

# Do you speak Corrugated?

a handy glossary from PCA

## “containerboard”

The paperboard components (linerboard or corrugating medium) used to manufacture corrugated products.

## parts & pieces

### “linerboard”

Paperboard used for the flat outer facings of combined corrugated board.

### “medium”

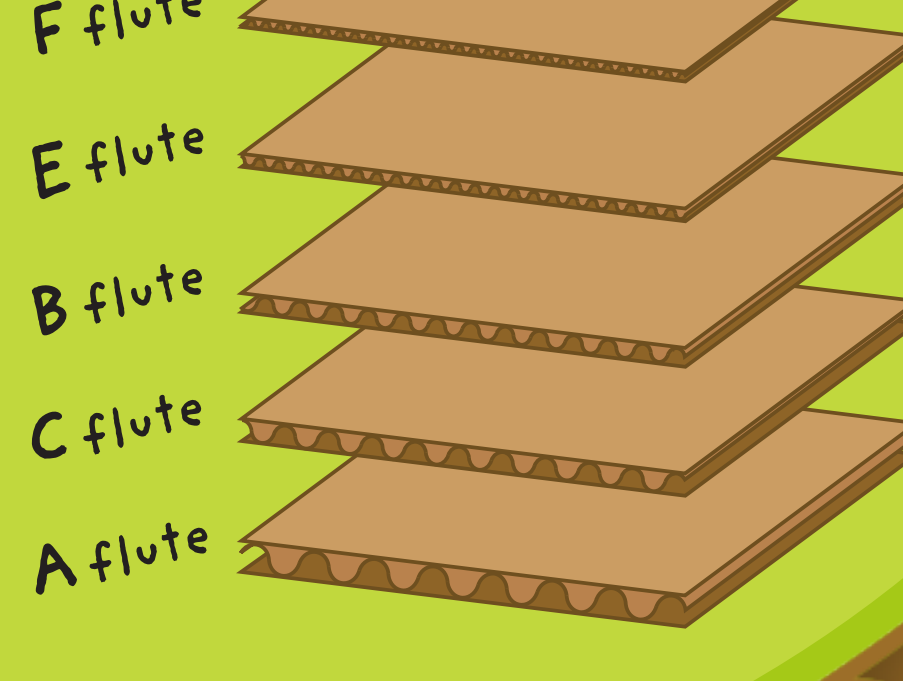
Containerboard used in forming the fluted portion of the corrugated board. After fluting, it is adhered to the outside facings.

### “kraft”

Indicates pulp, paper or paperboard produced from wood fibers by the sulfate process. Natural kraft paper has a characteristic light brown appearance.

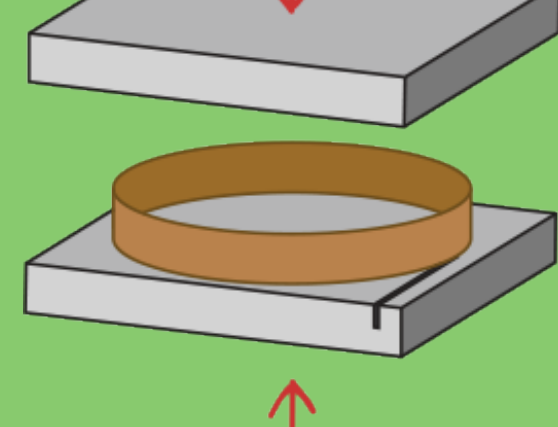
### “flute”

The “wave” shape formed into corrugating medium. A, B, C, E and F are the most common flute profiles. The profiles vary in flute height and number of flutes per foot.



## “Ring Crush Test (RCT)”

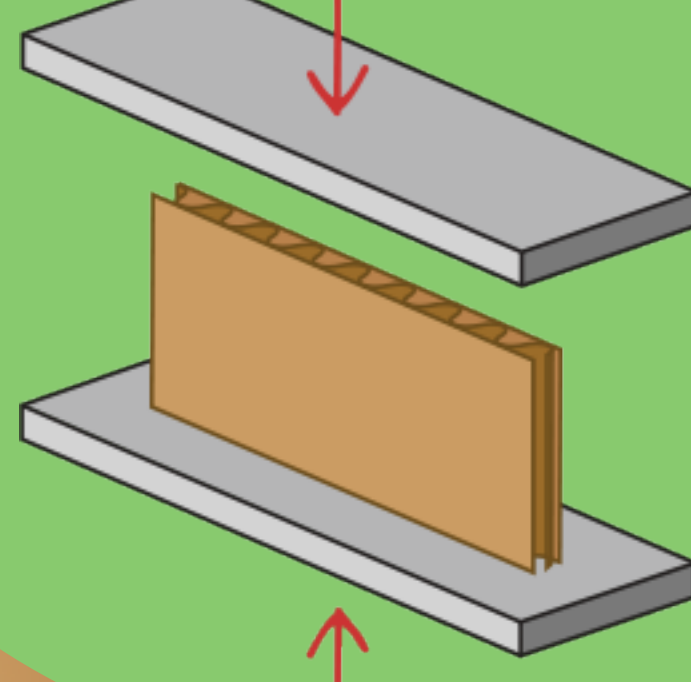
A laboratory test that determines the force needed to cause compressive failure of a strip of containerboard that has been placed in a circular configuration. Ring crush performance is one of the components of most formulas that are used to predict the compression strength of a finished box.



## gotta pass the test(s)

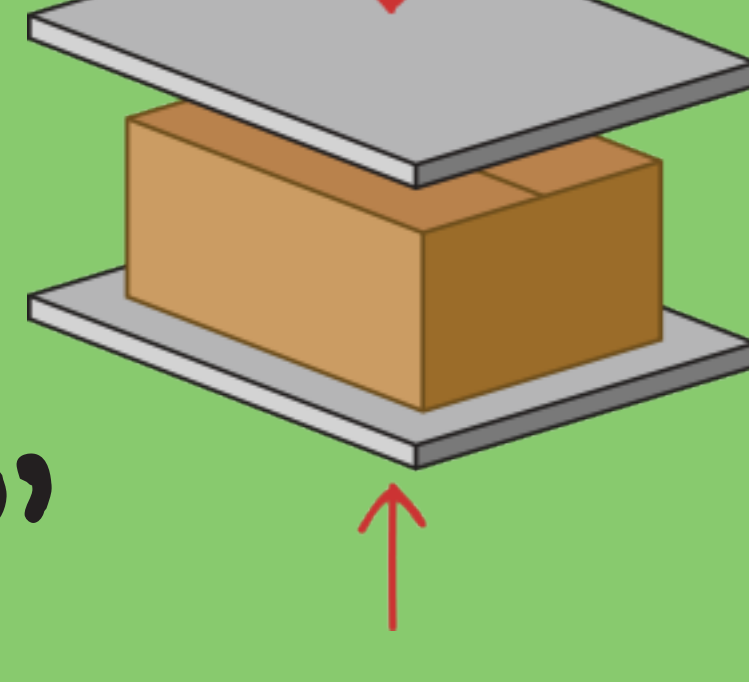
### “Edge Crush Test (ECT)”

A laboratory test that determines the amount of force needed to cause compressive failure of a vertical piece of corrugated board. Edge crush performance is used to predict the compression strength of a finished box.



### “Box Compression Test (BCT)”

A laboratory test that predicts a box's stacking performance in the field. The test measures a corrugated box's resistance to force, which is uniformly applied by two flat surfaces/platens to produce a given deflection.



## “combining plant”

A facility that has a corrugator. It manufactures combined board sheets and then processes the combined board into boxes or other finished products. It may also supply combined sheets to other box plants.

## “sheet feeder”

A facility that has a corrugator to manufacture combined corrugated board exclusively to supply sheets to box plants and other converting operations. The operation does not have finishing equipment to convert the sheets into boxes or other finished corrugated products.

## who does what where

### “sheet plant”

A converting operation that does not have an in-house corrugator and buys combined corrugated board from a sheet feeder or combining plant to manufacture products.

### “manufacturer's joint”

A joint (seal) made by the box manufacturer. The 4-sided box is folded in two places (called the “folding scores”), bringing one side panel and one end panel together. They are joined with adhesive, tape or staples.

### “knocked down (KD)”

### “knocked down flat (KDF)”

A flat, unopened box whose manufacturer's joint has been sealed. This is the way most boxes with a manufacturer's joint are shipped from the boxmaker to the customer.

### “MSF”

Abbreviation for thousand square feet, which is a unit of measurement for containerboard and finished corrugated products.

### “basis weight”

The weight of linerboard or corrugating medium expressed in pounds per 1,000 square feet (MSF) in the U.S.; generally in grams per square meter (GSM) where the metric system is used.

### “singleface”

Corrugated material that consists of one fluted corrugated medium adhered to one flat sheet of linerboard.



## heard around the plant

### “singlewall”

Combined corrugated board that consists of two sheets of linerboard with a fluted medium in between.



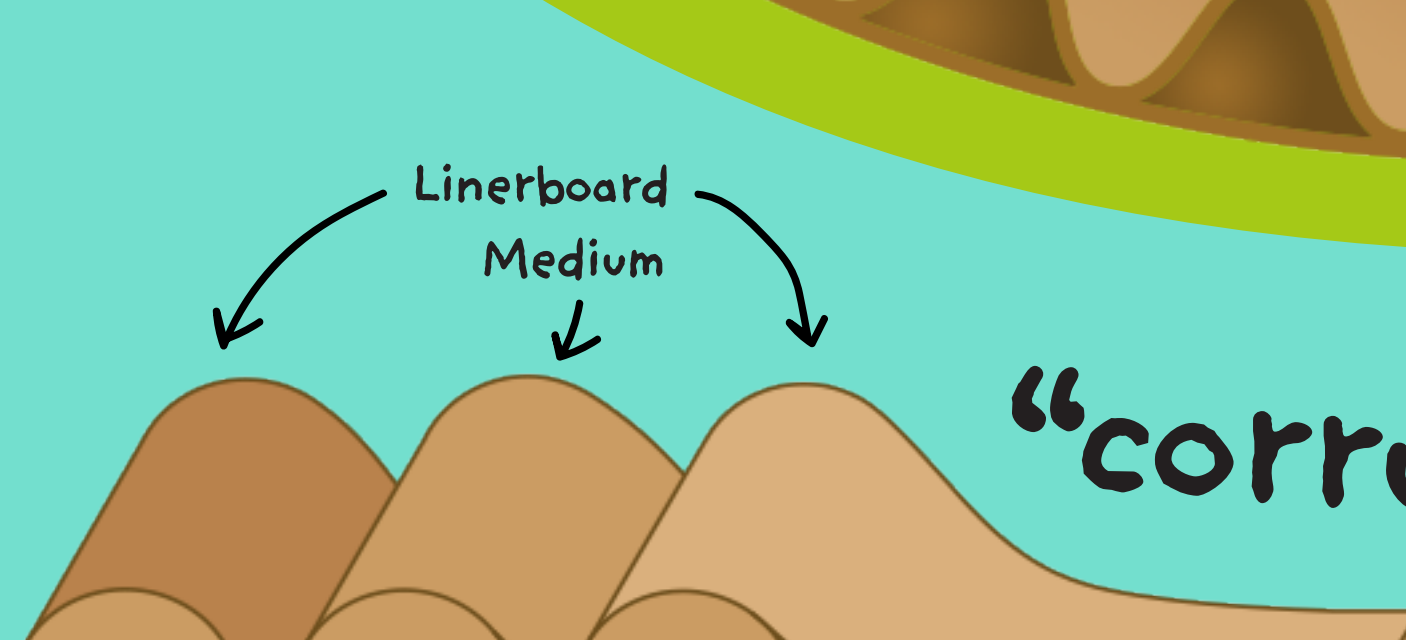
### “doublewall”

Combined corrugated board that consists of three sheets of linerboard with two fluted mediums in between.



### “triplewall”

Combined corrugated board that consists of four sheets of linerboard with three fluted mediums in between.



## “corrugator”

The machine that combines rolls of linerboard and corrugated medium to form corrugated board. This is accomplished by forming flutes in the medium, applying adhesive to the tips of the flutes and affixing the linerboard to the fluted medium. The continuous web of board is cut off to desired lengths to form corrugated sheets. The corrugator may also slit the board to desired widths and/or score in one direction.

## “die cutter (rotary, flatbed)”

A machine that cuts corrugated material to a desired shape (such as a box blank) by using a cutting and creasing die. Most die cutters also have in-line printing capability.

## big machines

### “flexo folder-gluer”

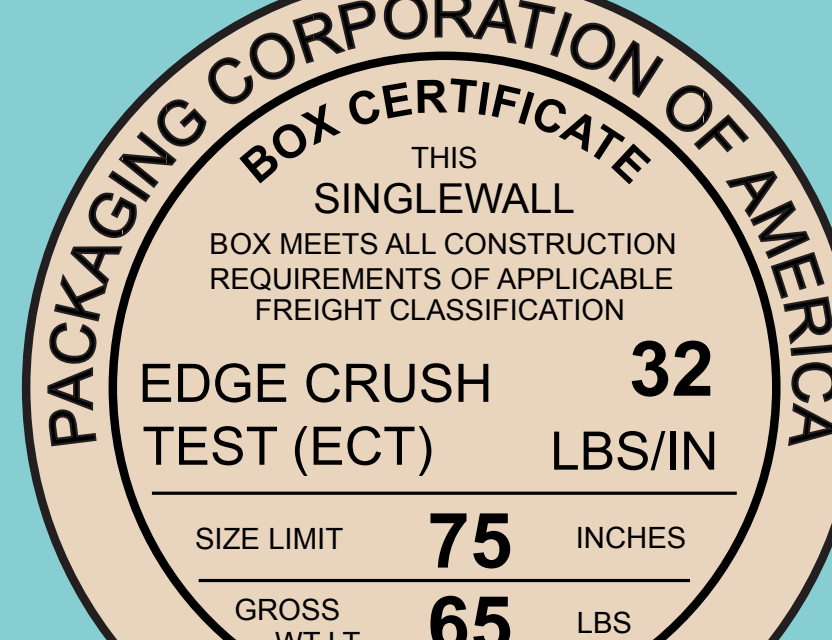
A machine that in a single operation prints, scores, slots and folds a box blank. It then glues the side seam (manufacturer's joint) to complete the manufacture of a knocked-down (KD) box. The KD boxes are collected at the end of the flexo folder-gluer and bundled for stacking and banding into a unitized load (sometimes on a pallet) for shipment to a box customer.

### “die cut”

Corrugated material cut to a desired shape (such as a box blank) by using a cutting and creasing die. Also used to describe the resulting piece or box blank.

### “Box Makers Certificate (BMC)”

A statement printed within a circular or rectangular border on a corrugated box guaranteeing that all applicable construction requirements of the common carrier classifications (e.g., National Motor Freight Traffic Association, Uniform Freight Classification) have been observed. It also identifies the box manufacturer. Even though BMCs are still commonly used, they are only needed if shipping by common carrier.



## printing & finishing

### “flexo (flexography)”

A method of printing using raised plates made of rubber or polymers. Fast-drying, water-based ink is transferred directly from the plate to the printing surface.

### “direct print”

The process of printing directly onto the outside surface of combined board. May be done with flexography or digital/inkjet printing methods.

### “score”

A well-defined impression or crease in corrugated board that is used to position and facilitate folds.

### “preprint”

A roll of linerboard that has been printed prior to the manufacture of combined board. Combining of preprint requires special equipment on a corrugator to assure precise cut-off.

### “blank size”



The dimensions (expressed in length and width) of a flat piece of corrugated board before it is converted to the final corrugated product. The blank size does NOT include trim (extra material), which may be necessary for the manufacturing process.

### “sheet size”



The dimensions (expressed in length and width) of a flat piece of corrugated board that is used to make a specific box (or other corrugated item). Unlike the blank size, the sheet size also includes “trim” material (if required) around the perimeter of the box that is needed to properly manufacture the item. The trim is removed as part of the manufacturing (usually die-cutting) process.

## “Point-of-Purchase (POP) display”

Corrugated structures, usually printed with high-quality graphics, that contain multiple sellable units of a product and serve as sales tools for the product. Many POP displays stand on the floor at the end of store aisles or in other prominent locations in the retail environment.

## eye-catching

### “Point-of-Sale (POS) packaging”

Corrugated packaging, usually printed with high-quality graphics, that is intended to serve both as a container and a sales tool to attract attention to the product that it contains. The POS is typically the primary package that the consumer removes from the shelf and takes home with the product inside.

### “Retail-Ready Packaging”

Boxes that serve both as the shipper and as a display mechanism in the retail environment. Retail-ready packaging usually utilizes graphics and unique designs to grab the attention of shoppers and aid in selling the product that is displayed. It also simplifies restocking in the retail environment and minimizes the use of additional protective packaging.

Now we're talking!

