translucent design in a sheet of paper that can be viewed as a paler area when held up to the light. Typically watermarks are linear, formed in wire.
web	A continuous length of paper (I.e. a roll or reel) as distinct from a sheet.
wet strength	The strength of a finished sheet of paper when it is saturated with water.
wire side	The underside of paper in contact with the mesh during making, as distinct from the felt side.