

PAPERBOARD 201



A CLEARWATER PAPER COMPANY

For over 40 years, Manchester Industries has demonstrated a passion for providing solutions to our customers. We take pride in being a part of our customers' process and working with them to meet the changing and challenging needs of the printing and packaging industry.

We provide an exceptional service platform with a staff that is second to none in technical and industry knowledge. Working with our customers, we assist with inventory requirements, specifications and recommend appropriate substrate selection based on cost, quality and end-use requirements.

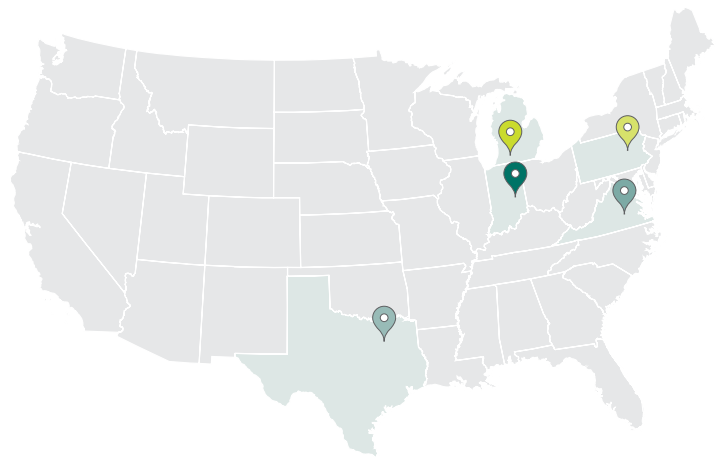
ENABLING SUCCESS THROUGH SUBSTRATE CHOICE, SPEED, EXPERTISE AND QUALITY.

Serving Your Printing and Packaging Needs:

- One Stop Sourcing for First Line - Mill backed paperboard and paper
- *No "Job Lot or Seconds" worries*
- *Custom Precision Sheeting - From a Skid to Truckloads!*
- Digital to Large Format
- Multiple Carton Packaging Lines
- Thirteen Precision Sheeters
- Multiple plant sites give us the ability to flex our schedules and provide supply chain contingency
- Slitting and Rewinding Rolls - *Perfect for Narrow Web Applications!*
- Contract Sheeting Services
- Guillotine Trimming capability
- Press Ready Skids
- *Quick Turnaround time! Ready to ship 1-3 Days*
- We invest in large inventory, so you don't need to
- At no additional cost, we provide technical assistance supported by our Mill's technical resources and staffing.

Call us to discuss your Private Label Needs!

Ask about our patented Quick Change® Skid Inserts!



Manchester has five strategic locations ensuring speed to market for additional regions including: Tennessee, Alabama, and South Carolina

VIRGINIA

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Phone: 804-226-4250

PENNSYLVANIA

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MICHIGAN

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PAPERBOARD GRADES

One way to think of packaging grades is a tri-level pyramid. Generally speaking as you ascend the pyramid you attain both higher quality and higher cost.

COATED VIRGIN GRADES:

SBS (Solid Bleached Sulfate), CUK (Coated Unbleached Kraft), FBB (Folding Box Board)

CUK has a heavier basis weight than SBS for strength (wet strength sizing is also available). SBS offers a smoother and generally cleaner print surface making it broadly acceptable by most customers who prefer a bleached board.

FBB is a multi-ply board included in the category offering a basis weight advantage, with varying degrees of stiffness and print quality.

The best way to look at SBS and FBB products is to refer to them as different manufacturing technologies: SBS/ CUK is manufactured using the southern kraft process, most commonly utilizing a single ply, Fourdrinier machine. FBB products are manufactured on multi-ply machines using multiple headboxes, coming together to form the sheet, with mechanically produced pulp in the middle ply. FBB production is more common outside of the US but growing in popularity.



SBS
CUK
FBB

CLAY COATED RECYCLED GRADES:

CCNB (Clay Coated News Back), CCKB (Clay Coated Kraft Back),
CCWB (Clay Coated White Back)

CCKB was traditionally used for cartons needing a little more strength than CCNB. CCKB was to contain more kraft box cuttings (virgin fiber) to add more rigidity, bursting strength, etc. CCWB had the white backliner to make a nicer finished (lined) carton.



CRB

UNCOATED CHIP GRADES:

Plain Chip, Bending Chip, Pasted Chip

USED FOR: Simple folding cartons, Packer boxes

Non clay coated virgin content would be the virgin fiber member of this group, to allow a cleaner, smoother surface for printing. Some chip mills do make a recycled sheet to rival UNK in printability, but availability may be difficult in some areas of the country.



CHIP BOARD (UNK)

AVAILABILITY & PRICE

Manchester has market leading inventory across all paperboard product categories and access to specialty products, for which we can establish inventory programs.

Paperboard mills typically serve truckload and railcar SKU business. A well-stocked converter's value proposition is to service quick-turn, custom needs.

For SBS: Calipers from .010 - .028 are normally available

- .022 is stocked less than any other caliper
- .010 - .024 are fairly common among suppliers
- FBB grades are typically imported with longer lead times, but stocked in standard sizes

CRB typical stock calipers are .018-.024.

- .016 is available for an upcharge and is stocked in smaller quantities
- .026+ is available in limited supply from specific mills as a specialty grade
- CCWB and CCKB grades are rarely stocked by most converters

Current price ladder but subject to market shifts:

- SUS
- SBS
- FBB
- Uncoated Natural Kraft
- CCKB
- CCWB
- CCNB
- Bending chip
- Bleached manila

The order may change slightly due to goals desired.

Specialty grades exist for specific end uses such as:

- Blast resistant
 - Sulfonated
 - Fluorinated
 - Grease holdout board
 - Top Sheet
 - Cup and plate
 - Lined on inside
- Grades and characteristics depend on end use.*

CONTACT YOUR MANCHESTER PAPERBOARD SPECIALIST TODAY

TO LEARN MORE

*About How Manchester Industries
Can Serve Your Printing and Packaging Needs:*

www.manind.com/contact



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