



**Innovation, Manufacturing Precision ...  
and the Charleston Port  
as Drivers in Global Market Leadership**

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**Introducing MeadWestvaco Specialty Chemicals**



# MeadWestvaco Profile

## Scale

- Global packaging company serving the world's most recognized companies in the food and beverage, media and entertainment, personal care, cosmetic and healthcare industries.
- Market-leading position in Specialty Chemicals, Consumer and Office Products and Specialty Papers.

## Resources

- Extensive research and development commitment.
- Renowned technical customer service commitment.
- Comprehensive market knowledge.

## Reach

- Operations in more than 29 countries. Customers in over 100 nations.



# MeadWestvaco... Means a Network of Support





# MeadWestvaco in South Carolina

Our company has a strong presence in the Palmetto State

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- Forestry Division
  - Manages more than 375,000 acres of company land and provides raw material – trees – to Charleston production facilities.
- Kraft Division
  - Manufactures premium, unbleached paper, paperboard and lumber products.
- Specialty Chemicals Division
  - Manufactures variety of performance specialty chemicals performance products from forest by-products recovered from the papermaking process.



# The Kraft Division

## The Longstanding Community Neighbor

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- Kraft Division
  - Began operations in 1937.
  - Today, one of the largest unbleached paperboard mills in the nation.
  - Manufactures 850,000 tons annually of folding carton board, saturating kraft and linerboard.
  - The division also operates a lumber mill in Summerville.



# MeadWestvaco Specialty Chemicals

## MeadWestvaco's Lesser Known Business Partner in Charleston

- One of MeadWestvaco's core businesses.
- International headquarters in Charleston.
- Lowcountry complex includes world class R&D center.
- Plus, a manufacturing facility serving customers around the world.





# The Wonders of Chemicals from Trees ...

As you drive your car along an asphalt road with your favorite printed material at your side, remember to think ...

**MeadWestvaco Specialty  
Chemicals.**





# Activated Carbons for Air and Water Purification



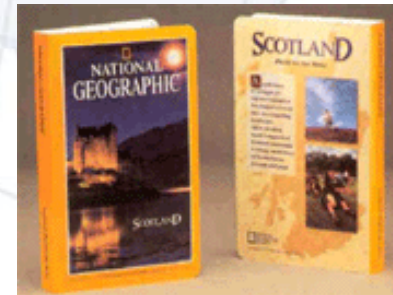


# Additives for Smooth and Durable Asphalt Roads





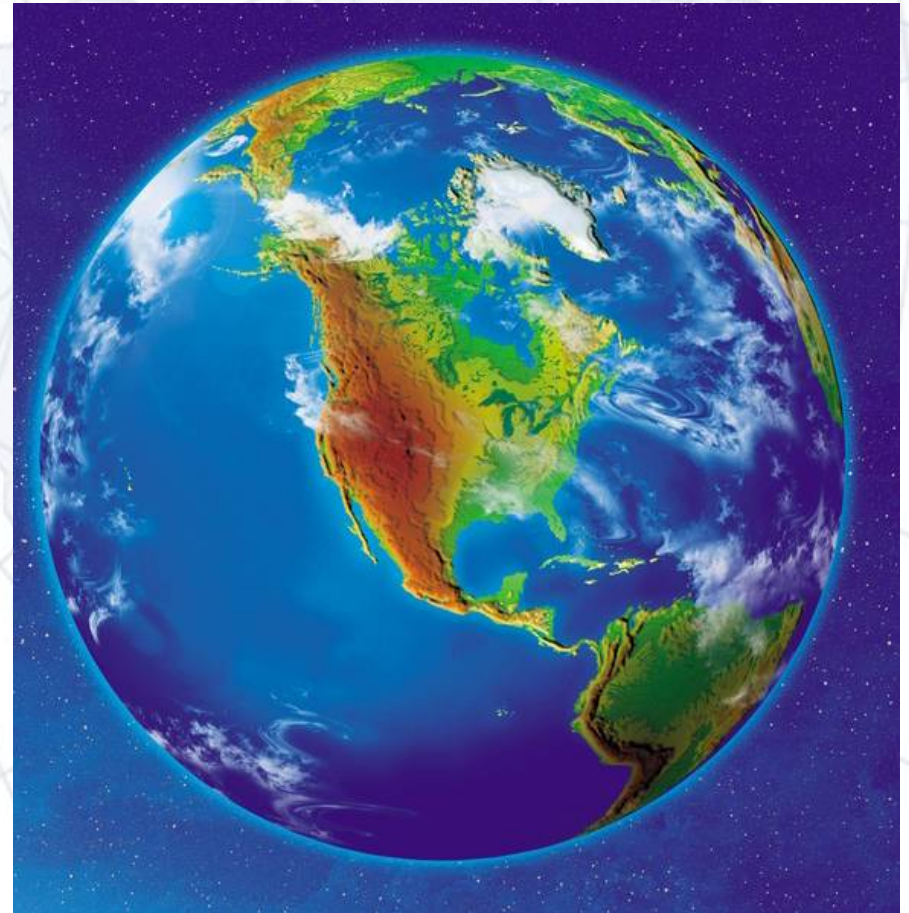
# Rosin for Printing Inks





# MeadWestvaco Specialty Chemicals: A Global Leader

- World's leading supplier of activated carbons for automotive emissions controls
- World's largest supplier of asphalt emulsifiers
- Leading U.S. supplier of lithographic and gravure printing ink resins

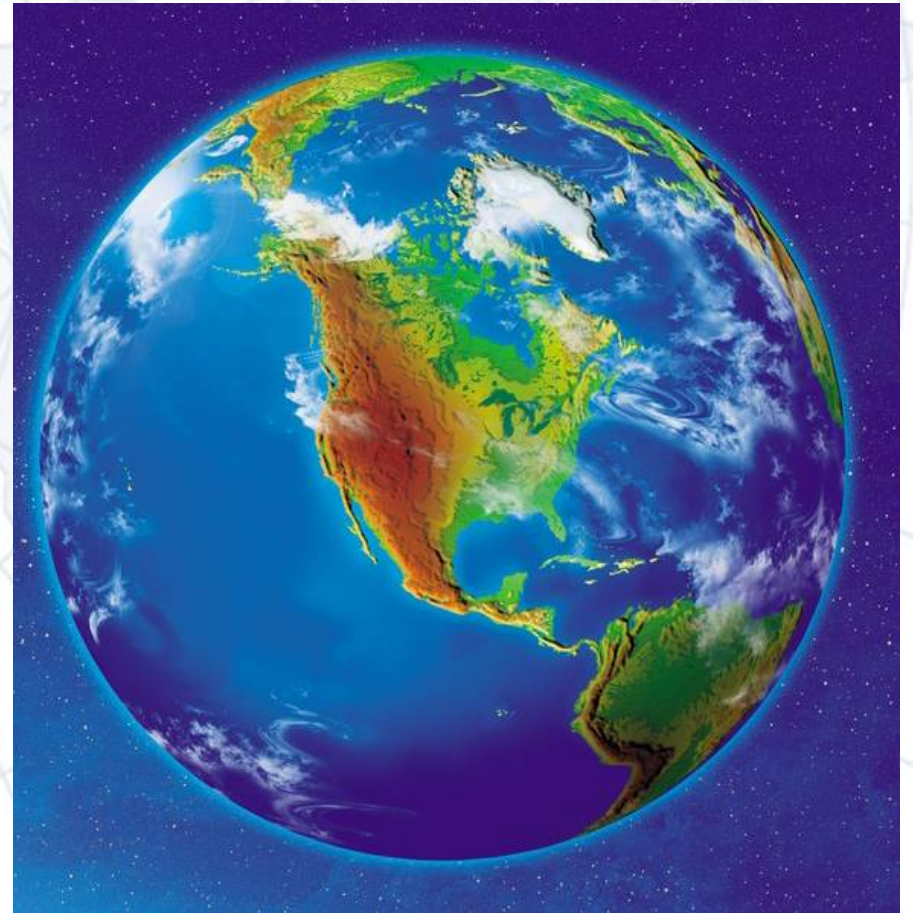




# MeadWestvaco Specialty Chemicals: A Global Leader

As you drive your car along  
an asphalt road with your  
favorite printed material at  
your side, remember to  
think . . .

**MeadWestvaco Specialty  
Chemicals.**





# Specialty Chemicals: Manufacturing Locations

## MWV SCD Operations

**Charleston, SC**  
**Covington, VA**  
**DeRidder, LA**  
**Wickliffe, KY**

## Joint Ventures & Alliances:

**NanoCool LLC – Albuquerque, NM**  
**Purification Cellutions LLC – Waynesboro, GA**  
**EverTech LLC – Ferndale, WA**  
**MWV (Shaxian) Pine Chemicals Company LTD – China**  
**Mindong Lianyi Group – China**





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# MeadWestvaco Specialty Chemicals Charleston Trade Profile



# MeadWestvaco Specialty Chemicals: A Global Leader

Our trade through Charleston's port  
has been a critical element in  
Specialty Chemicals' global growth  
in recent years.



# MeadWestvaco Specialty Chemicals

## Charleston Port: A Hub for SCD Export Activity

### Charleston Plant Exports Gross Sales

	<b>2003</b>	<b>2006 annual</b>
Africa	\$ 613,110.96	\$ 442,184.46
Asia	\$ 15,285,123.16	\$ 24,595,836.18
Australia	\$ 226,378.51	\$ 340,459.32
Central America	\$ 111,146.75	\$ 200,049.03
Europe	\$ 8,676,849.93	\$ 9,957,797.60
North America (excluding US)	\$ 4,676,376.20	\$ 5,613,160.11
South America	\$ 2,015,534.96	\$ 2,579,033.03
<b>Total</b>	<b>\$ 31,604,520.47</b>	<b>\$ 43,728,519.72</b>



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# MeadWestvaco Specialty Chemicals Charleston Manufacturing Profile



# Charleston's Performance Chemicals Plant



- ISO 9001 Registered
- Registered to American Chemistry Council's Responsible Care Management System
- Employees total 180 in Production; Maintenance; Quality and Technical Support; Engineering; Safety, Health & Environmental
- Three unions represent hourly employees – United Steel Workers, International Brotherhood of Electrical Workers and International Association of Machinists and Aerospace Workers
- More than 200 products manufactured for customers around the world



# Pine Chemicals



## Lignin “glue”

- dyestuff dispersants
- agricultural dispersants
- animal feed binder

## Crude Tall Oil “tree sap”

### Tall Oil Fatty Acid (TOFA)-

- soap, detergents, cleaners,
- asphalt emulsifiers, rubber
- emulsifiers, adhesives, paints,
- coatings

### Tall Oil Rosin (TOR)-

- ink resins
- paper size
- adhesives
- rubber emulsifiers

### Pitch-

- fuel
- sterols



# Lignin Products

**Dyes**

**Agriculture Chemicals**

**Asphalt Emulsions**





# Dyes: Role of Lignin

## Dispersants for Dye

- Ensures even & adequate color coverage
- Customers are dyestuff dispersant manufacturers
  - Clariant, Dystar, Ciba
- Primarily export business
  - China, S. Korea, Indonesia





# Agriculture Chemicals: Role of Lignin

## Dispersant for active ingredient

- Customers are major chemical formulators
  - Dow, FMC, Huntsman
- Global business: export to 17 countries
  - USA, Switzerland, France, Brazil





# Asphalt Emulsions: Role of Lignin

Stabilizer for asphalt emulsions used in road construction

Provides extended mixing and thorough coating with aggregate

Customers are emulsion manufacturers who supply paving contractors

- SemMaterials, Flint Hills Refining, Paramount Petroleum

Global business: export to 40 countries

- USA, China, Canada, Thailand, Brazil





# Tall Oil Fatty Acid & Rosin Products

- Paper Size
- Coating Additives
- Oil Drilling Additives
- Rubber Compounds
- Metalworking Fluids
- Corrosion Inhibitors
- Soaps and Detergents





# Fatty Acid Derivatives for Corrosion Protection

Our fatty acid derivatives, and oxidized crude tail oil offer numerous options for cost effective corrosion protection in producing wells, pipelines and fuels





# Fatty Acid Derivatives for Metal Working Fluids





# Rosin for Rubber Emulsifiers



**Tackifiers to  
synthetic  
rubber  
producers**





# Rosin for Paper Chemicals

We have provided paper chemicals to the paper industry since 1983, including rosin size, paper coating additives, and digester additives





# Rosin Adhesives for Multiple Applications





# Rosin, Fatty Acid and Lignin for Smooth and Durable Asphalt Roads





# Charleston Plant: Refinery





# Charleston Plant: Asphalt Production Equipment





# Charleston Plant: Isotainers





# Charleston Plant: Lignin Extractor





# Charleston Plant: Spray Dryer





# Charleston Plant: Bulk Bags of Lignin Products





# Charleston Plant: 55# Bags of Lignin Product





# MeadWestvaco Specialty Chemicals Research & Development Commitment



# MeadWestvaco Specialty Chemicals: A Global Leader

**Our commitment to world-class research,  
aggressive product development and  
comprehensive technical customer support  
is the cornerstone of our  
market leadership.**



# Leader in Innovation

## Charleston Technical Center

- Supports all MeadWestvaco Specialty Chemicals businesses.
- Includes more than 100 professionals in Charleston.
- Additional technical support facilities in Virginia, Asia and Europe.





# MeadWestvaco Specialty Chemicals

## Global Business Leadership from a Charleston Home Base