

INTERSTATE

RESOURCES

Liner Board



Liner Board



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About us

About Interstate Resources, Inc.

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About us



over **55** companies around the globe



"A Local Multinational from the Middle East"

www.indevcogroup.com



INDEVCO Group

For over 55 years, INDEVCO has diversified itself to operate globally in worldwide markets.

INDEVCO is an international manufacturing group that produces paper, plastic and corrugated packaging for a wide variety of industries.

We also manufacture personal care, household and institutional disposables for the retail and away-from-home (AFH) markets.

Our manufacturing group is comprised of over 35 flexible and corrugated packaging, paper, tissue, and consumer disposables manufacturing plants, as well as 20 other commercial companies.

Our plants supply such markets as:

Agriculture. Beverage. Construction. Food.
Industrial. Pharmaceutical. Personal Care.
Petrochemical. Promotional. Dairy. Hygiene
Converting. Soap & Detergent

Our key success factors are highly competitive manufacturing, a balanced integration of management services, optimal demand-supply chain and, above all, a committed and entrepreneurial management team.

Our team members are at the center of our success. Every member of the team strives to embrace and exhibit the core values upon which our group was founded:

Family Spirit. Hard Work. Entrepreneurial Drive.
Servant Leadership. Modesty. Honesty. Precision

INDEVCO employs over 7500 people in Cyprus, Egypt, England, France, Greece, Lebanon, Saudi Arabia, Sweden, Sudan, Ukraine, and the United States.





About Interstate Paper LLC

Interstate Paper is a leading manufacturer and distributor of kraft linerboard. One of the few independent linerboard mills remaining in the United States, we take pride in serving our customers with the highest quality products and exceptional service.

Interstate Paper was established in 1968 in Riceboro, Georgia, where we continue to operate today, producing 1,000 tons of linerboard each day. Like all affiliates of INDEVCO Group, Interstate Paper is a true family-oriented operation. Of the 230 employees at our mill, over 70 are second and third generation staff.

We are one of the largest employers in the Liberty County, Georgia area. As one of the cleanest effluent paper mills in the United States, we are especially proud of our environmental stewardship.

Interstate Paper applies all our resources towards one goal: to be the most customer-oriented linerboard operation in the global market. Our management team constantly invests in state-of-the-art machinery, IT systems, employee training, and environmental sustainability.

While we continue to invest in the infrastructure of our business, our employees are at the heart of our success. Their strong relationships with our customers are a reflection of the pride and ownership role they take in the business.

This combination of management, technology and people make Interstate Paper a world-class linerboard supplier.





Principles

Our team is committed to providing unparalleled customer satisfaction by adhering to the highest product quality, delivery, and consistency standards. Our commitment to these principles is evidenced in our daily operations, as well as in our strategic investment in modern technology.

We strive to be highly responsive to our customers' requests for technical assistance and innovative solutions. Our continual investments in the business allow us to provide high level services at competitive prices.





Mission

We are a market-driven, customer-focused company committed to serving the paperboard and packaging customers.

We operate with high ethical values and a high regard for the well-being, development and safety of our people.

We achieve profitability through optimal performance in all our business activities; this is made possible by adding value for our customers, and operating with an entrepreneurial drive.

We will steadily and predictably increase the economic value of the company.





Vision

Customers

At Interstate Paper, we proactively seek to build and enhance our business with customers who recognize and buy on total value. We develop an in-depth knowledge of our customers' business and industry; then we provide them with innovative products and services to assist them in meeting their objectives.

People

The safety and well being of our people is the primary factor that drives our business. Our employees are part of a caring team and are encouraged to develop and fully utilize their experience and talent in support of the business. Accordingly, we strive to create a safe and open culture that fosters entrepreneurial spirit and rewards creativity and learning.

Owners

Our ownership is continually investing and renewing assets in the company. As disciplined entrepreneurs, we build our credibility through:

- Achieving steady and predictable performance
- Possessing in-depth knowledge of our markets and customers
- Developing and implementing effective business strategies
- Demonstrating effective project management
- Providing timely and accurate information
- Developing and sharing technical and managerial talent in support of our business.





Safety

A key aspect of Interstate Paper's culture is commitment to the safety and well being of our employees. This is evidenced by our strong mill safety record and the mill safety program which underlies that record.

A successful safety program requires each person in the organization, regardless of position, to understand and accept safety as their individual and personal responsibility. We put this into practice by performing safety observations and offering immediate feedback with a strong focus on positive reinforcement of safe behavior.

Safety on the job is often perceived to be an 'individual' responsibility, much as a machine operator is responsible for the operation of their machine. However, employees do not work alone.

Employees have an entire network of co-workers to provide support and guidance. Teamwork is a must, in order to create a safe working environment. In that respect, our mill-wide Safety Program gives employees the opportunity to provide valuable input into all facets of the program.

Responsibility for assuring that the safety program works effectively is a core function of all management and supervisory personnel. Managers are responsible for the program's execution in the operations under their control; department heads, superintendents and line supervisors are accountable for the safety of the employees under their direction.

We are dedicated to working together to keep safety a primary, ongoing focus in our daily lives at Interstate Paper.





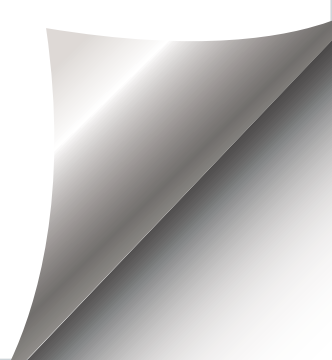
Quality

We believe fundamentally that quality is delivering an Interstate Paper product that meets or exceeds our customers' expectation every time, on time. This core principle leads us to accept nothing less than the best for our customers and provides the platform to improve our business every day.

Our commitment to service and our attention to detail provide the foundation of the partnership between Interstate Paper and our customers. We believe "what gets measured gets done."

As such, we have identified quality measurable attributes in our business to ensure consistency. Our keen focus on continuous improvement, renewing and upgrading of assets, and training of team members ensures quality standards are met or exceeded.

This management support of our quality program, coupled with employee training, allows us to provide repeatability in our process and provide customers products they can count on to perform at all times.





Port Information

Interstate Paper, conveniently located within a short distance to numerous local ports, is able to load containers at its Riceboro facility for direct shipment to the ports. Breakbulk service by either truck or rail is also available.

Georgia Port Authority – Savannah, Georgia

Georgia Port Authority in Savannah, 36 miles away from Interstate's paper mill, is the 4th highest volume container port in the United States having shipped 2.4 million TEUs in fiscal year 2009. Georgia Port Authority has spent millions of dollars on the port's upgrade in order to achieve the level of excellence it operates at today. The port has the ability to handle both containers and breakbulk cargo and is served by the CSX and Norfolk Southern railroads.





Port Information

Georgia Port Authority – Brunswick, Georgia

Georgia Port Authority in Brunswick, 50 miles away from the paper mill, handles breakbulk cargo. It is served by the CSX and Norfolk Southern railroads.

Jacksonville Port Authority – Jacksonville, Florida

Jacksonville Port Authority, 100 miles away from the paper mill, has multiple terminals that can handle both container and breakbulk cargo. It is served by the CSX, Norfolk Southern, and Florida East Coast railroads.

South Carolina Port Authority – Charleston, South Carolina

South Carolina Port Authority, 137 miles away from the paper mill, handles both containers and breakbulk cargo in multiple terminals. The Port of Charleston shipped 1.37 million TEUs in fiscal year 2009.



Interstate Paper Specialties

Interstate Resources plants are independent suppliers of kraft linerboard and recycled medium to the open market, delivering quality products with superior turnaround and customer service.

- **Prevent Glue Tab Failure With Interstate Liner**
- **Interstack® -35**
- **Interstack® -52**
- **Emveco Roughness**

Prevent Glue Tab Failure With Interstate Liner

Prevent Scoreline Cracking with Interstate Liner

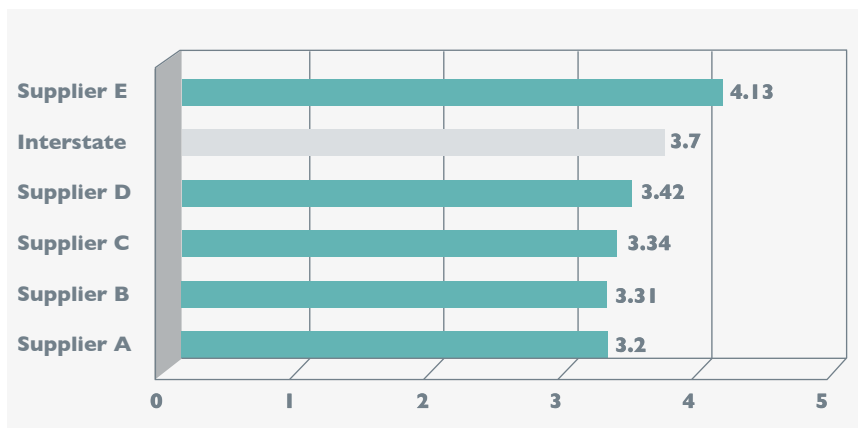
Scoreline cracking typically involves heavy weight liner greater than #42 and occurs more often in winter when cold and dry conditions exist.

A variety of linerboard properties influence score cracking:

- Liner furnish (Virgin vs. Recycled)
- Elasticity or stretch
- Moisture
- Top sheet fiber mix - Softwood (longer fibers) vs. Hardwood (shorter fibers)
- Internal bond

Independent laboratory testing shows that Interstate Liner has greater elasticity than most linerboards.

Score Cracking Resistant Liner #69 CD Elongation/Stretch



Many linerboard producers incorporate hardwood into their top sheet to improve smoothness, but this short fiber often is associated with Scoreline Cracking!

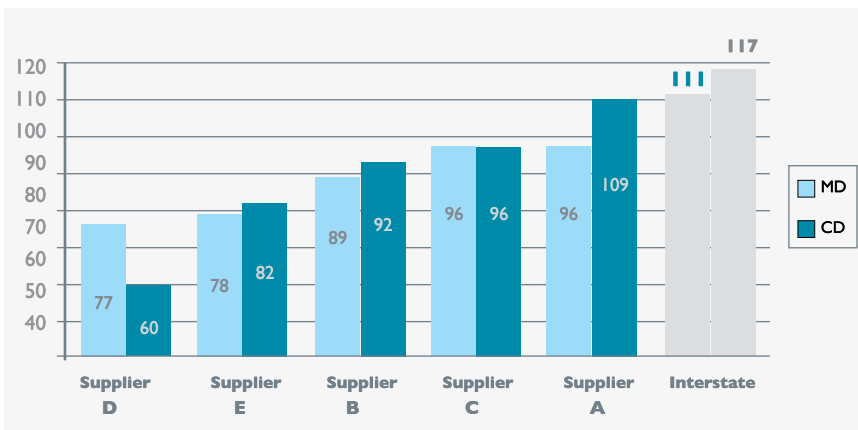
Interstate Resources paper mills use 98% virgin softwood in the top sheet and a Soft Nip Calender to create a crack-resistant sheet with superb smoothness.

Prevent Glue Tab Failures with Interstate Liner

Independent laboratory testing has shown Interstate #69 Liner has the highest Scott Internal Bond of all suppliers tested.

Note: TAPPI recommends that Virgin Liner should have a Scott Bond of 100.

Glue Tab Failure #69 MD/CD Scott Bond



* Independent laboratory studies have linked poor Scott Bond to Score Line Cracking.

Because of Interstate's high Scott Internal Bond values, customers can count on Interstate Liner to maximize glue tab strength and avoid glue tab failures in the field.

Interstack®- 35

A Corrugated Component for 32 ECT

Compression-Based Linerboard Characteristics

	Target	Lower Limit	Upper Limit
STFI (Cross-Directional)	20.5	18.4	
Ring Crush* (Cross-Directional)	80	70	
Moisture (%)	6.0	5.0	8.5
Porosity (Sec/100cc)	>25	15	
Smoothness (Sheffield)	370	390	
Cobb - Top/Bottom (g/m ²)	55	30	80

*Calculated from STFI

Vary the medium and change the ECT!

Typical Basis Weight Mediums	Minimum CD Ring Crush	Theoretical Minimum ECT <small>(assuming good combining)</small>
23	26	35
26	33	37
30	45	39
33	55	41
36	63	42

A Corrugated Component for 44 ECT

This proven packaging solution for corrugated manufacturers has offered versatility in designing 32 ECT for years.

Interstack®-35 contains more than 90% virgin southern pine fiber, the highest quality source of fiber material available today.

Greater Corrugator Productivity

- Uniform caliper
- Excellent roll construction
- Uniform moisture profiles
- Excellent printability
- Excellent ECT performance

In April 2002, Interstate Paper LLC further improved quality with the installation of a state-of-the-art top wire former and Soft Nip Calendar. Interstack®-35 is now more than 10% smoother with a 60% improvement in porosity. Formation and density have improved significantly.

Interstack®- 52

A Corrugated Component for 40-44 ECT

Compression-Based Linerboard Characteristics

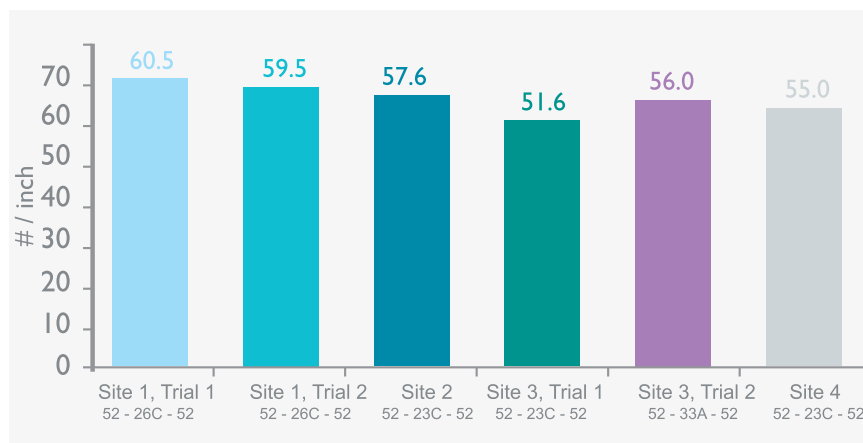
	Target	Lower Limit	Upper Limit
STFI (Cross-Directional)	29.5	27.7	
Ring Crush* (Cross-Directional)	120	112	
Moisture (%)	7.5	5.0	8.5
Porosity (Sec/100cc)	>25	15	
Smoothness (Sheffield)	380		400
Cobb - Top/Bottom (g/m ² - 2 min)	55	30	80

**Calculated from STFI*

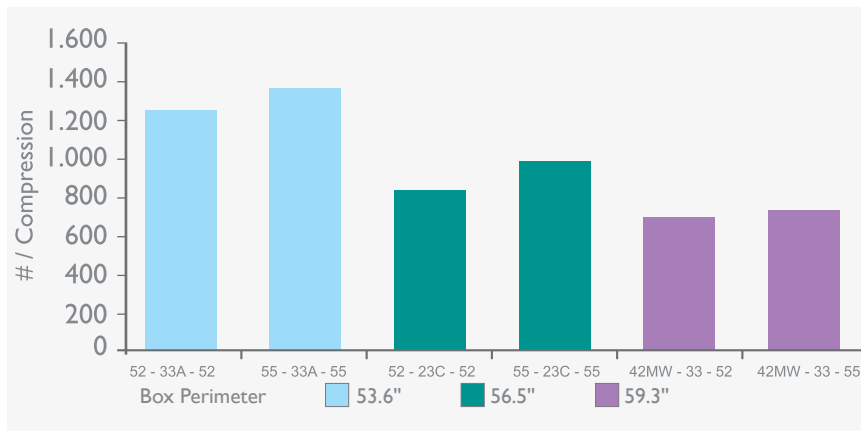
You have multiple options and combinations to develop a specific ECT!

ECT Performance: Interstack® - 52

Varying Flute & Medium



Box Performance: Interstate #52 and #55 Liner Varying Flute & Medium



Your Choice

Interstack®-52 kraft liner is the solution for corrugated manufacturers who desire an alternative compression component for ECT 40-44 and who are seeking greater value in packaging designs and cost competitiveness.

Your Source of Strength

Interstack®-52 kraft liner contains more than 90% virgin southern pine fiber, the highest quality fiber available today which retards the effects of scoreline “cracking” while delivering strength. Hardwood fiber is NOT used as a fiber source during Interstate liner production.

Your Converting Productivity

Discover greater corrugator productivity because of Interstack®-52 kraft liner’s lower basis weight, uniform caliper, roll hardness, and uniform moisture profiles. Lower basis weight means faster speed and reduced corrugating costs per hour.

Your Added Values

Interstack®-52 kraft liner offers high quality graphic printing capability without sacrificing ECT performance.

Your Profit Improvement Partner

Create other innovative packaging solutions or operational effectiveness in corrugating or converting. Our quick response shipments allow reduced inventory at your facility to improve cash flow. This alternative solution to other conventional based performance linerboards offers you a 5-9% reduction in basis weights, less weight per box and logistic economies.

Emveco Roughness

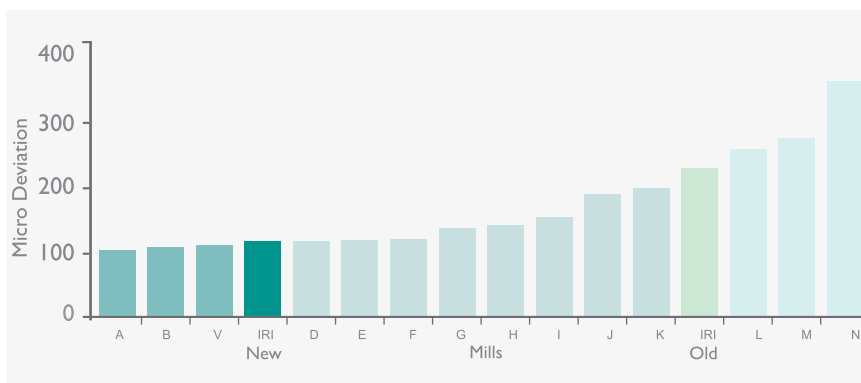
The Best Predictor of Printability

Of all instrumentation currently available to predict kraft linerboard printability, Emveco Roughness had the greatest predictive capability, according to a final report presented at the January 2002 American Forest & Paper Association (AF&PA) Technical Meeting. The Emveco Roughness tester uses a stylus similar to a phonograph needle to measure the topographic contours of linerboard surfaces.

Conversely, the report found that Sheffield Smoothness had a very poor predictive capability. The Sheffield Smoothness tester utilizes a current of air passed over the liner surface to make a measurement. In this sense the Sheffield tester actually makes no direct contact with the sample surface.

Kraft linerboard from Interstate Resources plants is in the top quartile within the industry for Emveco!

Emveco Roughness: Interstate #42 vs. Industry (lower values indicate better print surface)



Emveco Scale

- < 130 Very Good
- 130 to 150 Good
- 150 to 175 Fair
- > 175 Poor



Mullen Kraft Linerboard Specifications

- 36 Kraft
- 38 Kraft
- 41 Kraft
- 42 Kraft
- 47 Kraft
- 51 Kraft
- 56.3 Kraft
- 58 Kraft
- 61 Kraft
- 61.4 Kraft
- 69 Kraft



MULLEN



Mullen
Specifications Sheet

Grade Grade Code			36K 2176	38K 2186	41K 2200	42K 1042	47K 2229
Characteristics	Units	Method					
Cond. Basis Wt. Target	lb/1000 sq ft. gsm	On line scanner	36.0 176	38.0 186	41.0 200	41.5 205	47.0 229
Moisture Target	%	On line scanner	7.0	7.5	7.5	7.5	7.5
Mullen Min-Target	psig kPa	Tappi T-807	84-92 580-635	88-96 607-662	94-102 649-704	95-105 655-724	102-114 704-787
Cobb 2 min. Target	g/sq m	Tappi T-441	55	55	55	55	55
ZDT min	psi	Tappi T-541	28	28	28	28	28
Gurley Porosity Target	sec/100cc	Tappi T-460	>25	>25	>25	>25	>25
Caliper	.001 in. mm	Tappi T-411	9.9 0.25	10.3 0.26	11.2 0.28	11.2 0.28	12.5 0.32
Smoothness Target	Sheffield units	Tappi T-538	370	370	370	370	370
Scuff min.	strokes #	Tappi UM 580	7	7	7	7	7
Slide Angle min.	degrees	Tappi T-815	20	20	20	20	20



Grade Grade Code			51K 2249	56.3K 2275	58K 2283	61K 2298	61.4K 2300	69K 1069
Characteristics	Units	Method						
Cond. Basis Wt. Target	lb/1000 sq ft. gsm	On line scanner	51.0 249	56.3 275	58.0 283	61.0 298	61.4 300	68.2 337
Moisture Target	%	On line scanner	7.5	7.5	7.5	7.5	7.5	7.5
Mullen Min-Target	psig kPa	Tappi T-807	106-118 731-814	113-125 780-863	115-128 794-883	120-132 828-911	120-132 828-911	130-142 897-980
Cobb 2 min. Target	g/sq m	Tappi T-441	55	55	55	55	55	55
ZDT min	psi	Tappi T-541	28	28	28	28	28	28
Gurley Porosity Target	sec/100cc	Tappi T-460	>25	>25	>25	>25	>25	>25
Caliper	.001 in. mm	Tappi T-411	13.0 0.33	14.9 0.38	15.5 0.39	16.0 0.41	16.0 0.41	18.3 0.46
Smoothness Target	Sheffield units	Tappi T-538	380	380	380	380	380	380
Scuff min.	strokes #	Tappi UM 580	7	7	7	7	7	7
Slide Angle min.	degrees	Tappi T-815	20	20	20	20	20	20



High Performance Kraft Linerboard Specifications

- **35 High Performance**
- **45 High Performance**
- **52 High Performance**
- **55 High Performance**



Kraft Linerboard

Specifications
(High Performance)



HIGH Performance

High Performance
Specifications Sheet

Grade Grade Code			35H 1035	45H 1045	52H 1052	55H 1055
Characteristics	Units	Method				
Cond. Basis Wt. Target	lb/1000 sq ft. gsm	On line scanner	34.5 171	44.5 220	51.5 254	54.5 269
Moisture Target	%	On line scanner	6.0	7.5	7.5	7.5
CD STFI Min-Target	force #/in kN/m	Tappi T-826	18.4-20.5 3.22-3.59	22.9-24.9 4.01-4.36	27.7-29.5 4.85-5.17	29.4-31.2 5.15-5.46
Cobb 2 min. Target	g/sq m	Tappi T-441	55	55	55	55
ZDT min	psi	Tappi T-541	28	28	28	28
Gurley Porosity Target	sec/100cc	Tappi T-460	>25	>25	>25	>25
Caliper	.001 in. mm	Tappi T-411	10.0 0.25	11.7 0.30	13.5 0.34	14.3 0.36
Smoothness Target	Sheffield units	Tappi T-538	370	370	380	380
Scuff min.	strokes #	Tappi UM 580		7	7	7
Slide Angle min	degrees	Tappi T-815	20	20	20	20



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