PACKAGING AND FACILITY SOLUTIONS

CORRUGATED & FOLDING CARTONS GUIDE

There's nothing basic about a corrugated carton. This handy guide will help you understand the types, strength and flute types of commonly used corrugated cartons.

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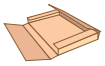
PICKING THE RIGHT BOX FOR THE RIGHT ITEM

When choosing the right corrugated packaging for your business there is a few factors that you need to consider before you decide on the best option, such as the type of carton, board style and flute type. This guide will also help you read box classification stamps to understand weight restrictions as well as how the box held up to laboratory tests. Here are a few things to consider when you choose the box to get.

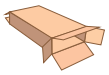
TYPES OF SHIPPING CARTONS

Regular Slotted Carton (RSC)
The Regular Slotted Carton can be used for most products, and is the most common box style. If the product requires a flat, even bottom surface, or the protection of two full layers, a fill-in pad can be placed between the two inner flaps.

Five Panel Wrap
The Five Panel Wrap is made from one piece of cardboard. These boxes are great for wrapping around a product that has to be carefully packed. This box design has good stacking strength and is easy to tape closed.



Cut-out Wrap (COW)
Like the Five Panel Wrap, the Cut-out Wrap folds the box around your product. A centre panel with four flaps wrap around that product, the width flaps can tuck under the length flaps or fold around themselves to form protective air cells. The length flaps fold up to meet in the middle, where the box is taped closed.

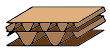


Full Overlap Carton (FOL)
All flaps are the same depth, and their depth equals the width of the box. When closed, the outer flaps come within one inch of a complete overlap. This style is especially resistant to rough handling. Stacked on its bottom panel, the overlapping flaps provide added cushioning. Stacked on its side, the extra thickness provides stacking strength.

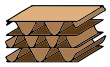
BOARD STYLES

Single Face
One corrugated medium is glued to one flat sheet of linerboard.

Single Wall
The corrugated medium is glued between two sheets of linerboard. Also known as Double Face.



Double Wall
Three sheets of linerboard with two mediums in between.



Triple Wall
Four sheets of linerboard with three mediums in between.

FLUTE TYPES

F Flute - 1/32” 0.8mm
Nearly half the thickness of E-Flute and is a popular choice in the corrugated industry. Using F-Flute can reduce the total amount of fibre in packaging and makes a more rigid box and sends less waste to landfills.

E Flute - 1/16” 2 mm
Has the greatest number of flutes which gives it the greatest crush resistance and the flattest surface for high quality printing applications. Due to its thin profile E-Flute can substitute for conventional folding cartons or solid fiber containers.

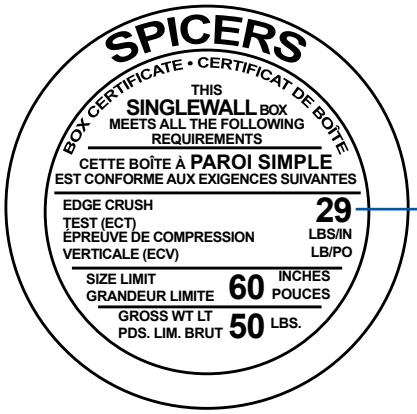
C Flute - 5/32” 4.0 mm
C-Flute is thinner than A-flute, thicker than B, and offers good cushioning, stacking and printing properties. C-Flute is by far the most widely used flute size.

B Flute - 1/8” 3.2 mm
B-Flute has lower arch heights than A, providing a stiff, flat surface for high quality printing and die cutting and with excellent crush resistant properties.

A Flute - 3/16” 6 mm
A-Flute is the highest flute size, due to its inner and outer facing it is the thickest. A-Flute is typically used for cushioning and stacking to protect fragile and delicate items.

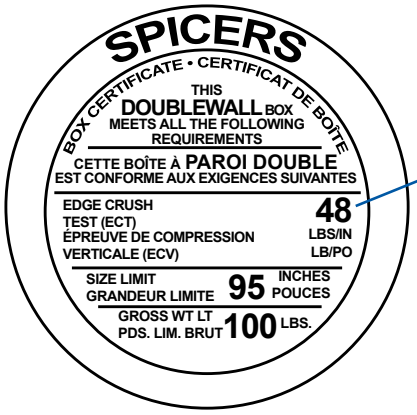
UNDERSTANDING THE CLASSIFICATION STAMP

CORRUGATED BOX LOADING LIMIT (LBS).



SINGLE WALL CORRUGATED

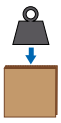
MULLEN TEST	TEST ECT (EDGE CRUSH TEST)	MAXIMUM SUGGESTED LOADING LIMIT PER BOX
125#	23 ECT	20 lbs.
150#	26 ECT	35 lbs.
175#	29 ECT	50lbs
200#	32 ECT	65 lbs.
275#	44 ECT	95 lbs.
350#	55 ECT	120 lbs.



DOUBLE WALL CORRUGATED

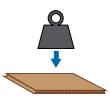
MULLEN TEST	TEST ECT (EDGE CRUSH TEST)	MAXIMUM SUGGESTED LOADING LIMIT PER BOX
200#	42 ECT	80 lbs.
275#	48 ECT	100 lbs.
350#	51 ECT	120 lbs
400#	61 ECT	140 lbs.
500#	71 ECT	160 lbs.
600#	82 ECT	180 lbs.

EDGE CRUSH TEST (ECT) VS MULLEN TEST



EDGE CRUSH TEST (ECT)

The edge crush test is a laboratory test method that is used to measure the cross-direction crushing of a sample of corrugated board. It gives information on the ability of a particular board construction to resist crushing.



MULLEN TEST

The older of the two tests is the Mullen Test (also known as the “burst test”), which is been used for most of the last century. All certified corrugated boxes were assessed by a hydraulic testing device called a Mullen tester. The machine evaluated the bursting resistance of a box by applying pressure to a flat piece of suspended corrugated. The Mullen Test is a pretty good indicator of how a box might perform when each box is handled individually and is subject to rough handling.

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