

Cortec Coated Products

Film and Paper Coating Operations



Cortec Coated Products - February 2004



Cortec Coated Products

- Newest addition to the Cortec Corporation
- Custom coating and calendering capabilities
- Converting
- Blending of solutions



Outline

- Facility
- Equipment
- Quality Assurance
- Product lines
- Benefits
- Conclusions



Facility

- Located between Paper Valley (Green Bay, Appleton, Oshkosh, WI) and Minneapolis/Saint Paul
- Among major paper mills



Equipment

- Coating make-up
- Coater
- Converting
- Super calender



Coating Make-up

- Specialized mixing equipment for formulations requiring tightly controlled conditions



Coater

- Primary coating station including:
 - Two-roll pre-metering applicator
 - Mayer rod pre-metering applicator
 - Air knife (metering and smoothing)



Coater



- Secondary coating station:
 - Slot die (high viscosity, high thickness coating)
- Back-treat station (moisturizing and coloring)
- Floatation ovens
- Wide web (Current: 208 cm. Near future: 245 cm)
- High speed (Up to 450 m/min.)



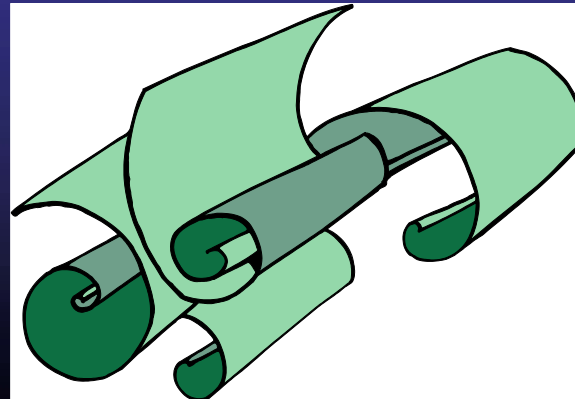
Coater

- Auxiliary equipment:
 - Corona treater (surface treatment)
 - In-line profiling system (base and coated properties)
 - Steam foil (curl control)



Converting

- Slitter/Rewinder:
 - Jumbo rolls
- Duplex rewinder:
 - Smaller rolls (subrolls)
- Sheeting:
 - Master sheets
 - Custom sheets



Super Calender

- Modification of surface properties (smoothness and gloss), caliper and density
- Typical applications:
 - High quality printing paper
 - Release paper liners
- Very few super calenders available



Quality Assurance

- Rigorous Quality Management System
- Based on the same culture found throughout Cortec plants (ISO 9000 and ISO 14001)



Quality Assurance

- Fully equipped test laboratory:
 - Basis weight
 - Caliper
 - Density
 - Tear
 - Gloss
 - Moisture
 - Porosity
 - Roughness/Smoothness



What can be coated?

- Paper:
 - 50 to 550 g/m² (30 to 340 lb/ream)
Natural Kraft/bleached paper, linerboard
- Films:
 - Low or High Density Polyethylene, other polymers
- Non-woven materials



VpCI-146

- Premium VpCI paper in the industry
- Highest quality Neutral Natural Kraft (NNK) paper
- Multimetal protection
- Superior VpCI properties
- Nitrite-free
- Recyclable, biodegradable
- Increased physical properties



VpCI-146

- Effective against aggressive environments (humidity, SO₂, H₂S, galvanic corrosion)
- Non-toxic
- Conforms to MIL-PRF-3420G

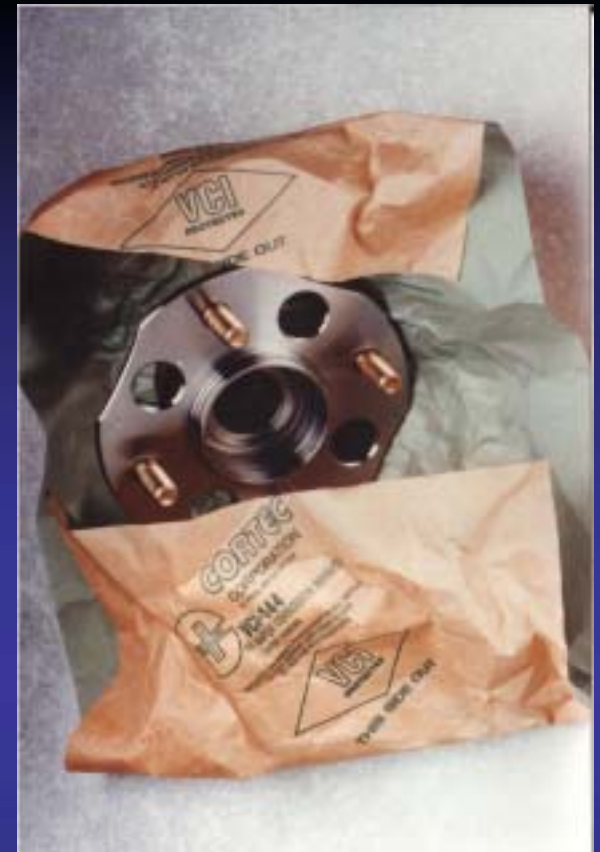


VpCI-144

- Excellent replacement for polycoated and wax papers
 - Barrier properties:
 - 1.2 g for 25 μ m polycoated paper
 - 0.6 g for VpCI-144

MVTR values in g H₂O/24 hr/100 in²

- Easy disposal (recyclable/repulpable)
- Superior VpCI Multimetal protection
- Nitrite-free



VpCI-145



- Static Dissipative corrosion inhibiting paper
- Uses an environmentally friendly coating made from soybean oil
- Better static dissipative properties than conventional papers
- Fully recyclable/repulpable
- Conforms to MIL-PRF-81705D and MIL-PRF-3420G



VpCI Polycoated Paper

- Premium corrosion inhibiting polycoated paper in the industry
- Exceptional resistance to water, oil and grease
- Combines corrosion protection, barrier and packaging in one step



VpCI Reinforced Paper

- Excellent tear resistance
- Extremely durable paper
- Barrier to water, oil and grease
- Non-toxic



Cor-Pak™ Linerboard

- Superior VpCI linerboard
- Used to manufacture corrugated boxes, end closures, insert strips, sheet liners, etc.
- No detrimental effect on the corrugating process
- Package reduces handling



EcoShield Paper and Linerboard

- Barrier coated paper
- Very low Moisture Vapor Transmission Rate
- Complies with FDA and USDA regulations
- Fully recyclable (repulpable)
- Non-toxic



EcoShield VpCI Paper and Linerboard

- Combines corrosion protection and moisture vapor barrier properties in one step
- Protects ferrous and non-ferrous metals
- Fully recyclable
- Non toxic
- Reduces handling



SilverBrite



- Protection of copper and silver
- Contains a corrosive gas (H_2S) scavenger
- Indicator: paper turns brown when exposed to corrosive gases
- Better overall properties than Silver Saver™ paper

Non-woven Materials

- Cor-Pak™ Fabric
- Excellent strength and tear resistance
- Other non-woven materials may be coated



Cold Seal Film

- Strong cling
- Sticks to itself, not the part
- For metal and non-metallic parts



Release Liner Papers

- For silicone and non-silicone based processes
- The industry's highest level of silicone hold-out (very high density)
- Excellent caliper control
- Label industry



Calendered Papers and Films

- Very high smoothness
- Controlled caliper and density
- High quality printing paper



Benefits

- Unique custom coating and calendaring capabilities
- Price competitive
- Delivery
- Reliable
- Flexibility
- Only one of its kind



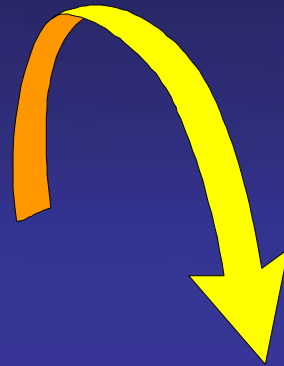
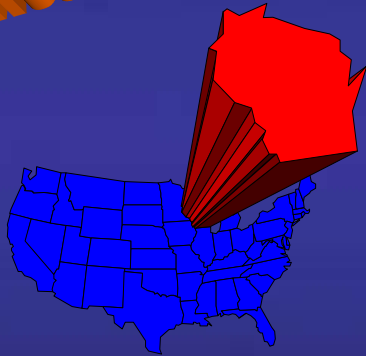
Conclusions

- Facility
- Equipment
- Product lines
 - VpCI
 - Non-VpCI
- Benefits



Global Supplier

Cortec Coated Products
Eau Claire, Wisconsin



The World

