

ANNEX 1

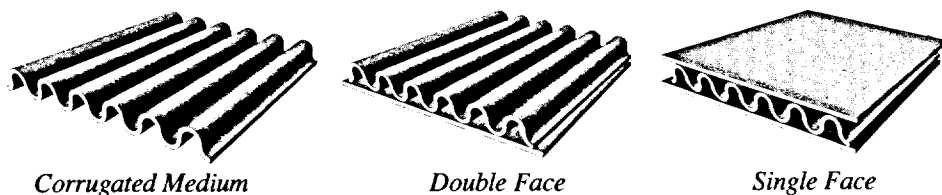
CORRUGATED BOXES

Corrugated boxes are constructed from a wavy (fluted) sheet or sheets glued to one or more liner board layers, see Fig 3.2. The structural characteristics of corrugated containers are governed by four variables:

- strength of the liners
- strength of the corrugated layer
- height and number of waves (flutes) per foot
- type of walls (single, double, triple etc.)

The wider the wave the greater the capacity to absorb shock, while a short wave provides maximum crush resistance. In addition, waxes and plastics can be added to a corrugated box to improve moisture resistance. This allows, for example, shipment of fruits, vegetables and other products otherwise shipped in more expensive wooden crates to be handled in cardboard cartons. The principal drawback of corrugated boxes is that compressive and burst strength is significantly reduced under conditions of high humidity (90% plus) and up to half normal strength can be lost. This loss of strength will be accelerated if the carton is subject to cyclical humidity.

Figure 3.2
Typical Flute Characteristics of Single Wall Corrugated Fibreboard



Flute Categories	Corrugations per foot	Approx. height		Edge Appearance
		inches	cm	
A	33 ± 3	.184	.467	
B	47 ± 3	.097	.246	
C	39 ± 3	.142	.361	
E	90 ± 4	.062	.157	
F	96 ± 4	.045	.114	