

Performance Coatings and the Sustainability Movement

**Lake States TAPPI 3.27.07
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Outline

- Why sustainability?
- What is sustainability?
- Case study: waxed corrugated
- Spectra-Kote Solutions



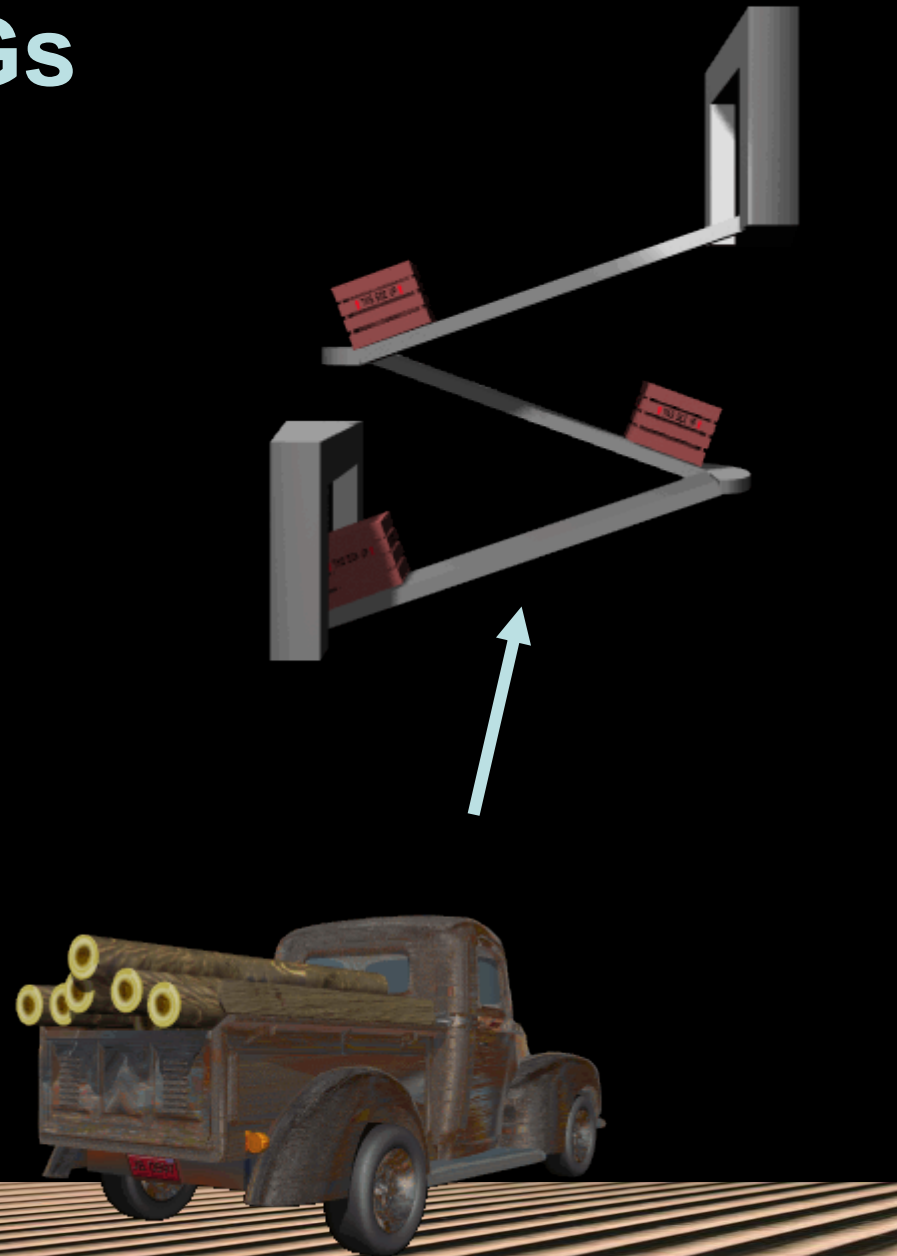
Origins of Greenhouse Gases

To produce high-grade corrugated, for example, a manufacturer uses gasoline-powered machinery to cut down trees (which store carbon), diesel trucks to carry the lumber to the paper mill, fossil fuels or wood products to power the mill, and more diesel trucks to distribute the product to customers.



From MSW to GHGs

Every stage of a product's life cycle—extraction, manufacturing, distribution, use, and disposal—indirectly or directly contributes to the concentration of GHGs in the atmosphere and affects global climate.



Sustainable Packaging

- Is beneficial, safe & healthy for individuals and communities throughout its life cycle;
- Meets market criteria for performance and cost;
- Is sourced, manufactured, transported, and recycled using renewable energy;
- Maximizes the use of renewable or recycled source materials;
- Is manufactured using clean production technologies and best practices;
- Is made from materials healthy in all probable end of life scenarios;
- Is physically designed to optimize materials and energy;
- Is effectively recovered and utilized in biological and/or industrial cradle to cradle cycles.

Wal-Mart Initiative



Remove Packaging

If packaging is necessary, why not make it natural packaging that returns to where it came from—the earth—with the minimal inputs of water, moisture and sunlight. Earthcycle's molded palm fiber packaging is certified compostable (ASTM D6400) and, in a well managed compost, will return to earth in less than 90 days.

Reduce Packaging

Huge reduction in packaging weight and volume by the shift from plastic bottle to refillable flexible pouch

Reuse Packaging

- Systems enable our customer to reduce cost by reusing a number of our products.
- Plastic film cores can be refurbished for reuse and our wooden reels have improved surfaces for repeated usage.
- SUPPLIER X provides over 2 times the expected floor life of traditional pallet display for restocking. Other examples are SUPPLIER's film cores, reel and specialty based solutions.

Renew (able)

SUPPLIER X presents PACKAGING™, a line of fully recyclable corrugated containers that have the strength to withstand moderate moisture environments.

Recycle (able)

The paper industry recovers more material from municipal waste than all other industries combined. Recovered paper accounted for 37.1% of the US paper industries fiber needs in 2004. The amount of paper recovered for recycling continues to outpace the amount of paper sent to landfills ~ 50 million tons recycled vs. 38 million landfilled. SUPPLIER's corrugated business uses 15% recycled content for linerboard, and 70% recycled content for medium. Our folding carton business utilizes 75% recycled board.

Revenue

In many cases SUPPLIER provides turnkey services where the materials are designed, printed, converted, packed and shipped from the same location.

Read

For additional information related to SUPPLIER X and any of the solutions you see, please visit www.SUPPLIER.com or contact SALES PERSON at (479) 277-7057.

Corrugated Packaging

Nearly 76% corrugated packaging
recycled



Recycled vs. Virgin Fiber

By increasing the amount of recycled-content in the corrugated, the manufacturer can eliminate GHG emissions

The EPA Waste Recycling Model (WARM) shows that recycling corrugated **has a greater positive impact** than even waste prevention.



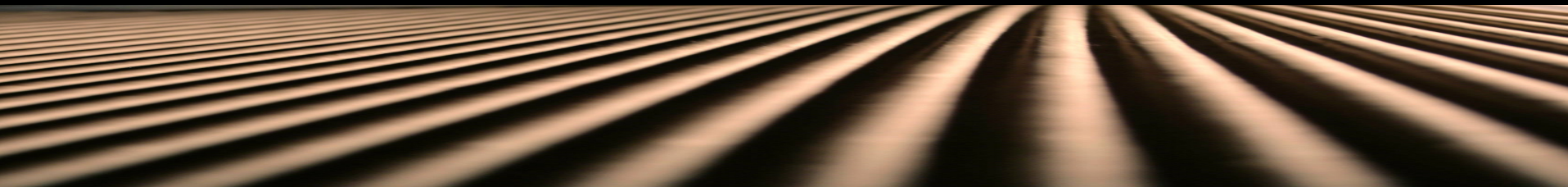
Waxed Corrugated Packaging is...

- used for produce and protein
- provides strength and waterproofing
- Is not recyclable



Waxed corrugated not recycled...

- 1.5 million tons of *waxed* corrugated packaging **NOT** recycled annually.
- 500 million pounds of wax used in the production of that corrugated.



By the numbers

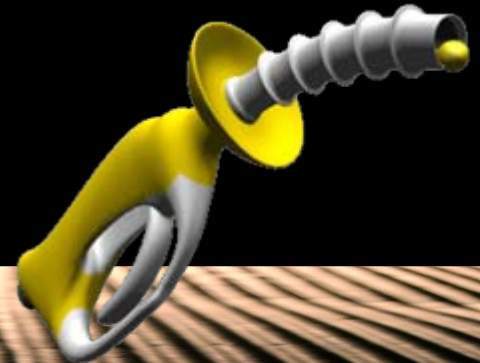
- The energy benefits of recycling rather than landfilling **1.5 million tons of OCC** (old corrugated cartons) are:

**23,470,445 million
BTUs**



This energy benefit equals

- 343,693 Passenger Cars Removed from the Roadway Each Year
- 4,046,628 Barrels of Oil
- 187,656,326 Gallons of Gasoline



Associated greenhouse gas (GHG) emissions benefits

5,267,370 metric tons of CO₂e



The GHG emissions benefits are equivalent to...

- 1,140,123 Passenger cars not driven for one year
- 800,928,246 Gallons of gasoline
- 12,249,698 Barrels of oil
- 676,171 Household electricity use for a year

Retailers Key in Value Chain

- Gross sales for groceries are \$700 billion
- 10 major chains make 75% market
- Trash costs 1 one basis point of sales or \$700 million

Retailers Can Turn Cost Into Profit - Corrugated

\$75 per ton cost to landfill (Avoided)

\$75 per ton revenue for recycling

\$150 to bottom line

National potential \$75-100 million annually

Market Events Helping

Repulpability/Recycability Protocol

by

Fibre Box Association

American Forest & Paper Association

www.corrugated.org



Labeling



**Corrugated
Recycles**



**Corrugated
Recycles**



Performance Coating Solutions

- Applications for waste reduction in solid fibre, fine papers and corrugated package markets.
- Water-based coatings allow for a wide variety of application techniques.
- Allow these water-based alternatives to work for you in market penetration.

Wax Alternative Materials (WAMtm)

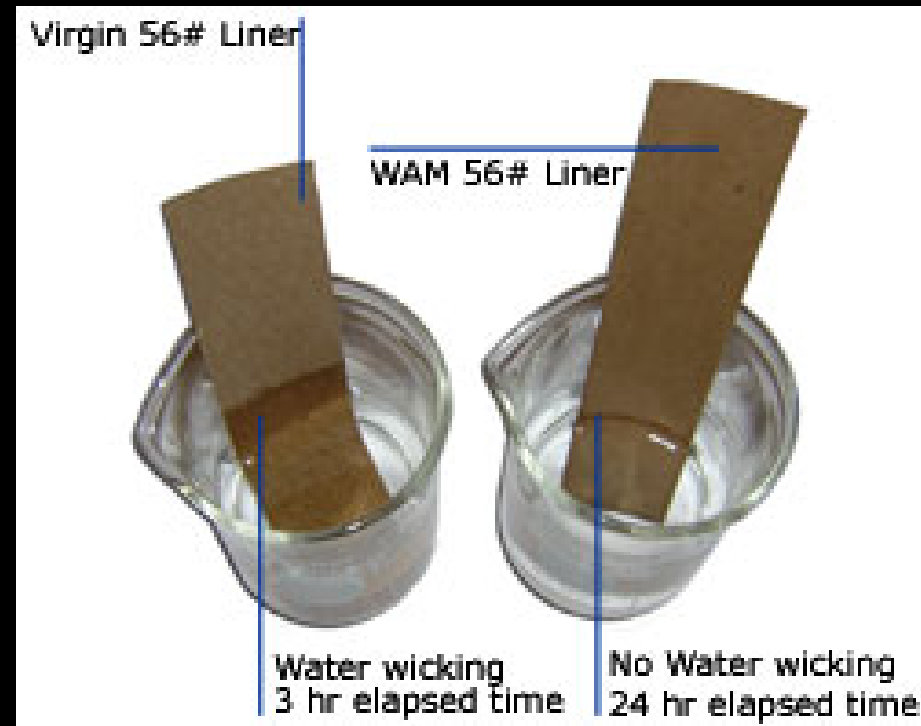
- **Why WAMtm Works**

Using WAMtm paper instead of wax in the construction of a corrugated produce box allows the corrugator to build a box that will protect and transport your produce and is environmentally friendly because it is 100 % recyclable.



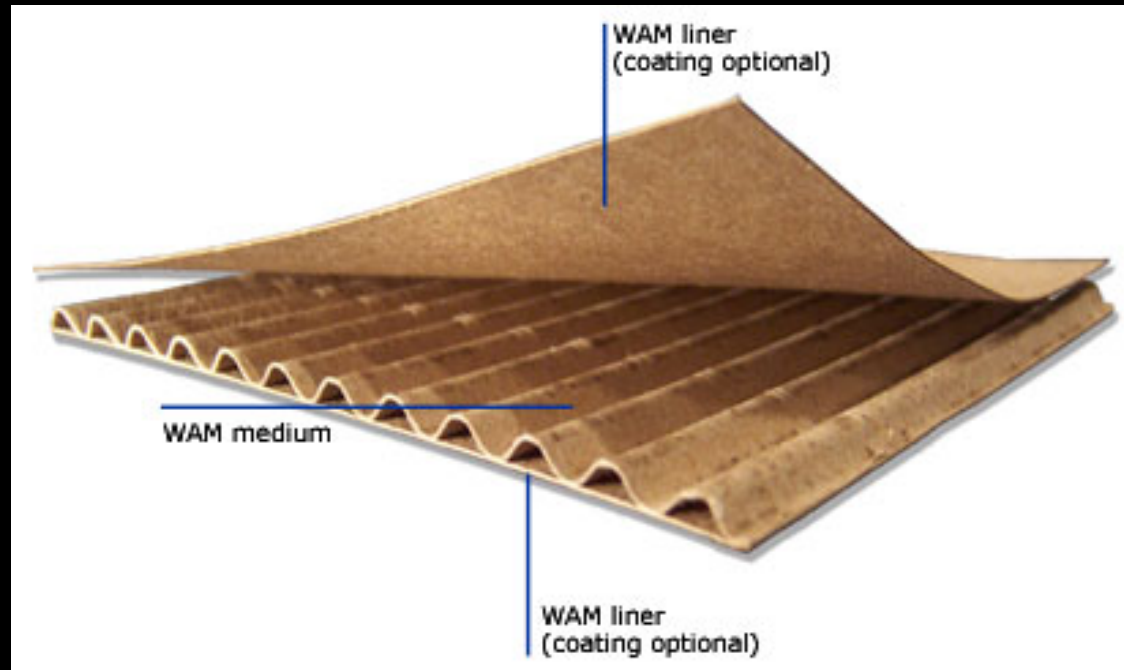
WAMtm Technology

WAMtm is a combination of paper additives and paper making processes that yield a non-wicking, water-resistant Kraft liner/medium that can be corrugated into boxes, replacing wax boxes (WIM, Curtain and Cascaded).



WAM™ Technology

WAM™ technology allows any corrugator (1000+ in the US) to make recyclable boxes that can replace waxed boxes.



For more information:

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