



Fluting Media

A USER'S PERSPECTIVE

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PANOPLY PACKAGINGS

FLUTING MEDIUM

Fluting Media or
Corrugating Media
are like bracings in a truss.



GENERAL CHARACTERISTICS

- Dull Surface with fibrous look.
- Dirt Spots are plenty and prominent.
- BF in the range of 18-22
- RCT could be $(0.4 \times 100) / 100$
- Very high moisture carrying capacity on either side.
- COBB Value > 100 gms

TYPES OF FLUTING MEDIA

Waste Based (Recycled) :

- Normal Fluting Medium
- High Strength Fluting Medium - High ECT/BCT Requirement

Virgin Pulp :

- Semi - Chemical Fluting Medium

SEMI CHEMICAL FLUTING MEDIA

- Used for high strength.
- Made from 100% primary fibre.
- Semi-Chem Fluting is best suited for when BCT is used to establish peak load of a corrugated box but it fails to withstand load in different humidity & temperature conditions.
- Perfect material for packaging fresh fruits & vegetables and fragile heavy goods.

CORRUGATED MARKET

- The past 10 to 15 years have witnessed massive growth in the packaging industry, with significant advancements and expansion across various sectors.
- Big transformation from semi-automatic lines to fully automatic lines
- Requirements of good quality paper has also increased for better runnability on high speed corrugators.

PAPER ADVANCEMENT LAGGING

- In India , most of the mills do not produce fluting media
The cost of Imported fluting media is high.
- Same paper is being used for liners as well as fluting.
World over, different grade papers are being used for liners and fluting unlike India
- COBB 60 Seconds is standard 30-40 GSM.

ADVANTAGES

- Most suitable for automatic lines and runs very smoothly on high speed corrugators.
Approximately 20% increase in productivity.
- High Cobb allows efficient glue absorption & penetration. Flute height is even and maximum with minimal washboarding.
- Improved board quality will give improved ECT, FCT & BCT which also results in cost savings.

ADVANTAGES

- No steam showers required while converting.
- Glue application setting is at low. Boards being more flat results in better productivity on printers and die-cutters.
- Low process rejection due to less splicing failure.

SAMPLE FLUTING MEDIA SPEC

| Grade | B/W (g/m ² ±4%) | 65% RH, 27 °C | | | | | | | 50% RH, 23 °C | | | | | | |
|---------|-------------------------------|---------------|---------|------------|------|--------|--------|-----------------|---------------|---------|------------|------|--------|--------|------|
| | | Ring Crush | | | CMT | | | Moisture (%) | Ring Crush | | | CMT | | | |
| | | (N/152.4mm) | (kg/cm) | (kg/6inch) | (N) | (kg) | (lb) | | (N/152.4 mm) | (kg/cm) | (kg/6inch) | (N) | (kg) | (lb) | |
| CAI 105 | Target | 105 | 90 | 0.60 | 9.2 | 170 | 17.3 | 38.2 | 6 - 9 | 98 | 0.65 | 10.0 | 170 | 17.3 | 38.2 |
| | Min. | | 85 | 0.57 | 8.7 | 160 | 16.3 | 36.0 | | 92 | 0.62 | 9.4 | 160 | 16.3 | 36.0 |
| CAI 112 | Target | 112 | 125 | 0.84 | 12.7 | 220 | 22.4 | 49.5 | 6 - 9 | 136 | 0.91 | 13.9 | 220 | 22.4 | 49.5 |
| | Min. | | 120 | 0.80 | 12.2 | 210 | 21.4 | 47.2 | | 130 | 0.87 | 13.3 | 210 | 21.4 | 47.2 |
| CAI 115 | Target | 115 | 130 | 0.87 | 13.3 | 225 | 22.9 | 50.6 | 6 - 9 | 141 | 0.95 | 14.4 | 225 | 22.9 | 50.6 |
| | Min. | | 125 | 0.84 | 12.7 | 215 | 21.9 | 48.3 | | 136 | 0.91 | 13.9 | 215 | 21.9 | 48.3 |
| CAI 125 | Target | 125 | 150 | 1.00 | 15.3 | 245 | 25.0 | 55.1 | 6 - 9 | 163 | 1.09 | 16.6 | 245 | 25.0 | 55.1 |
| | Min. | | 140 | 0.94 | 14.3 | 230 | 23.5 | 51.7 | | 152 | 1.02 | 15.5 | 230 | 23.5 | 51.7 |

Remark:

1. This specification is subject to review as per progress from continuous development.
2. Quality figures at 65%RH, 27°C are guaranteed specification based on internationally recognizable quality control system.
3. Figures at 50% RH, 23°C are calculated conversion from data at 65%RH, 27°C. They are not directly guaranteed against QC system.

Testing Condition : Temperature 27°C ± 1°C
 : Relative Humidity 65 ± 2%
 : Period 24 Hours

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Reference Testing Method

Basis Weight : ISO 536
 Ring Crush Resistance : ISO 12192
 Concora Medium Test : ISO 7263
 Moisture : ISO 287

INDIAN MARKET SCENARIO

- Kraft Paper consumption approximately 8-9 Million Tons Per Annum
- More than 50% consumption is by Auto Plants.
- Fluting paper makes up 40% of complete corrugating paper consumption.
- For auto plants , Fluting paper consumption is approximate 2.5 Million Tons Per Annum.

INDIAN MARKET SCENARIO

- Over the last 10-15 years, paper mills have made substantial investments and significantly increased their capacity.
- But there have been no investments in producing fluting media.
- There is huge potential for fluting media consumption by auto plants driven by the installation of many High-Speed Corrugators.

MARKET OPPORTUNITY

- Cost of producing fluting media should be low due to lower input costs than liners
- Big vacuum in India for supply of fluting media.
Huge potential for paper mills to penetrate & develop fluting media market
- High speed corrugators being installed all over India will result in good demand for fluting media in coming years
- Sooner or later auto line corrugators will shift to corrugation medium for fluting in board making

Thank You !