

GLOSSARY

Barrier: specially prepared products that provide resistance to the passage of moisture, vapour, gases, water, oil and other liquids

Bending: the process of folding a board along a previously made score, used in the making of boxes

Board: A thick heavyweight rigid paper (also known as paperboard)

Bonding: Refers to the intra-layer binding force in a multi-layer paperboard. The term also refers to the interfiber binding force within a sheet

Brightness: A measure of the degree of reflectivity of a sheet of pulp or paper for blue light measured at a wavelength of 457 nm.

Broke: Damaged paper as a result of breaks on the paper machine or anywhere else in the process. It is usually returned for reprocessing.

Calendar: The equipment consisting of cylindrical rolls, which are used for smoothing, levelling, and gloss improvement of paper.

Calendar loading: Refers to the pressure applied to the calendar

Cleanliness: The absence of dirt or spots on paper

Cobb: The amount of water absorbed in a given time by one side of a unit area of paper

Colour: Refers to the closeness of the colour to white or black or degree of lightness or darkness

Compression strength: The physical property of paper and paperboard that is resistant to compacting loads

Convertibility: The ability to treat, modify, and manipulate paper so that it can be made into end user products such as boxes

Core: A metal, wood, or convolute-wound fibre tube used to wind paper into rolls for transporting

Corrugating: The process of producing parallel, wavelike shapes (flutes) on the paper used to manufacture fluting

Corrugating rolls: The metallic rolls with grooves in such a manner that it imparts wavelike shapes to paper passed through it

Corrugator/ Corrugating Machine: Equipment consisting of two or more alternately grooved metallic rolls geared to operate so that the ridges run within the in the grooves in such a manner to impart flutes to a sheet passed through it

Cracking defects occurring in folds of paper because of fiber separation and appearing as very small sheet and surface fissures.

Cross direction (CD) : A term referring to the side to side direction of a papermachine, or to the paper sheet made on it, as opposed to the along the machine or machine direction (MD) which runs from head to exit

Cull: Paper that does not meet manufacturing specifications and is returned to the papermaking process for reprocessing

Curl: A paper deformation caused by the non-uniform distribution of stains and stresses throughout the sheet as a result of uneven internal moisture and conditioning

Deckle: rubber strips or moving straps on the side edges of the paper machine wire to prevent the spill over of fibres over the sides. This determines the width of the paper that can be run on a particular machine.

Deckle loss: Paper losses occurring due to deckle

Delamination: The separation of pasted paper layers of a laminated sheet due to adhesion breakdown

Downtime: The amount of time a piece of equipment or process is out of service or not operating due to malfunctions, breakdowns, repairs, and maintenance

Flat crush resistance: The ability of corrugated board flutes to withstand a perpendicularly applied load to the surface.

Flute tip formation: The ability to form well round wavy shapes (flutes) on a fluting medium.

Glueability: the measure of a paper's ability to accept or "hold" glue as an indication of its receptiveness to being attached together by adhesives

Grammage CD variation: The variation of grammage in the cross direction of the paper

Grammage: The basis weight, substance, or grammage is the most fundamental property of paper and is the weight per unit area.

Grindstone: A grinding wheel made from stone and used to shred wood logs

Grit: The particles in a grindstone that are abrasive are responsible for tearing away fibers from wood logs pressed against the grindstone surface while it is rotating

Gross length: Total length of paper produced on the papermachine

Gross production: refer to the total amount of paper produced on the paper machine and is calculated as $\text{Gross Production} = \text{paper meters produced} \times \text{target deckle} \times \text{target grammage}$

Hot coefficient of friction: The resistance of paper to slippage or sliding when rubbed or stacked together, when the paper is heated

Internal Tearing resistance: The force needed to continue tearing a paper, once the tear has been initiated. It is thus a measure of the paper's internal resistance to tearing

Join / Joint: refers to the joining or attaching together of two sheets of paper

Labelling: The process of attaching a label to a reel of paper

Levels: the vertical distance between the surface of material and some given reference point. With respect to paper, it refers to uneven surfaces or unequal levels on the surface of the paper.

Lightweight: Refer to lower basis weights

Loose core: A paper roll defect due to insufficient sheet tension being used at the beginning of winding or shrinkage of a core causing loose wound paper.

Loose edges: A paper roll defect where there is insufficient sheet tension on the edges of the reel

Loose joint: Refers to a paper join that is slack

Moisture: The percentage of water by its weight in paper

Moisture CD spread: The variation of moisture in the cross direction of the paper

Net Productive Time = Available Time – maintenance- breaks – startups

Nett length: The length of paper on the reel that can be sold to the customer

Nett production: The amount of paper in tons that can be sold to the customer

Pallet: A low platform on which materials such as paper are placed so that they can be moved from one location to another in the mill or out of the mill by the use of a forklift truck

Paper break: Denotes a tear completely across the sheet of paper that occurs while the paper machine is running or during some conversion operation

Ply adhesion: Refers to the ability of layers or plies of paper to adhere together and not separate or delaminate

Porosity: The property of paper related to the ability of fluids to pass through them. It is an indication of the size, shape, and distribution orientation of the pores in a sheet and the compactness of the fibres

Printability: The ease with which paper can be printed to high quality standards with the least amount of spoilage

Production rate: The amount of paper produced in a given amount of time

Reel: The roll of untrimmed paper that is wound upon a core or shaft after leaving the dry end of the paper machine

Retree: Substandard and defective watermarked papers that are sorted at the Mill and sold at a discount

Ring crush: The ability of paper made up into cylinders to withstand deformation forces applied to the edges

Run minutes: The total time in minutes that the machine was in operation

Runnability: Refers to how well the paper performs in the converting operations, e.g. corrugation. It is an indication of the performance of the paper to be corrugated without causing problems on the corrugating machine

Score: To put an indentation on the surface of a board so that it is easier to fold

Scoreability: The ability or ease of scoring a board

Scuffing: The process of lifting the surface fibres when paper are rubbed together or against other rough surfaces, especially when wet

Single facer: A type of corrugated board with only one single liner pasted onto the corrugating medium.

Slab: A multi sheet slice of paper off the other surface of a roll of paper that is removed to reduce the size of a roll or to break down the roll for reprocessing or removal of certain defects

Slack edges: Warped or wavy edges on sheets of paper usually caused by the edges being thinner than the center resulting in soft ends when wound up into rolls.

Smoothness: The surface property of a paper sheet related to its degree of uniform evenness and flatness

Stack loading: Calendars used on papermachines

Starch penetration: The ability of starch to be absorbed into the paper, so that the starch may adhere to the paper and glue two or more sheets of paper to each other

Start up: refers to the time between the moment pulp is pumped to the wire of the machine after the machine stops, to the moment of full width on the paper reel

Stiffness: The ability of paper to withstand bending or crushing forces

Stretch: The elongation experienced by paper before rupture when tension is applied

Tensile strength: The resistant property of a sheet of

Thickness: or Caliper of paper is measured with a micrometre as the perpendicular distance between two circular, planes, parallel surfaces

Time efficiency: $\text{Time Efficiency} = \text{Net Productive Time} / \text{Available Time} \times 100$

Total efficiency/ Overall Efficiency = $\text{Time Efficiency} \times \text{Yield} / 100 \%$

Trim: The edge portions of the sheet on the paper machine that are cut or trimmed off

UID loss: unidentified losses is a reference to paper that cannot be accounted for

Warp: A paper defect appearing as wavy edges or curl

Water flotation: refers to the resistance to water penetration. That property of paper, which retards the passage of water from one surface of the paper to the other surface

Whiteness: Whiteness refers to the extent that paper diffusely reflects light of all wave lengths throughout the visible spectrum.

Winding: The process at the dry end of the papermachine, where an equipment winds and sometimes slits the sheets into rolls as it comes off the dryers

Wrong size: This refers to incorrect size of paper roll or incorrect grammage of paper

Yield: Yield is the ratio of the net saleable production to the gross production expressed as a percentage

The definitions provided here are referenced from Lavigne (1998).