



### Fact Book 2006

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### **LANXESS Group**

**Performance Rubber** 

**Engineering Plastics** 

**Chemical Intermediates** 

**Performance Chemicals** 

#### **Overview**

Strategy Financials FY 2005



#### Lanxess Group - Overview

# A Young Company with Strong Roots

January 31, 2005 was an historic day for LANXESS. The first day of the company being traded at the Frankfurt Stock Exchange signified the beginning of the company's independence. The foundations for the future success of LANXESS were laid - 142 years after Bayer was established in 1863.



Decision made on the strategic reorganization of the Bayer Group Presentation of brand strategy and "Energizing Chemistry" claim

Approval by Bayer AG's Supervisory Board of the decision to spin-off LANXESS

#### 2003-07-11 2004-03-18

#### 2004-03-27

2004-07-01

2004-07-16

#### 2004-11-17

Announcement of the name LANXESS created from a combination of the words "lancer" (to launch) and "success" Internal launch of LANXESS with its new structure Extraordinary Stockholders' Meeting of Bayer AG - acceptance of spin-off by Bayer's shareholders

### <u>LANXESS</u>

Lanxess Group - Overview

# We have Achieved a Lot in 2005 And Keep Going With High Speed

Targeted implementation of corporate strategy enabled LANXESS to distinctly improve its performance as an independent company, even in its first year – future focus areas include acquisitions as well as further increases in profitability

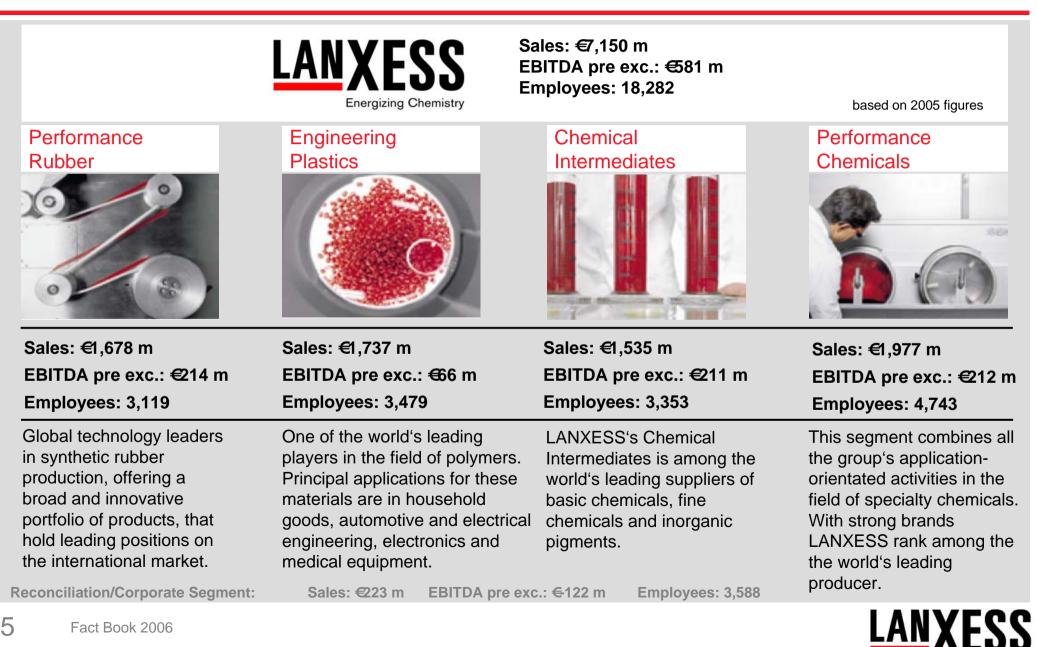


|     |   | Announceme<br>of 1 <sup>st</sup> phase<br>restructuring | of                                     | 1 <sup>st</sup> Annual<br>Stockholder<br>Meeting | s'                     | Issuance of<br>€500 m Eur<br>bond |                                       | Sale of PAP<br>and FIB<br>concluded | •          | strategic plan<br>esults in all                    |
|-----|---|---|--|--|------------------------|-----------------------------------|---------------------------------------|-------------------------------------|------------|--|
| 200 | 5-01-31 2005                                  | 5-06-03 2005  | -06-06 2005                            | 5-06-16 200 <b>4</b>                             | 5-06-20 2005           | <b>-06-21</b> 2006                | -01-01 2006                           | 6-03/04-01 200                      | 06-04-04 2 | 006-5-31   |
|     | Initial quotat<br>at the Frank<br>Stock Excha | furt  | Buyback of<br>Mandatory<br>Convertible |  | Admission<br>into MDAX |                                   | Carve-out<br>the BU FC<br>form Saltig | CH to                               |            | 2 <sup>nd</sup> Annual<br>Stockholders'<br>Meeting |



EV 2005 results

# A Chemical Company with 4 Segments

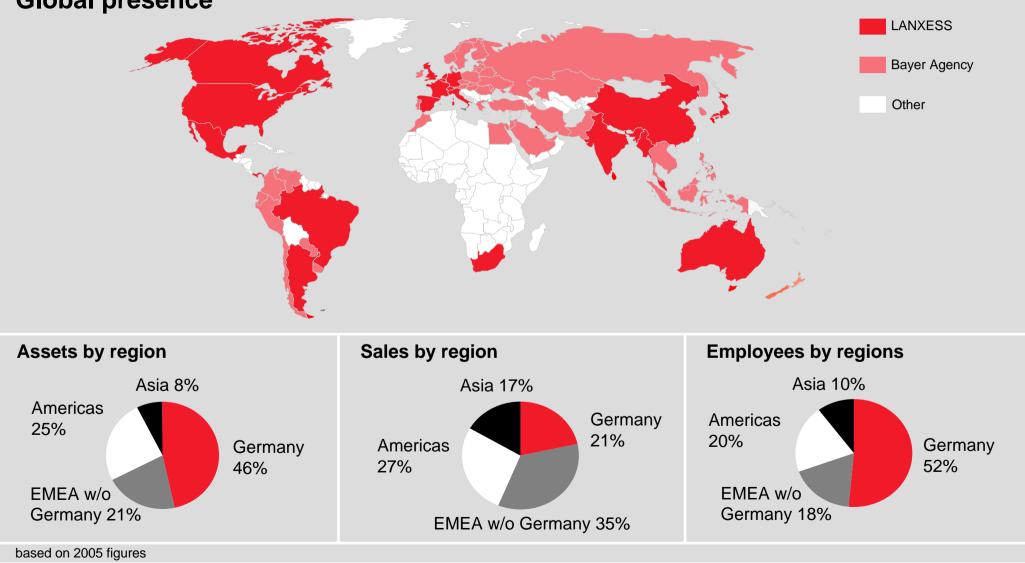




Lanxess Group - Overview

# LANXESS - a Global Player in the Chemical Industry

**Global presence** 





# **Broad Supplier Base**

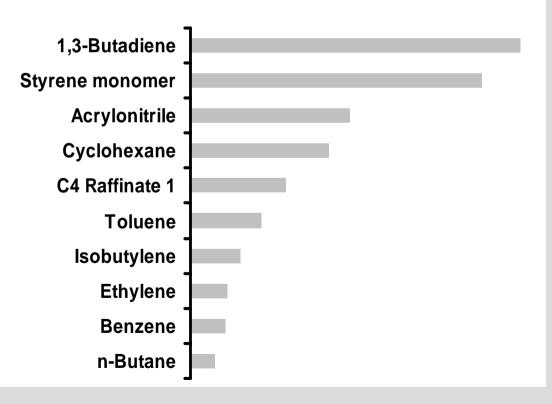
#### **Suppliers**

LANXESS uses a centrally managed global procurement organization to ensure a reliable supply of materials and services. About 30% of all items ordered are now handled through eprocurement.

Procuring petrochemical raw materials is a top priority at LANXESS. The biggest suppliers here in 2005 included BP, Chevron Phillips, Dow, Exxon Mobil, Huntsman, Ineos, Innovene, Lyondell, Shell Chemicals and Total. Other important suppliers of basic inorganic and organic chemicals are BASF, Bayer, Degussa and Rhodia.

- Total raw material costs in 2005 were approx. €2.6 bn
- Top10 petrochemical raw materials accounted for approx. € 1.3 bn of costs in 2005

#### Top 10 Petrochemical Raw Materials 2005 in € million





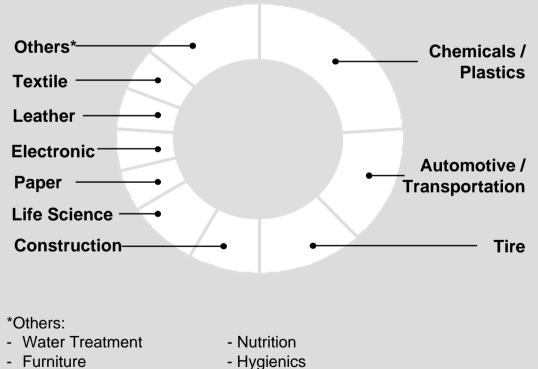
# **Diversified Customer Base and Industry Portfolio**

#### **Customers**

The LANXESS Group's top five customers accounted for about 14% of all sales in fiscal 2005. 18 customers account for sales of between €20 million and €50 million. About 15,000 LANXESS customers contribute sales of up to €100,000. The number of customers varies widely by segment.

The Performance Rubber segment has some 2,000 customers, Engineering Plastics has about 4,000, Chemical Intermediates has more than 7,000, and Performance Chemicals has about 14,000. However, one customer may do business with more than one segment. Each segment includes all customer groups and sales volumes.

#### **End User Industries 2005**



- Packaging

- Health Care

Coatings



#### Lanxess Group - Overview

### Long Term Incentive Program: Stock Performance Plan (SPP) and Economic Value Plan (EVP)

• Condition to participation: Personal investment (40% of one annual fixed salary in three tranches\*)

#### • Stock Performance Plan (SPP)

| Benchmark:                            | Outperformance of the DJ Global STOXX 600 Chemicals Index                                       |
|---------------------------------------|---|
|                                       | (index+10%: 100% targeted payout, index+20%: cap at 150%)                                       |
| <ul> <li>Targeted payout*:</li> </ul> | 90% of total annual salary (fixed and variable)   |
| <ul> <li>Vesting period:</li> </ul>   | 3 years, following 2 years of exercise period for each of three tranches                        |
| Grant price:                          | €15.01 for 1st tranche; €26.03 for 2nd tranche; 3rd tranche will be determined in February 2007 |

#### • Economic Value Plan (EVP)

| <ul> <li>Benchmark:</li> </ul>        | Increase of Economic Value over three years versus business plan |
|---------------------------------------|--|
|                                       | Economic Value = EBITDA * Multiplier - net nebt                  |
|                                       | (100% vs. budget: 100% targeted payout; cap at 200%)             |
| <ul> <li>Targeted payout*:</li> </ul> | 40% of one total annual salary (fixed and variable)              |
| <ul> <li>Vesting period:</li> </ul>   | automatic exercise after 3 years                                 |

\* percentage applicable on Board level - lower percentage for first level below Board of Management

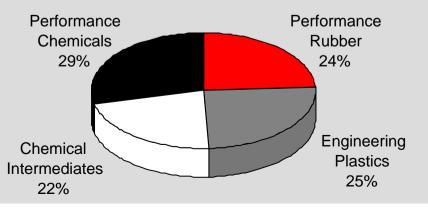


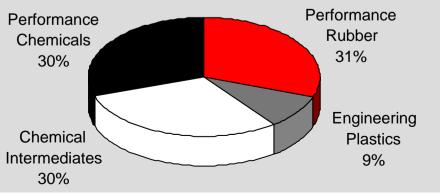
# **Summary of Key Financials**

|                         | 2003                           | 2004     | 2005   |
|-------------------------|--------------------------------|----------|--------|
| Sales                   | 6,315                          | 6,773    | 7,150  |
| EBITDA pre exc.         | 311                            | 447      | 581    |
| EBITDA pre exc. / Sales | 4,9%                           | 6,6%     | 8,1%   |
| Net income              | -997                           | -12      | -63    |
| Net financial debt*     | 1,429                          | 1,135    | 680    |
| Working capital*        | 1,512                          | 1,468    | 1,439  |
| Сарех                   | 312                            | 279      | 25     |
| Number of Employees*    | 20,423                         | 19,659   | 18,282 |
| *as per 31.12           | Spin-off Combined Financial St | atements |        |

Sales by Segment 2005







# LANXESS



### **LANXESS** Group

**Performance Rubber** 

**Engineering Plastics** 

**Chemical Intermediates** 

**Performance Chemicals** 

**Overview** 

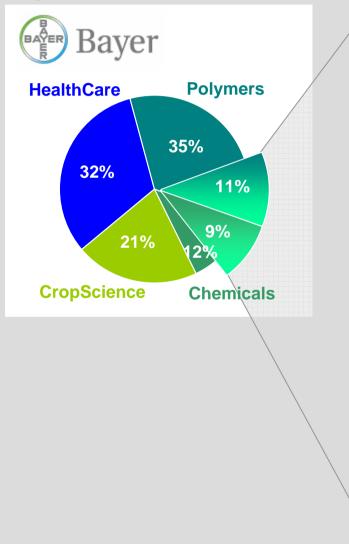
### **Strategy**

**Financials FY 2005** 



# LANXESS at the Time of the Spin-off – Build on Polymers and Chemicals

#### **Bayer 2003**



#### Spin-off: A new company



#### **Performance Rubber**



- Butyl Rubber (BTR)
  - Polybutadiene Rubber (PBR)
  - Technical Rubber Products (TRP)

#### Engineering Plastics



- Styrenic Resins (STY)
- Semi-Cristalline Products (SCP)
- Dorlastan Fibers (FIB)

#### **Chemical Intermediates**



- Basic Chemicals (BAC)
- Fine Chemicals (FCH)
- Inorganic Pigments (IPG)

#### **Performance Chemicals**



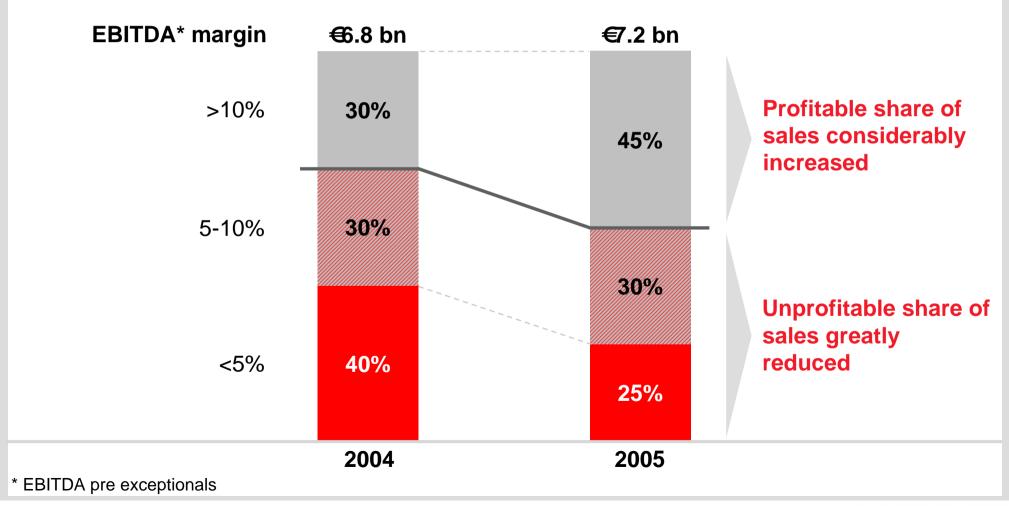
- Material Protection Products (MPP)
- Functional Chemicals (FCC)
- Leather (LEA)
- Textile Processing Chemicals (TPC)
- Paper (PAP)
- RheinChemie (RCH)
- Rubber Chemicals (RUC)
- Ion Exchange Resins (ION)

Independence. Restructuring. Portfolio Management.



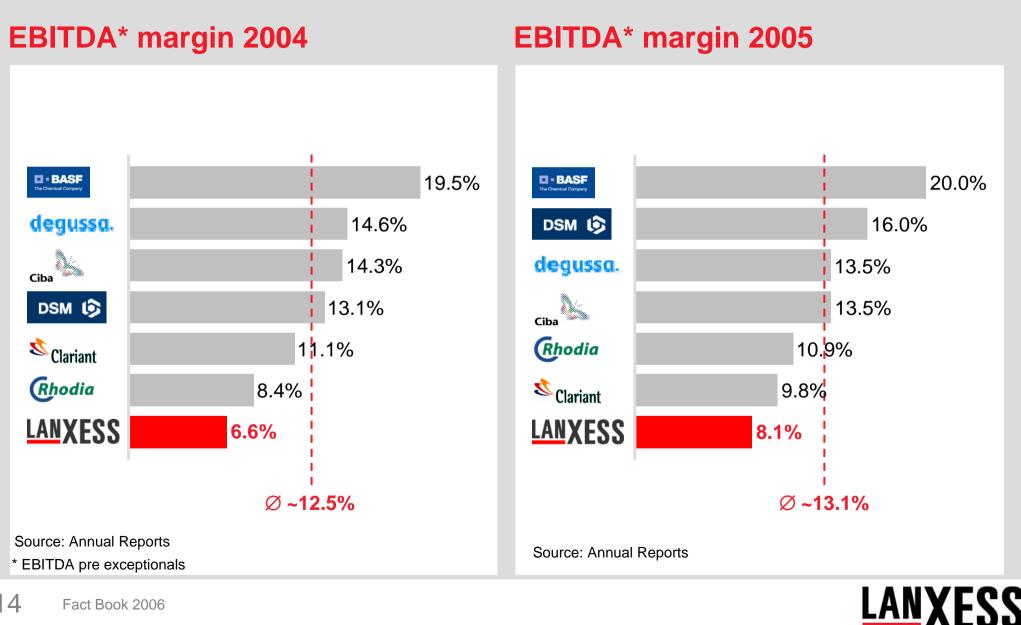
### Proportion of Profitable Sales Risen to 45% -Margins on 55% of Business Still Inadequate

#### Profitability split 2004 vs. 2005

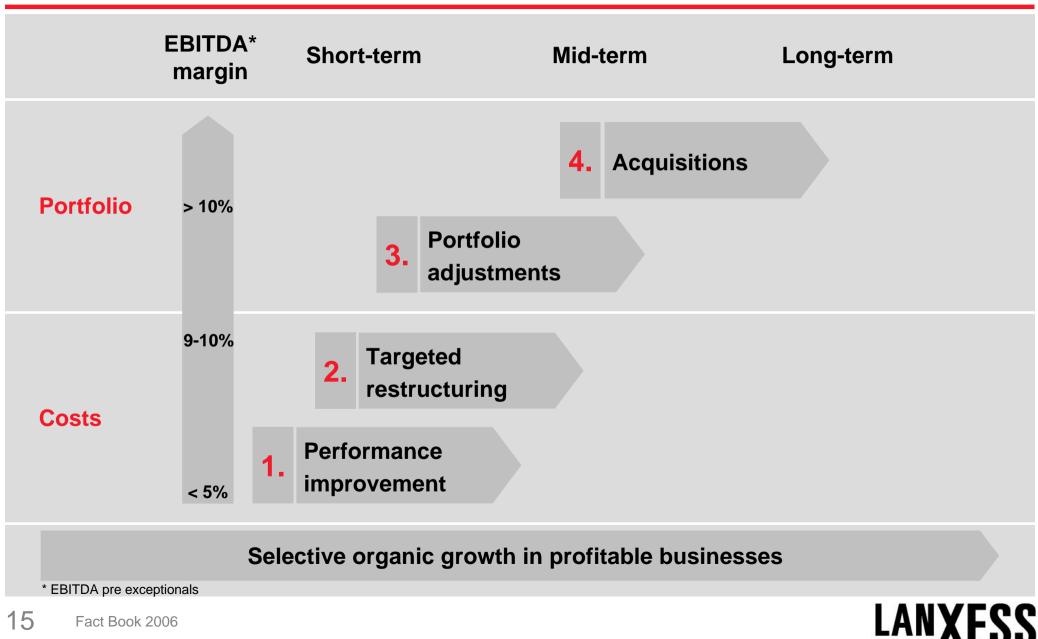




# **Overall Performance Still Below Average**



# **Step-by-Step Approach to Creating Value**

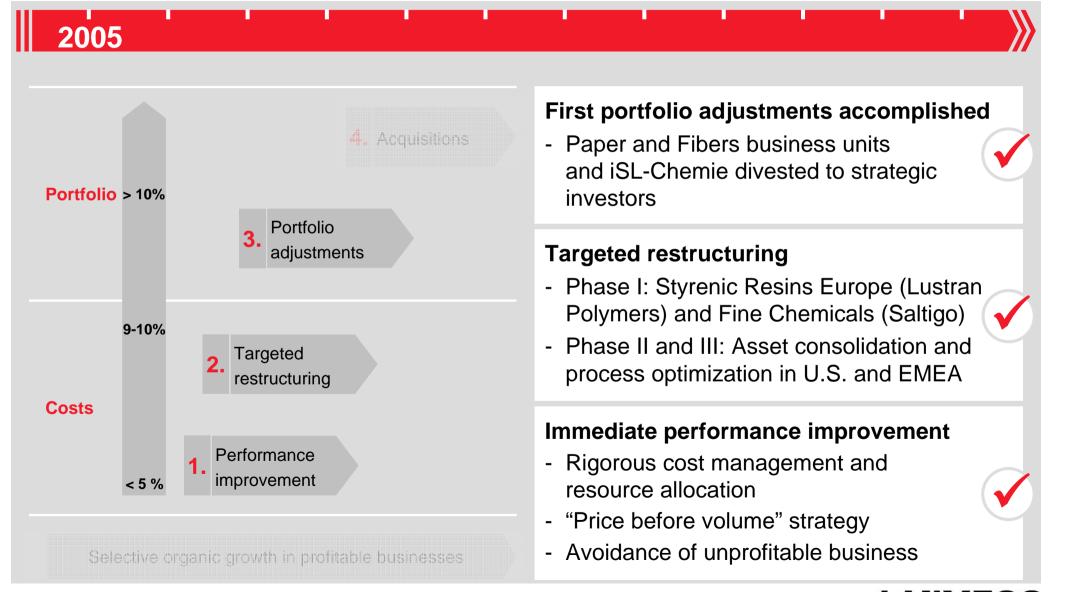


# **Growth through Investment and Innovation**



### LANXESS

# **Consistent Strategy Implementation**



# **Portfolio Adjustments as Part of Transformation**

| Performance I         | Rubber     | Engineering Plastics                               | Chemical Intermediates   | Performance Chemicals           |
|-----------------------|------------|--|--------------------------|---------------------------------|
| Butyl Rubber          |            | Lustran Polymers /<br>Styrenic Resins              | Basic Chemicals          | Material Protection<br>Products |
| Polybutadiene Rub     | ber        | Semi-Crystalline Products                          | Saltigo / Fine Chemicals | Functional Chemicals            |
| Technical Rubber I    | Products   | Fibers   | Inorganic Pigments       | Leather                         |
|                       |            |  |                          | Textile Processing<br>Chemicals |
| -                     |            | <sup>·</sup> 2006 two business<br>SL business have |                          | Paper                           |
|                       |            | epresenting sales of<br>∉350 m in 2005             |                          | RheinChemie iSL                 |
| ap                    | proximater | y <del>2</del> 350 m m 2005                        |                          | Rubber Chemicals                |
|                       |            |  |                          | Ion Exchange Resins             |
| _                     |            |  |                          | ,                               |
| Sales: > <sup>•</sup> | €500 m     | Sales: €200 m – 500 m                              | Sales: < €200 m          | Divested                        |
| 18 Fact Book 20       | 006        |  |                          | LANXESS                         |



### **LANXESS** Group

**Performance Rubber** 

**Engineering Plastics** 

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Overview

Strategy

**Financials FY 2005** 



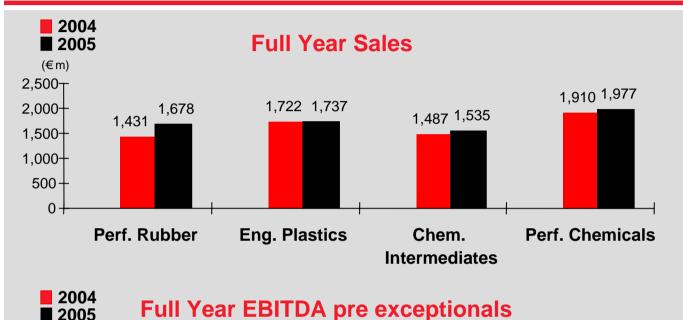
### Independence and Restructuring Contribute to **Better Performance Amid Supportive Demand**

| (€m)                    | FY 2004 | FY 2005 | ∆ in %           |   |
|-------------------------|---------|---------|------------------|---|
| Sales                   | 6,773   | 7,150   | 6%               |   |
| Cost of goods sold      | -5,349  | -5,537  | 4%               | <ul> <li>Price increases (+8%)<br/>and marginally stronger</li> </ul> |
| SG&A                    | -1,144  | -1,148  | 0%               | U.S. Dollar offset slightly   |
| R&D                     | -123    | -101    | -18%             | lower volumes (-3%)   |
| Other op. result        | -98     | -336    | >100%            | <ul> <li>Other operating result</li> </ul>                            |
| thereof exceptionals    | -99     | -304    | >100%            | includes exceptionals such as charges for                             |
| EBIT                    | 59      | 28      | <b>-53</b> %     | restructuring (€166 m),   |
| Net Income              | -12     | -63     | <b>&gt;100</b> % | portfolio changes (€27 m)   |
|                         |         |         |                  | and anti-trust (€71 m)  |
| EBITDA                  | 387     | 341     | -12%             | <ul> <li>Majority of restructuring</li> </ul>                         |
| thereof exceptionals    | -60     | -240    | >100%            | charges booked in 2005  |
| EBITDA pre exceptionals | 447     | 581     | 30%              |   |

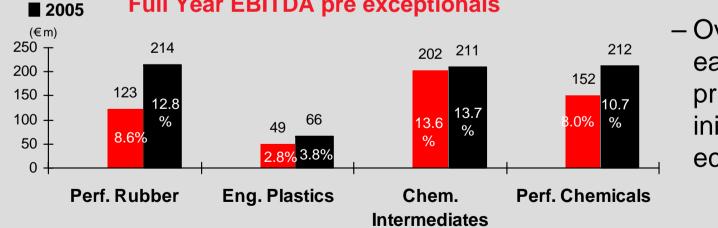
#### Significant improvement in underlying profitability



# First Year of Independence: We Delivered on Promises



 Sales increased on risen pricing due to higher raw material costs, despite "price-before-volume" strategy being implemented



 Overall increased earnings on improved pricing and cost initiatives in a supportive economic environment

Consistently risen EBITDA pre exceptionals in all business segments



# Financing Structure Significantly Improved while Transforming the Company

### Net financial debt overview: (€m) €1,135 million 1,200 €680 million 800 400 0 -200 Dec. 31, 2004 Dec. 31, 2005 Long term Short term Cash

- Financing structure solid and long-term
- Net financial debt reduced from 1,135 million to 680 million
- Net debt to EBITDA pre exceptionals ratio improved from 2.5x to 1.2x

• ...and we pay less interest



### **Balance Sheet Reflects Solid Structure**

| (€m)                        | Dec 31,<br>2004 | Dec 31,<br>2005 | (€m)                        | Dec 31,<br>2004 | Dec 31,<br>2005 |
|-----------------------------|-----------------|-----------------|-----------------------------|-----------------|-----------------|
| Non-current Assets          | 1,988           | 1,835           | Stockholders' equity        | 1,365           | 1,256           |
| Intangible assets           | 65              | 53              | thereof Minority interest   | 14              | 17              |
| Property, plant & equipment | 1,521           | 1,526           |                             |                 |                 |
| Equity Investments          | 44              | 22              | Non-current Liabilities     | 878             | 1,576           |
| Other Investments           | 4               | 4               | Pension & post empl. provis | sions 418       | 497             |
| Financial assets            | 53              | 48              | Other provisions            | 230             | 302             |
| Deferred taxes              | 172             | 103             | Financial liabilities       | 131             | 644             |
| Other non-current assets    | 129             | 79              | Tax liabilities             | 8               | 26              |
|                             |                 |                 | Other liabilities           | 36              | 32              |
| Current Assets              | 2,589           | 2,506           | Deferred taxes              | 55              | 75              |
| Inventories                 | 1,151           | 1,068           |                             |                 |                 |
| Trade accounts receivable   | 1,137           | 1,065           | Current Liabilities         | 2,334           | 1,509           |
| Financial assets            | 24              | 37              | Other provisions            | 225             | 401             |
| Other current assets        | 205             | 200             | Financial liabilities       | 1,076           | 172             |
| Liquid assets               | 72              | 136             | Trade accounts payable      | 820             | 694             |
|                             |                 |                 | Tax liabilities             | 18              | 27              |
|                             |                 |                 | Other liabilities           | 195             | 215             |
| Total assets                | 4,577           | 4,341           | Total Liabilities & Equity  | 4,577           | 4,341           |



## Stronger Cash Flow due to Operating Results and Improved Working Capital Management

| (€m)                               | FY 2004 | FY 2005 |
|------------------------------------|---------|---------|
| Profit before Tax                  | -20     | -117    |
| Depreciation & Amortization        | 328     | 313     |
| Investments at equity              | 4       | 35      |
| Gain / Loss from Sale of Assets    | 2       | -1      |
| Financial Losses                   | 44      | 72      |
| Cash tax payments                  | -45     | -56     |
| Change in Working Capital*         | -35     | 106     |
| Change in Other Net Current Assets | 33      | 272     |
| Cash provided by Operating Act.    | 311     | 624     |
| Capex                              | -279    | -251    |
|                                    |         |         |

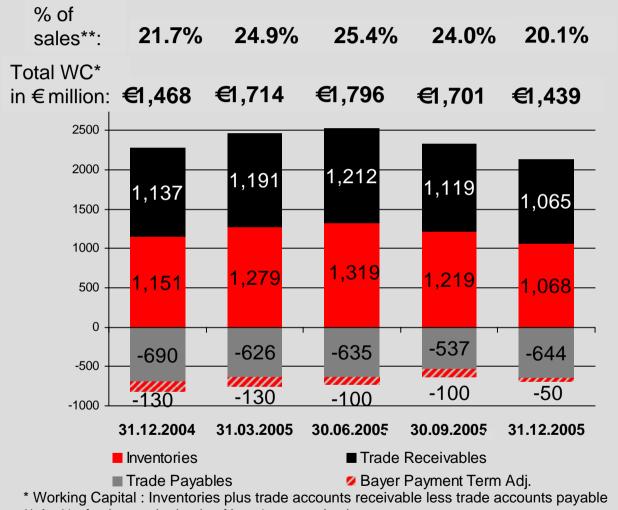
\* Working Capital : Inventories plus trade accounts receivable less trade accounts payable

- Focus on working capital and better operating result lead to substantial improvement in operating cash flow
  - despite ~€80 million payback to Bayer for payment term adjustment
  - despite ~€10 million cash out for restructuring
  - despite ~€50 million allocated charges from pre spin-off antitrust cases
- Reduction of working capital was supported by production cut-back due to supplier-outage (impact of ~€50 m)
- Restructuring provision is included in "Change in Other Net current Assets"

Excess cash has been used to reduce net financial debt



# Focus on Working Capital Management Started to Pay Off in H2 2005



\*\* As % of sales on the basis of last 4 quarters' sales

Working Capital decreased on inventory and receivable management as well as one-offs

LANXESS

Receivables: Lower mainly on

decrease, however supported

Canada due to supplier-outage

decrease mainly due to outflow

adjustment with Bayer (thereof

of €80 m for payment term

€50 m repaid earlier than

improved payment terms

by production cut-back in

Inventories: substantial

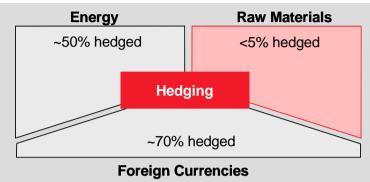
(impact of ~€50 m)

initially scheduled)

Payables: year over year

# New Hedging Policy - Increased Stability Achieved

- Status at spin off:
- Policy in place not appropriate for nature of business
- Risk assessment lacks close cooperation between procurement, businesses and treasury
- No group-wide treasury controlling in place



- New hedging policy introduced
- Group-wide treasury controlling
- Integrated risk assessment

- Status today:
- Significantly reduced exposure to FX and energy price fluctuations
- Increased stability

#### **Example: Hedging of Foreign Currencies**

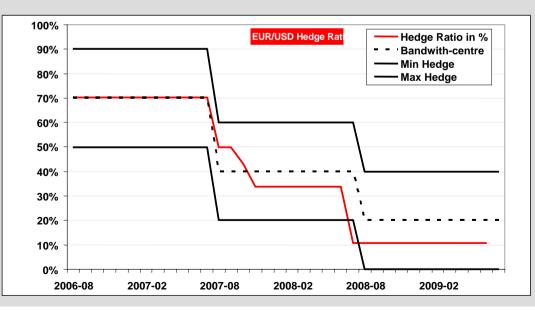
Lanxess has exposure to four main foreign currencies:

- US\$, Can\$, Yen, SA Rand
- Total US\$ exposure ~€700 m

Conservative, rolling hedging approach:

- Each month, forecasted cash flows of the next 36 months are hedged to a certain extent in a layered approach in order to smooth volatilities
- Instruments used are forwards, and zero cost options

For 2006, ~70% of the net exposure are hedged, for 2007, ~35% are already locked in.





### **Credit Ratings - Increasing Trust and Stability**

Investment grade rating improved



Initiated in May 2006 as unsolicited rating: BBB (stable outlook)



STANDARD &POOR'S

27

Initiated in May 2005: Baa3 (stable outlook), confirmed in June 2006, outlook raised to positive

Initiated in October 2004: BBB- (stable outlook), confirmed in May 2006, outlook raised to positive

First BBB rating with stable outlook underpins transformation success





### Overview

### **Performance Rubber**

**Engineering Plastics** 

**Chemical Intermediates** 

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**Financials** 

#### Performance Rubber

LANXESS has many years of experience with rubber and rubber chemicals. Back in 1909, synthetic rubber was invented and patented by the forerunners of the presentday Performance Rubber segment.

The segment comprises three business units:

**Butyl Rubber (BTR)** 

**Polybutadiene Rubber (PBR)** 

Technical Rubber Products (TRP)



#### Performance Rubber – Structure

### A Leading Rubber Producer with Strong Market Positions in the Automotive Tyre Industry

#### Butyl Rubber



Manufactures butyl rubber, which is a general purpose rubber impermeable to air with wide applications both in tyre and other industries, such as pharmaceutical closures and chewing gum. Polybutadiene Rubber



One of the world's leading manufacturers of general purpose rubbers polybutadieneand solution-styrenepolybutadiene-rubber used principally in tyre compounds Technical Rubber Products



Provides a broad range of specialty elastomers for the rubber processing industry with wide applications e.g. automotive, engineering, construction, electronics, oil exploration, aviation

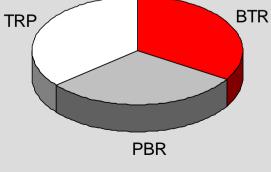
- Automotive and tyre industries as the major end-users
- Mainly price-, cost- and technology-driven
- Based on butadiene, isobutene, ethylene, propylene, isoprene, acrylonitrile

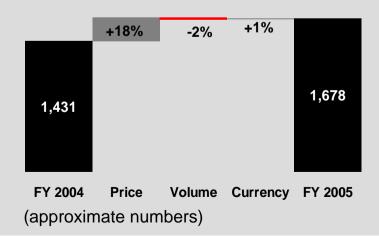


# **Summary of Key Financials**

|                         | 2003                                | 2004                         | 2005     |
|-------------------------|-------------------------------------|------------------------------|----------|
| Sales                   | 1,375                               | 1,431                        | 1,678    |
| EBITDA pre exc.         | 36                                  | 123                          | 214      |
| EBITDA pre exc. / Sales | 2,6%                                | 8,6%                         | 12,8%    |
| EBITDA                  | 4                                   | 111                          | 17       |
| Depr. & Amort.          | 250                                 | 61                           | 63       |
| EBIT                    | -246                                | 50                           | 108      |
| Capex                   | 78                                  | 76                           | 75       |
| Number of Employees*    | 2,999                               | 3,163                        | 3,119    |
| *as of Dec 31           | 2003-2004 figures are based on Spir | n-off Combined Financial Sta | atements |

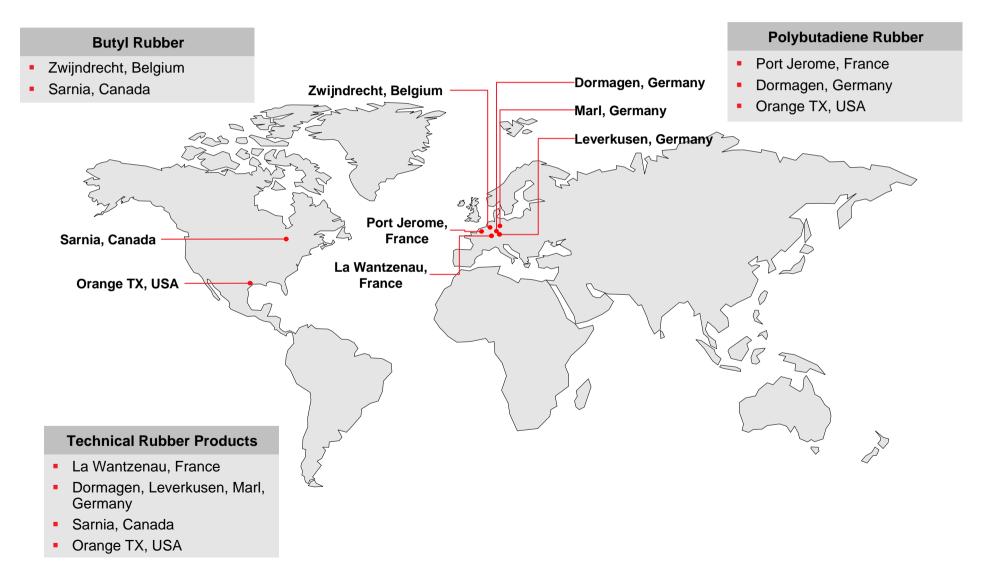








### World-Class European and North American Manufacturing Base







# **Turning Strong Market Position Into Value**

- Behave as a market leader in rubber
- Stronger participation in Asian growth
- Realize significant cost advantages through concentration on world-scale plants
- More cost-efficient set-up after restructuring
- Selective expansion for promising sub-segments
- Development of non automotive / non tyre markets and rubber specialty segments





**Overview** 

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**Butyl Rubber (BTR)** 

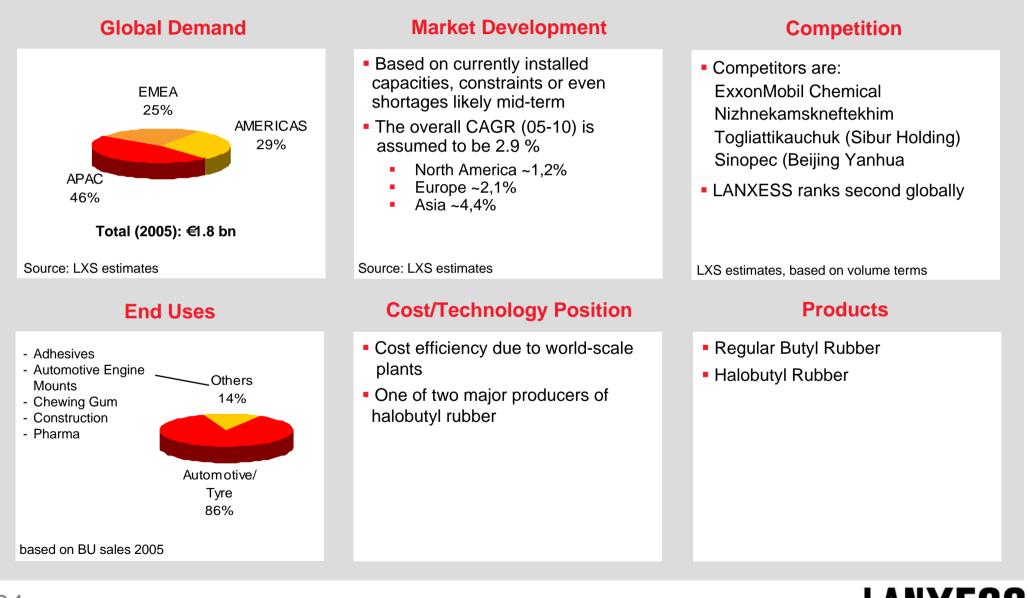
**Polybutadiene Rubber (PBR)** 

Technical Rubber Products (TRP)



#### Performance Rubber – Butyl Rubber

### Strong Market & Technology Position as Basis to Participate in Attractive Growth Areas



# **Tyres are the Main Applications for Butyl Rubber**

### **Products**

#### Halobutyl Rubber:

- CHLOROBUTYL®
- BROMOBUTYL®

#### Regular Butyl Rubber

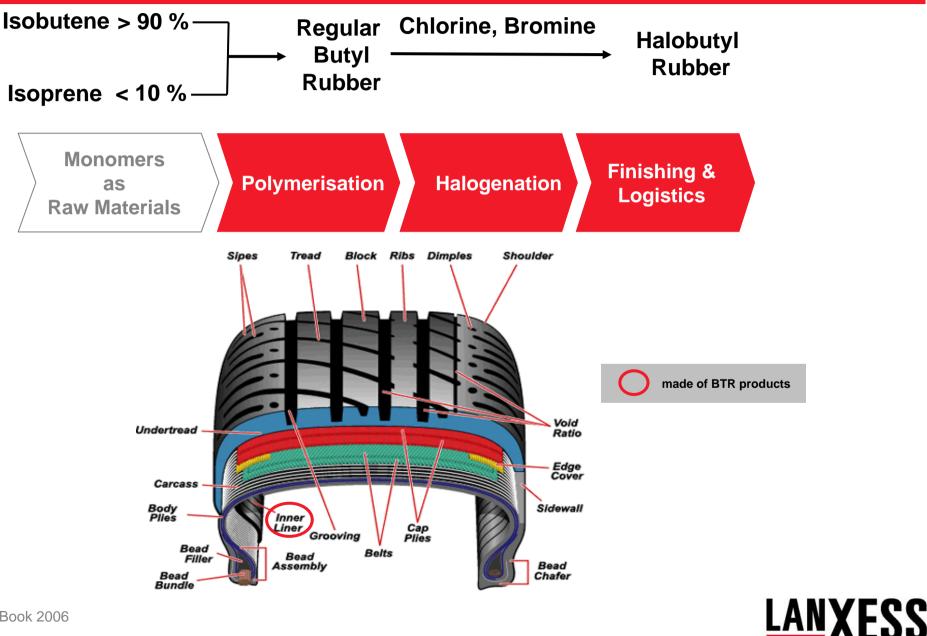
- BUTYL®

### **Main Applications**

- Tyre inner-liners
- Pharmaceutical stoppers
- Inner-tubes for tyres
- Tyre curing bladders / envelopes
- Chewing gum



# A Leading Producer of Butyl and Halobutyl Rubber



# A Leading Market and Technology Position as well as Strong Customer Relationships

## **Competitive Advantages**

- A leading market position in overall market for Butyl Rubber
- Low cost, high efficiency world scale plants for manufacturing in Belgium and Canada allow flexible production of butyl and halobutyl rubber
- Leading technology
- Strong customer relationships based on collaborations with tyre manufacturers to meet specific customer needs
- Strong infrastructure in APAC

## Challenges

- Increasing Asian and Russian competition
- Change of Air-Retention-Technology is a potential threat





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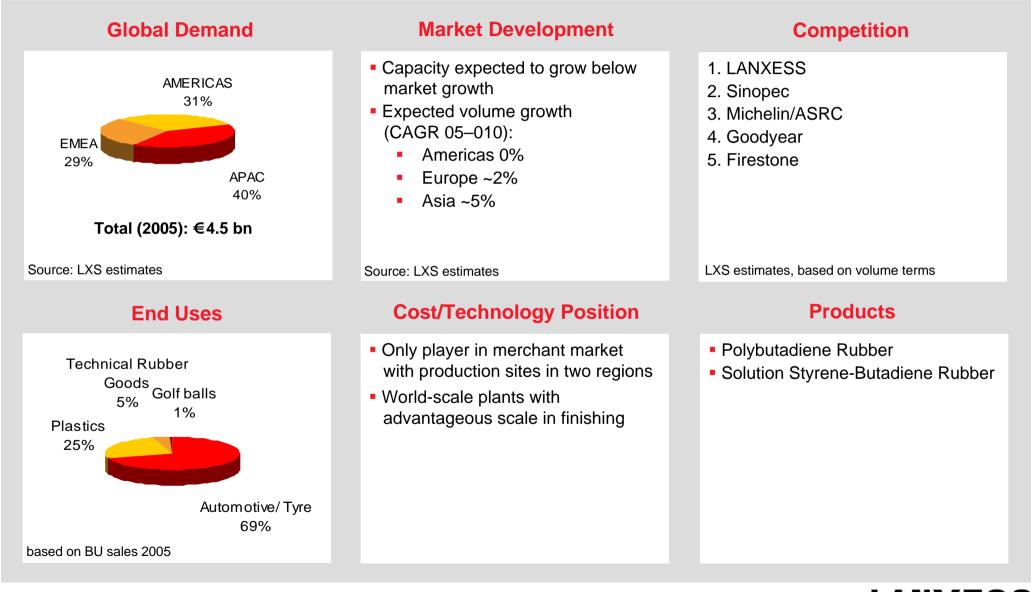
**Polybutadiene Rubber (PBR)** 

Technical Rubber Products (TRP)



#### Performance Rubber – Polybutadiene Rubber

## Leading Market Positions and World-Scale Plants in Important Markets



# Automotive and Tyre Industries are the Main Customers of Polybutadiene

## **Products**

- <u>Solution Styrene-Butadiene Rubber</u> (S-SBR)
  - Buna™ VSL
  - Buna™ BL

#### Polybutadiene Rubber (PBR)

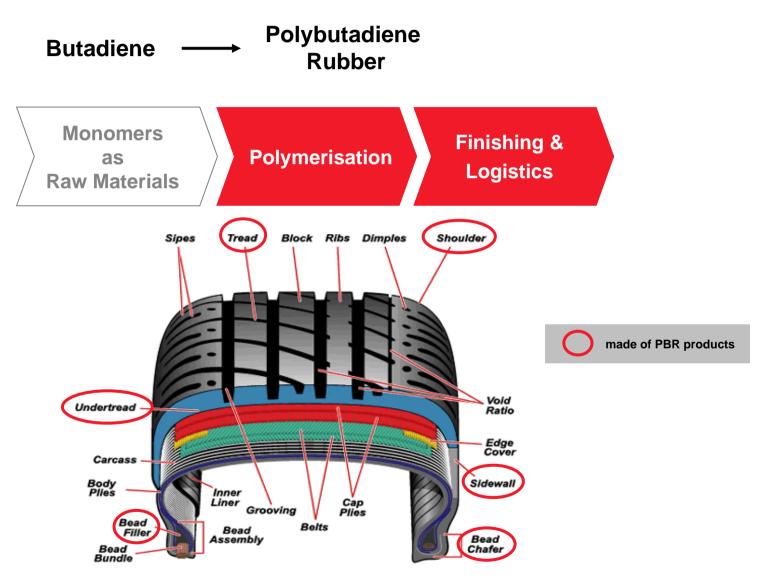
- Buna™CB
- Taktene ®

### **Main Applications**

- Tyre treads, e.g. low-rolling-resistance tyre
- Tyre sidewalls
- Plastics modification (HIPS, ABS)
- Golf balls
- Shoe soles



## **One of the World's Major Suppliers**





## Broad and Innovative Product Portfolio Combined with Excellent Reputation

## **Competitive Advantages**

- Broad and innovative product portfolio offered to both tyre manufacturers and plastic producers
- Strategic focus on high performance products
- Only player in the merchant market covering 2 regions with modern, cost efficient world scale production sites located close to customers
- Scale advantages
- Strategic raw material (butadiene) is secured structurally
- Reputation with customers for reliable performance and delivery
- Consolidation of polybutadiene rubber from four to three lines in Orange, Texas due to increase in productivity and flexibility

## Challenges

- Compete with purchasing power of concentrated and backward integrated customers
- React on customer expansion into Asia leading to:
  - Tyre capacity inflation
  - Price pressure in tyre market





**Overview** 

**Performance Rubber** 

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**Performance Chemicals** 

**Financials** 

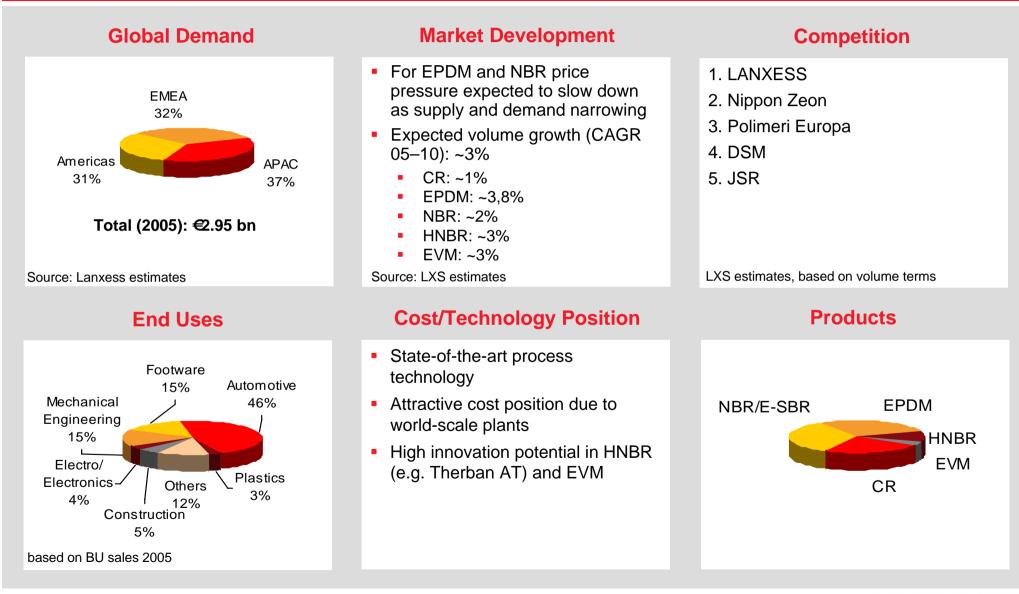
**Butyl Rubber (BTR)** 

**Polybutadiene Rubber (PBR)** 

**Technical Rubber Products (TRP)** 



## Leading Market Positions, State-of-the-Art Technology and World-Scale Plants





## **Focus on Non-Tyre Applications**

### **Products**

- Chloroprene rubber (CR): BAYPREN®
- Nitrile-butadiene rubber (NBR): KRYNAC®, PERBUNAN®
- Ethylene-propylene diene rubber (EPDM): BUNA<sup>™</sup> EP
- Hydrogenated nitrile-butadiene rubber (HNBR): THERBAN®
- Ethylene-vinyl acetate rubber (EVM): LEVAPREN®, LEVAMELT®
- Emulsion styrene-butadiene rubber (E-SBR): KRYLENE®

### **Main Applications**

- Functional, safety & performance parts for automotive (belts, hoses, wiper blades, weather strips, seals)
- Mechanical engineering (hoses, tubes, cables, gaskets, membranes, roll covers)
- Leisure industry (sponges, shoe soles)
- Building materials (membranes, seals, cables)



# A Leading Supplier of Specialty Elastomers for the Rubber Industry

| Butadiene<br>+ acrylonitrile    | Nitrile-butadiene<br>rubber (NBR)   | Hydrogenated nitrile-<br>butadiene rubber (HN | BR)                      |
|---------------------------------|-------------------------------------|---|--------------------------|
| Butadiene                       | Chloroprene<br>monomer              | (Poly-) chloroprene<br>rubber (CR)            |                          |
| Ethylene<br>+ propylene         | Ethylene-propylene<br>rubber (EPDM) | diene   |                          |
| Butadiene<br>+ styrene          | Styrene-butadiene<br>rubber (E-SBR) |   |                          |
| Ethylene<br>+ vinylacetate      | Ethylene-vinylaceta<br>rubber (EVM) | ate   |                          |
| Monomers<br>as<br>Raw Materials | Chlorination<br>in case of CR) Poly | vmerisation (in case of HNBR)                 | Finishing &<br>Logistics |
|                                 |                                     |   |                          |

LAN

# Strong Innovation Capabilities Combined with World-Scale Plants to Enable Future Growth

## **Competitive Advantages**

- Broad and deep product portfolio with strong brand marketing
- World-scale plants with state-of-the-art production facilities and processes
- Significant improvements in manufacturing performance
- Broad customer basis
- Strong position in premium EVM and HNBR segments
- Strong innovation capability and promising new product pipeline

## Challenges

- Pass through of raw material price increases
- Market consolidation and migration to Asia
- Substitution by alternative rubber materials
- Strengthen position as innovation-driven supplier for the rubber industry





### Overview

### **Performance Rubber**

## **Engineering Plastics**

**Chemical Intermediates** 

### **Performance Chemicals**

**Financials** 

#### **Engineering Plastics**

LANXESS Plastics are noted for their outstanding quality. The portfolio covers numerous products and innovative system solutions all over the world.

After the divestment of the BU Fibers in Q1 2006 the segment now comprises two business units:

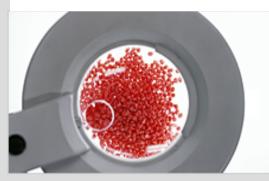
Lustran Polymers (LUP)

Semi-Crystalline Products (SCP)



## Engineering Plastics is a Leading Provider of Thermoplastic Resins

#### **Lustran Polymers**



Provides a range of thermoplastics resins for household, automotive, electronics and medical applications

Acknowledged supplier of ABS, SAN and ABS-PA resins with 50 years of experience in serving the engineering plastics market

ABS Acrylonitrile Butadiene Styrene Copolymer SAN Styrene Acrylonitrile Copolymer



Provides a range of PA and PBT resins and compounds and blends principally to the automotive and electrical industries

Committed to the development of products and new applications

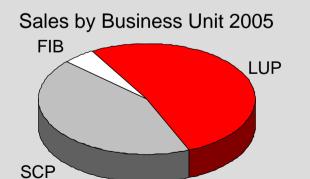
PA Polyamide PBT Polybutyleneterephthalate

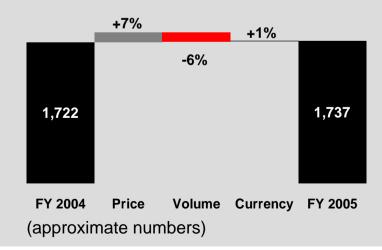
- Broad range of product and system solutions
- The BU products often rank among the leaders in their core application areas and are known for their durability and dimensional stability



# **Summary of Key Financials**

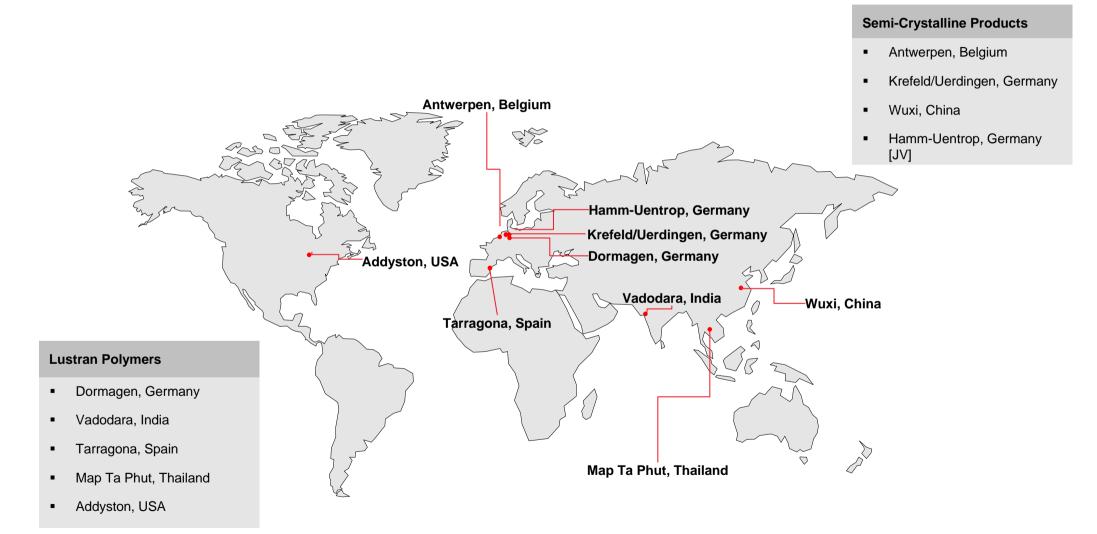
| Engineering Plastics    |   |       |       |
|-------------------------|---|-------|-------|
|                         | 2003  | 2004  | 2005  |
| Sales                   | 1,401   | 1,722 | 1,737 |
| EBITDA pre exc.         | 22  | 49    | 66    |
| EBITDA pre exc. / Sales | 1,6%  | 2,8%  | 3,8%  |
| EBITDA                  | -14   | 49    | 66    |
| Depr. & Amort.          | 474   | 37    | 56    |
| EBIT                    | -488  | 12    | 10    |
| Сарех                   | 85  | 45    | 45    |
| Number of Employees*    | 3,658   | 3,652 | 3,479 |
| *as of Dec 31           | 2003-2004 figures are based on Spin-off Combined Financial Statements |       |       |







## Engineering Plastics has Manufacturing Facilities in all Important Regions





# Focus on Enhancing Profitability and Customer Value-Added

- Defend leading positions in Europe, Americas and India
- Participate in Asian growth
- Capture growth opportunities in promising sub-segments
- Shift to differentiated and customer-specific products
- Strengthen profitability through continuation of cost and efficiency programs
- Leverage of production chain capabilities





**Overview** 

**Performance Rubber** 

**Engineering Plastics** 

**Chemical Intermediates** 

**Performance Chemicals** 

**Financials** 

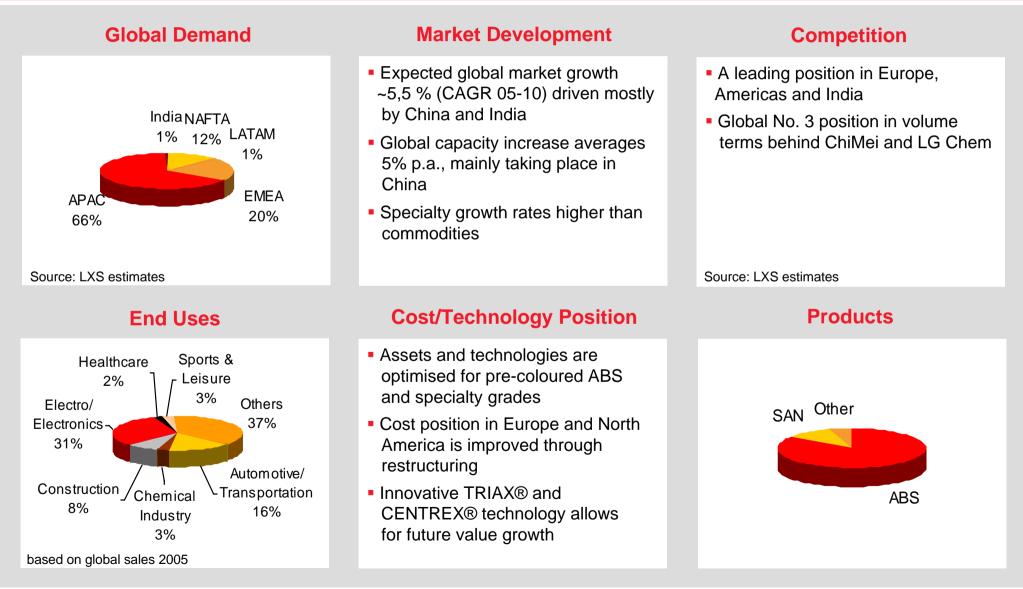
#### Lustran Polymers (LUP)

Semi-Crystalline Products (SCP)



#### **Engineering Plastics – Lustran Polymers**

# Strong Market Position in Europe, Americas and India



#### 54 Fact Book 2006

## LANXESS

## Key Products Lustran<sup>®</sup> and Novodur<sup>®</sup> have Applications in Various Industries

### **Products**

- ABS types: LUSTRAN<sup>®,</sup> NOVODUR® and ABSOLAC<sup>™</sup>. The range of grades includes injection moulding grades, extrusion grades and grades that are pre-coloured, heatresistant, intermediates for PC/ABS, paintable, glass fiber reinforced, improved chemical resistance and medical/food contact compliant.
- SAN types: LUSTRAN<sup>®</sup> and ABSOLAN<sup>™</sup>
- PA-ABS blends: TRIAX<sup>®</sup>
- ASA and AES polymers: CENTREX<sup>®</sup>

### **Main Applications**

- ABS types: consumer appliances, automotive parts, electrical/ electronic products, information technology, construction and medical applications
- SAN types: kitchen and sanitary items, cosmetics packaging, information technology, medical devices and office items.
- PA-ABS blends: automotive industry (interior and exterior car parts) and heavy-duty electrical appliances

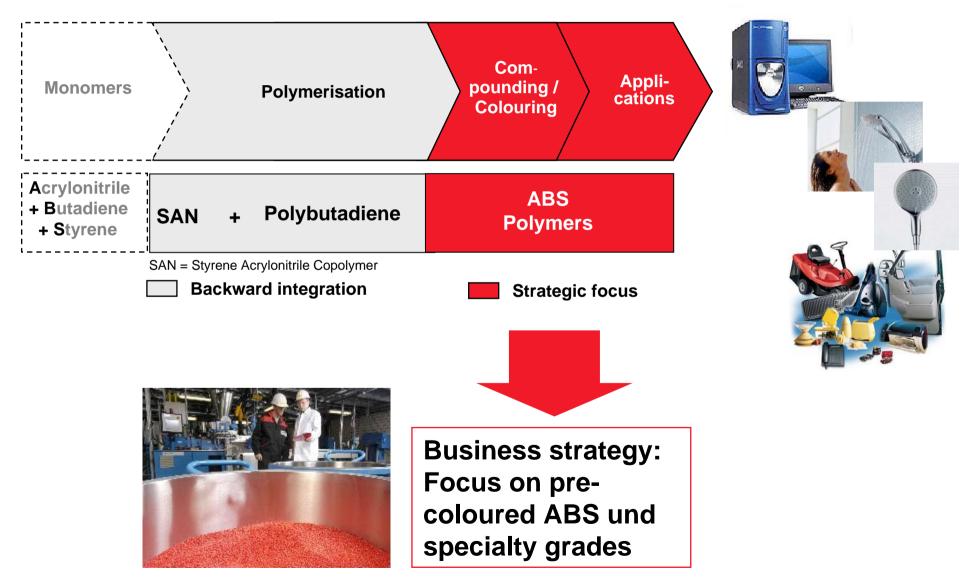
Acrylonitrile Butadiene Styrene Copolymer Acrylonitrile Styrene Acrylate Copolymer

ABS

ASA



# **Styrenic Resins is Forming a Colourful Difference**





# Global Manufacturer with Regional Management in Close Proximity to the Customers

## **Competitive Advantages**

- Regional organisation and manufacturing facilities are covering individual market requirements
- Backward integration into polymerisation enables STY to produce the necessary building blocks for differentiated grades and specialties
- Strong expertise in differentiated and precoloured grades supported by technical development in all regions ensuring close proximity to customers

## Challenges

- High complexity in "small lot" business
- General business driven by raw material costs and scale of manufacturing
- Processes and technologies differ across sites
- Migration of injection moulding business to low labour-cost countries (i.e. China)





**Overview** 

**Performance Rubber** 

**Engineering Plastics** 

**Chemical Intermediates** 

**Performance Chemicals** 

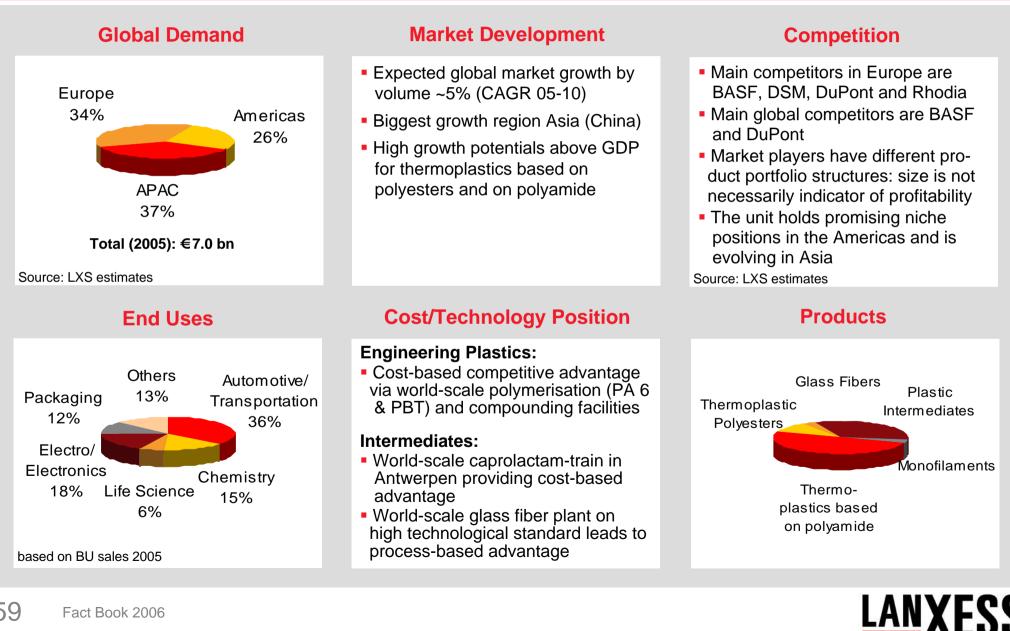
**Financials** 

Lustran Polymers (LUP)

Semi-Crystalline Products (SCP)



# Leverage Strong Product Expertise Globally



# DURETHAN<sup>®</sup> and POCAN<sup>®</sup> have Numerous Applications Across a Variety of Industries

### **Products**

 DURETHAN® A - based on polyamide 6.6 DURETHAN® B – based on polyamide 6 POCAN® - based on polybutylene terephthalate (PBT) and polyethylene terephthalate (PET)

Available types for all three: non-reinforced, glass fiber reinforced, glass-bead and mineralfilled, glass fiber reinforced/ mineral-filled, flame-retardant, and polymer and elastomermodified grades

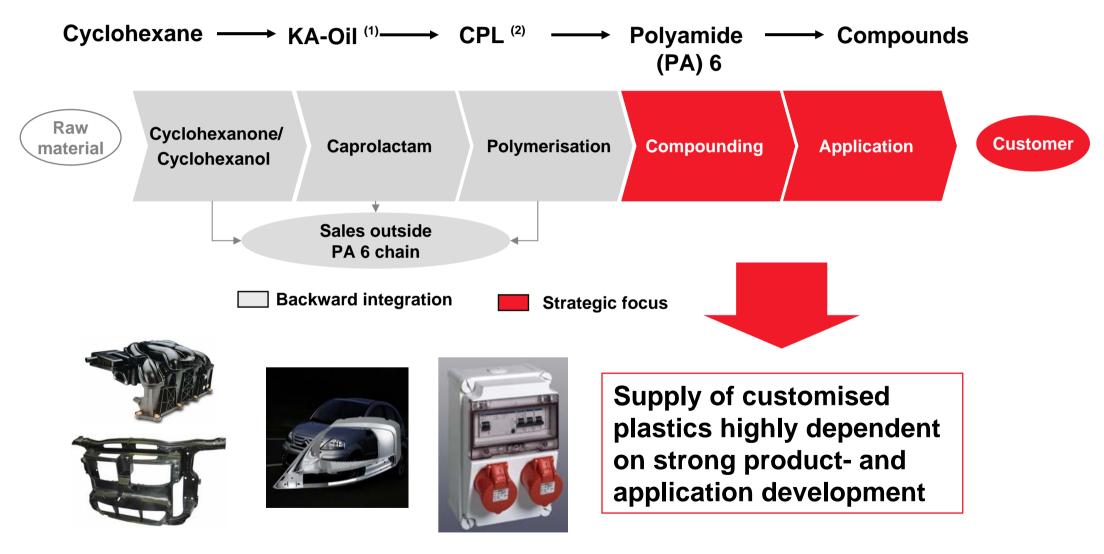
- Glass fibers
- Plastics Intermediates such as Adipic Adid or Caprolactame
- Polyamide-based monofilament products PERLON® and ATLAS®

## **Main Applications**

- DURETHAN® A: automotive industry, construction & housing and electrical/ electronic sector
- DURETHAN® B: appliances, automotive industry, construction & housing, electrical/ electronic sector, furniture, industrial/ mechanical products, information technology, packaging and sport & leisure
- POCAN®: appliances, automotive industry, electrical/ electronic sector, information technology and medical products
- Glass fibers used for reinforcement of plastics
- Plastics Intermediates as raw materials for plastics
- Monofilament: mainly paper machine clothing



## SCP is Increasingly Focussed on Value-added Parts of the Manufacturing Chain



) Caprolactam



## Taking Advantage of European Market and Technology Position to Address Asian Opportunities

## **Competitive Advantages**

- Expertise and track record in application engineering and development support longterm customer relationships
- Backward integration into polymerisation and monomers
- Favourable long term contracts for intermediate products reduce exposure to cyclicality and overcapacity
- World-scale plants in polyamide and glass fibers
- Focus on differentiated grades allows SCP to maximise the benefits of its development, application and compounding know-how
- Established and strong brands
- Image of quality supplier

## Challenges

- Increase in raw material prices
- Increase in Asian imports to EU due to favourable exchange rates (weak dollar)

#### **Engineering Plastics:**

 Development out of niche positions in Asia-Pacific into market player





#### **Overview**

**Performance Rubber** 

**Engineering Plastics** 

**Chemical Intermediates** 

**Performance Chemicals** 

**Financials** 

#### **Chemical Intermediates**

The Chemical Intermediates segment has a comprehensive portfolio of chemical starting materials and intermediate products. Its core competencies lie in research and development and the production and marketing of industrial and fine chemicals.

The segment comprises three business units:

**Basic Chemicals (BAC)** 

Saltigo (SGO)

**Inorganic Pigments (IPG)** 



## Multi-Customer Commodities and Custom Manufactured Fine Chemicals

#### **Basic Chemicals**



Supplier of :

 Aromatic compounds such as e.g. cresols, chlorobenzenes, chlorotoluenes and nitrotoluenes

 As well as amines, polyols, monoisocyanates, thio products, inorganic acids

#### Saltigo



A leading company in custom manufacturing focussed on:

- Agrochemicals
- Pharmaceuticals
- Specialties

#### **Inorganic Pigments**

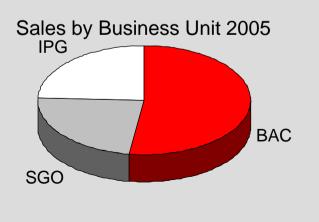


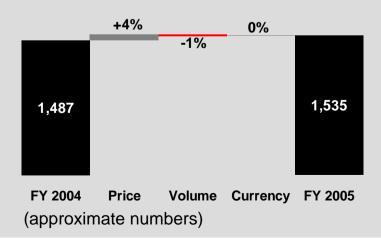
A leading global supplier of inorganic pigments with a broad, innovative product range



# **Summary of Key Financials**

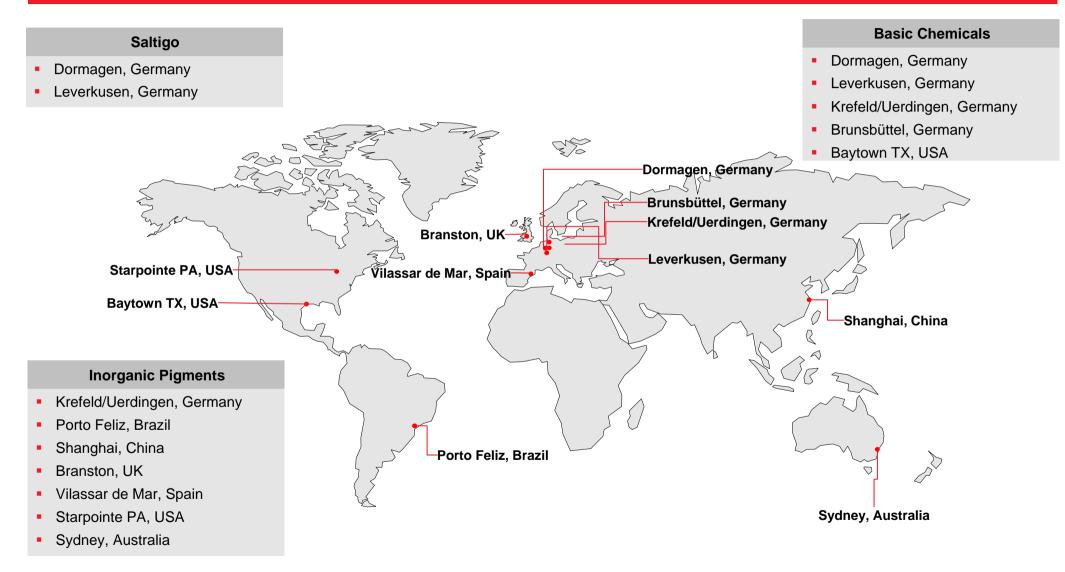
|                         | 2003  | 2004  | 2005  |
|-------------------------|---|-------|-------|
| Sales                   | 1,411   | 1,487 | 1,535 |
| EBITDA pre exc.         | 153   | 202   | 212   |
| EBITDA pre exc. / Sales | 10,8%   | 13,6% | 13,7% |
| EBITDA                  | 119   | 202   | 212   |
| Depr. & Amort.          | 463   | 113   | 82    |
| EBIT                    | -344  | 89    | 129   |
| Сарех                   | 79  | 89    | 59    |
| Number of Employees*    | 4,059   | 3,819 | 3,353 |
| *as of Dec 31           | 2003-2004 figures are based on Spin-off Combined Financial Statements |       |       |







# Chemical Intermediates Relies on a Global Manufacturing Base with Focus in Europe





## Chemical Intermediates Actively Manage Industry Consolidation

- Further debottlenecking and consolidation of existing asset structures in Western hemisphere
- Leverage organic growth opportunities from market consolidation
- Strengthen profitability through continuation of cost and efficiency programs
- Selectively invest in competitive assets in Asia
- Occupy the fast developing high quality segments in emerging markets
- Actively leverage low cost Asian sources for intermediates





**Overview** 

**Performance Rubber** 

**Engineering Plastics** 

**Chemical Intermediates** 

**Performance Chemicals** 

**Financials** 

### **Basic Chemicals (BAC)**

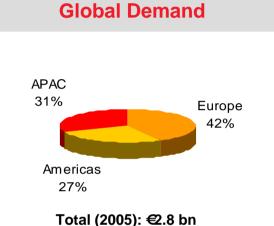
Saltigo (SGO)

**Inorganic Pigments (IPG)** 



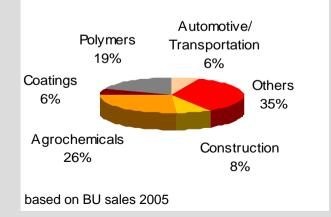
#### Chemical Intermediates – Basic Chemicals

## Leading Positions in Industry with Asian Competition and Consolidation trends



Source: LXS estimates

#### **End Uses**



#### **Market Development**

- Expected demand growth according to GDP
- Strong growth in Asia, stagnation in Europe due to demand shifting to Asia
- Consolidation expected for Benzyl Products
- Strong pressure for industry consolidation in the segments Chlorotoluenes, Chlorobenzenes and Nitrotoluenes

#### **Cost/Technology Position**

- For most segments world-scale capacities and competitive processes result in cost-based advantage
- However, competition from Asia is becoming stronger due to lower personnel and environmental cost
- Strengthening by further low cost capacity increases and productivity improvement

#### Competition

- The business unit maintains strong positions in all its product lines
- Main competitors are BASF, Dow Chemical, Jiangsu Yangnong, Kureha, Merisol, Perstorp and Tessenderlo

#### **Products**

- Chlorobenzenes + Derivatives
- Chlorotoluenes + Derivatives
- Nitrotoluenes + Derivatives
- Polyols / Oxidation products
- Inorganic acids
- Benzyl products / Amines



# BAC Offers Broad Product Range for Use in Numerous End-User Industries

## **Products**

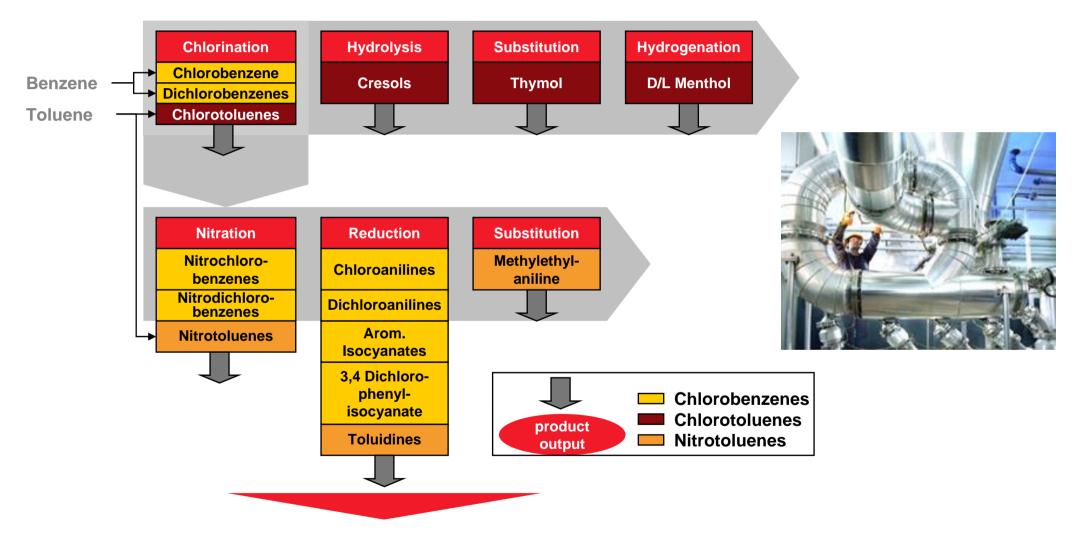
- Chlorobenzenes and derivatives
- Aliphatic and aromatic monoisocyanates
- Chlorotoluenes and cresols, butylhydroxytoluene
- Nitrotoluenes and derivatives
- Polyols (e.g. trimethylolpropane)
- Oxidation products (maleic anhydride, phthalic anhydride)
- Cyclohexylamine, dicyclohexylamine
- Benzyl alcohol, benzyl chloride, benzo trichloride, benzoyl chloride
- Benzylamine, Monoisopropanolamine, Diisopropanolamine
- Hydrofluoric acid, anhydrite
- Sulphur products (sulphuric acid/ oleum, sodium bisulfite, thionyl chloride, sulfuryl chloride, disulphur dichloride)

## **Main Applications**

- The unit sells commodity chemicals used in the following industries and sectors:
  - Agrochemicals
  - Polymers
  - Coatings
  - Automotive and transportation industry
  - Construction



## Unique, Integrated Manufacturing Process Provides Clear Competitive Advantage



Output of individual products can be modified according to market needs in order to optimise overall revenue



# BAC Leverages Strong European Base to Further Succeed Globally

#### **Competitive Advantages**

- Competitive technologies, world-scale production facilities and high utilization rates provide cost advantage
- The unique "Aromatenverbund" system enables BAC to optimize its capacity utilization, cost of production and product mix ensuring a solid market position
- BAC has been able to successfully leverage its competitive strength to grow its business, increase its market position and improve profitability

### Challenges

- Focus shifts to Asia as an important driver of growth
- Migration of downstream industries to Asia (textiles, dyestuffs, fluoro chemicals, pigments, etc.)
- REACH, TA-Luft as well as ongoing ecotoxicological discussions may generate expenditures for European producers





**Overview** 

**Performance Rubber** 

**Engineering Plastics** 

**Chemical Intermediates** 

**Performance Chemicals** 

**Financials** 

**Basic Chemicals (BAC)** 

Saltigo (SGO)

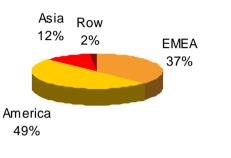
**Inorganic Pigments (IPG)** 



#### Chemical Intermediates – Saltigo

# Saltigo is Serving the Market with High-End Custom Manufacturing of Fine Chemicals

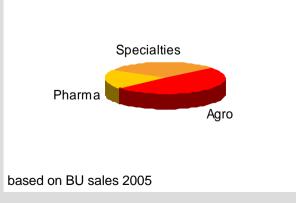
#### **Global Demand**



Total (2005): €12.3 bn

Source: LXS estimates

#### End Uses



#### **Market Development**

- Shrinking overcapacity and strong competition
- Industry consolidation is going on
- Asian competitors in intermediates and generics
- Customers are looking for a strong and committed supplier in a fragmented market for custom manufacturing

#### **Cost/Technology Position**

- Saltigo is providing state-of-the-art technology and services to the pharmaceuticals, agrochemicals and specialty chemicals industries
- Restructuring and asset consolidation show expected savings
- Saltigo continues improving its cost structure to further increase competitiveness

#### Competition

- Saltigo is among the top global players in custom manufacturing
- Leading position in custom manufacturing of agrochemicals
- Established supplier for the pharmaceutical industry
- Producer of selected specialties
- Main competitors are DSM, Lonza, Clariant and Albemarle

#### **Products**

- Custom manufactured active ingredients and intermediates for life-science and other industries
- Multi-customer fine chemicals
- Process development services (route selection, lab scale development, pilotation, analytical services)
- Mainly concentrated on patent protected customer products



# Intermediates and Active Ingredients for Pharma, Agrochemical and Other Industries

## **Products**

- Saltigo is focused on customized
  - synthesis,
  - process development,
  - manufacturing,
  - services.
- Based on a large experience in fine chemicals production Saltigo also offers a broad portfolio of high quality multi-customer products

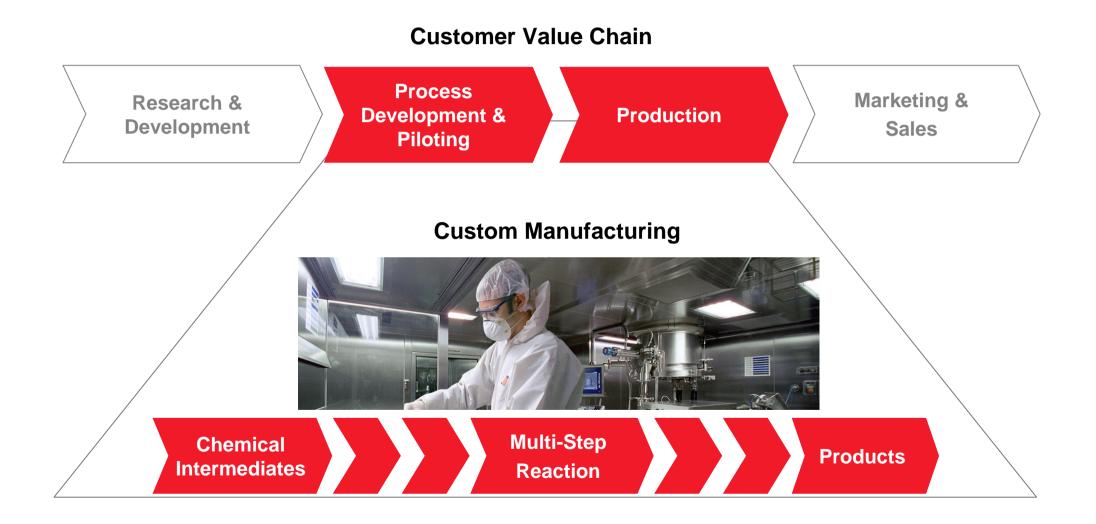
## **Main Applications**

- Intermediates and active components for the agrochemical industry
- Intermediates and active ingredients for the pharmaceutical industry
- Specialty fine chemicals for applications like imaging, polymer additives, electronics, consumer care and other innovative products



Chemical Intermediates – Saltigo

# Focussed on Custom Manufacturing of Fine Chemicals





# Saltigo will Take Advantage of its Strong Technology Position and New Market Approach

### **Competitive Advantages**

- New and focused market approach
- Strong customer relationships based on established track record
- Technology leadership in high-end chemistry
- Expertise in the field of complex chemistry and fast "ramp-up" capabilities, particularly in the agrochemicals segment

## Challenges

- Overcapacities in custom manufacturing
- Ongoing market consolidation
- Cost pressure





**Overview** 

**Performance Rubber** 

**Engineering Plastics** 

**Chemical Intermediates** 

**Performance Chemicals** 

**Financials** 

**Basic Chemicals (BAC)** 

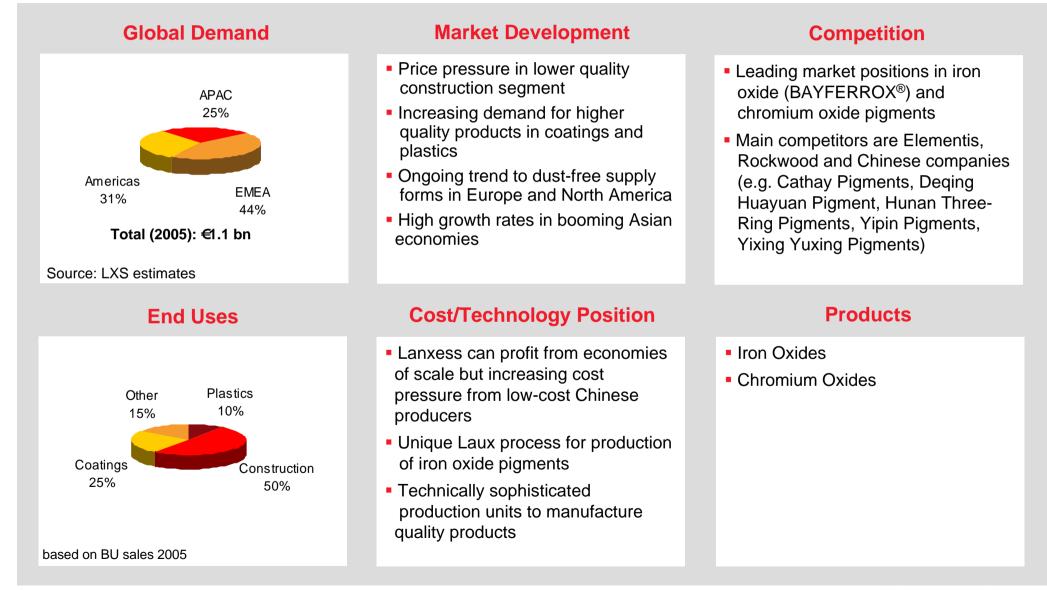
Saltigo (SGO)

**Inorganic Pigments (IPG)** 



#### Chemical Intermediates – Inorganic Pigments

# Quality Products for Construction, Coatings, Plastics and Other Industries





## Under its Famous Brands IPG Offers a Broad Product Range for its Customers

#### **Products**

- A leading producer of iron oxide pigments offering a broad product range
- Provider of colour pigments to various industries, in particular construction
- Important products include iron oxide pigments BAYFERROX<sup>®</sup>, BAYOXIDE<sup>®</sup>, BAYSCAPE<sup>®</sup>, COLORTHERM<sup>®</sup> and chromium oxide products



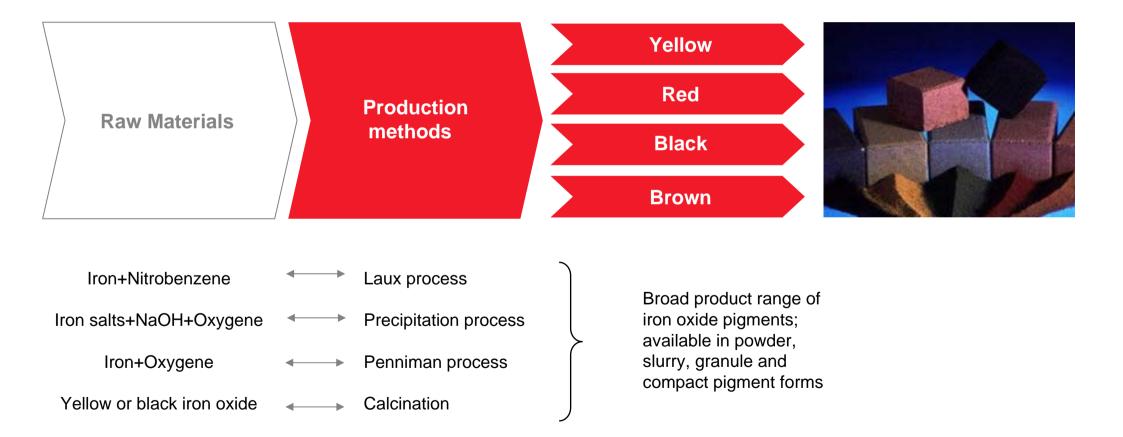
### **Main Applications**

- Colouring of construction materials (asphalt, concrete for floors, roofs and walls)
- Paints and coatings (architectural paints as well as industrial coatings)
- Other applications include products used for colouring of plastics and paper and manufacture of refractory, ceramics, brake linings, mulch, glazes and airbags
- IPG also supplies oxides with tailored magnetic, chemical and morphological properties for the production of toners used in photocopiers and laser printers



# Various Technologies are Applied to Produce a Full Range of Colours

Producing iron oxides at its sites in Western Europe and Brazil, LANXESS can offer a broad and innovative product range using different production methods





# IPG is Meeting the Challenges by Using its Worldwide Market Access

## **Competitive Advantages**

- State-of-the-art production capacities and superior product quality
- Strong established brands such as BAYFERROX<sup>®</sup>
- Worldwide distribution network

## Challenges

- Chinese producers with lower cost structure, fast capacity build-up and improvements in quality
- Increasing raw material and energy costs





Overview

**Performance Rubber** 

**Engineering Plastics** 

**Chemical Intermediates** 

**Performance Chemicals** 

#### **Performance Chemicals**

The Performance Chemicals segment with its various business units offers a broad spectrum of process and functional chemicals for a variety of industries.

After the divestment of the BU Paper the segment now comprises seven business units:

Material Protection Products (MPP)

**Functional Chemicals (FCC)** 

Leather (LEA)

**Textile Processing Chemicals (TPC)** 

**Rhein Chemie (RCH)** 

**Rubber Chemicals (RUC)** 

Ion Exchange Resins (ION)



#### Performance Chemicals – Structure

# BUs Produce Service- and Application-Driven Products for a Wide Range of Industries

#### Material Protection Products



Comprehensive range of biocides and specialties for:

- Beverage stabilization
- Wood preservatives/ antifouling products
- Industrial preservation and Disinfection

# Functional Chemicals

Manufactures products such as:

- Plastic additives
- Flame retardants
- Water chemicals
- Specialty dyes
- Colorants

#### Leather

#### INTER ALLER ALLER A



Broad range of specialty products for the leather industry including:

- Tanning agents
- Preservatives
- Finishing auxiliaries
- Dye products

- Mainly service- and application-driven
- Serving a wide range of industries
- Covering either the whole value chain of a specific industry or providing a specific functionality



#### Performance Chemicals – Structure

# BUs Produce Service- and Application-Driven Products for a Wide Range of Industries (continued)

#### Textile Processing Chemicals



Product solutions for the processes of

- Pretreatment
- Dyeing Auxiliaries
- Finishing
- Textile printing



Providing technical services Full portfolio of rubber and additives for the chemicals for the tire a

- Rubber
- Polyurethane
- Plastics
- Lubricant oil industries

Full portfolio of rubber chemicals for the tire and technical rubber industry including:

**Rubber Chemicals** 

- Antidegradants
- Accelerators
- Specialties



Providing Ion Exchange Resins and complete solutions for the treatment of liquids in the following industries:

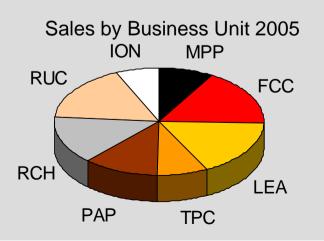
- Water
- Foodstuff
- Chemicals

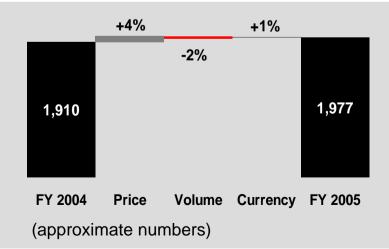
- Mainly service- and application-driven
- Serving a wide range of industries
- Covering either the whole value chain of a specific industry or providing a specific functionality



# **Summary of Key Financials**

| Performance Chemicals   |   |       |       |
|-------------------------|---|-------|-------|
|                         | 2003  | 2004  | 2005  |
| Sales                   | 1,925   | 1,910 | 1,977 |
| EBITDA pre exc.         | 125   | 152   | 212   |
| EBITDA pre exc. / Sales | 6,5%  | 8,0%  | 10,7% |
| EBITDA                  | 96  | 104   | 184   |
| Depr. & Amort.          | 272   | 95    | 66    |
| EBIT                    | -176  | 9     | 118   |
| Сарех                   | 63  | 57    | 6     |
| Number of Employees*    | 4,881   | 5,140 | 4,743 |
| *as of Dec 31           | 2003-2004 figures are based on Spin-off Combined Financial Statements |       |       |

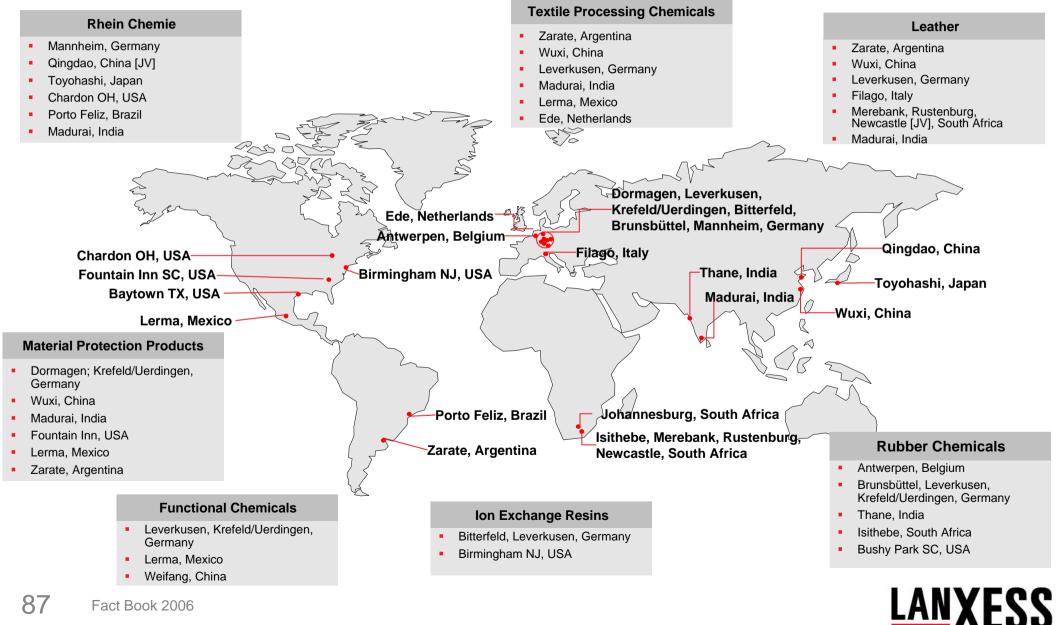






#### Performance Chemicals – Sites

## Performance Chemicals has a World-wide Manufacturing base



# Build on Strengths to Grow in Profitable Niches and Expand Businesses Regionally

- Strengthen regional activities by expansion of local technical service and increase geographic diversification
- Develop profitable niches through innovation and intensify innovation partnerships with customers
- Broaden product portfolio to increase coverage of customers' value chain
- Widen industrial application focus





**Overview** 

**Performance Rubber** 

**Engineering Plastics** 

**Chemical Intermediates** 

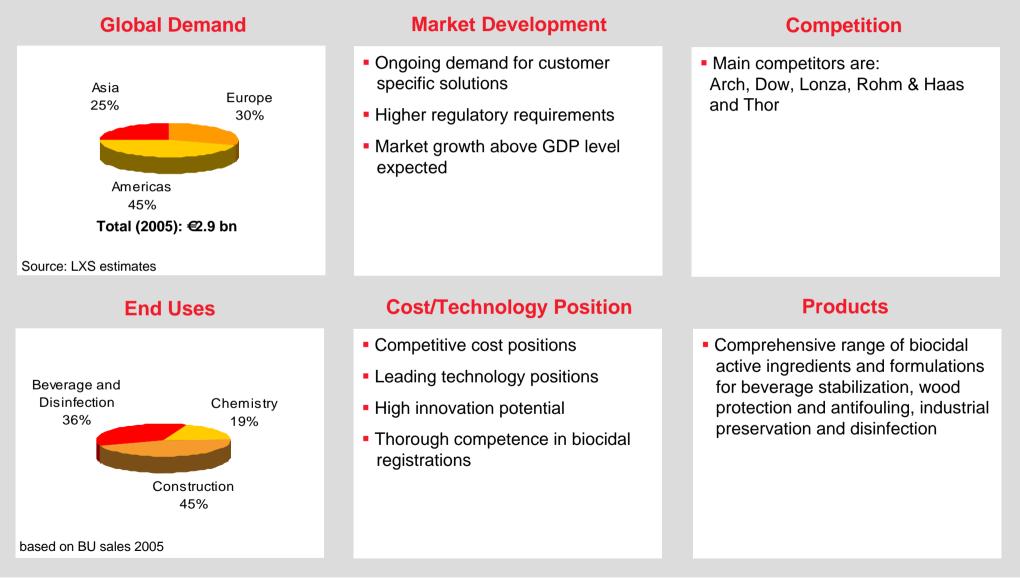
**Performance Chemicals** 

Material Protection Products (MPP) Functional Chemicals (FCC) Leather (LEA) Textile Processing Chemicals (TPC) Rhein Chemie (RCH) Rubber Chemicals (RUC) Ion Exchange Resins (ION)



#### Performance Chemicals – Material Protection Products

# MPP has a Broad and Innovative Product Portfolio





# Products and Problem Solutions for a Wide Area of Applications

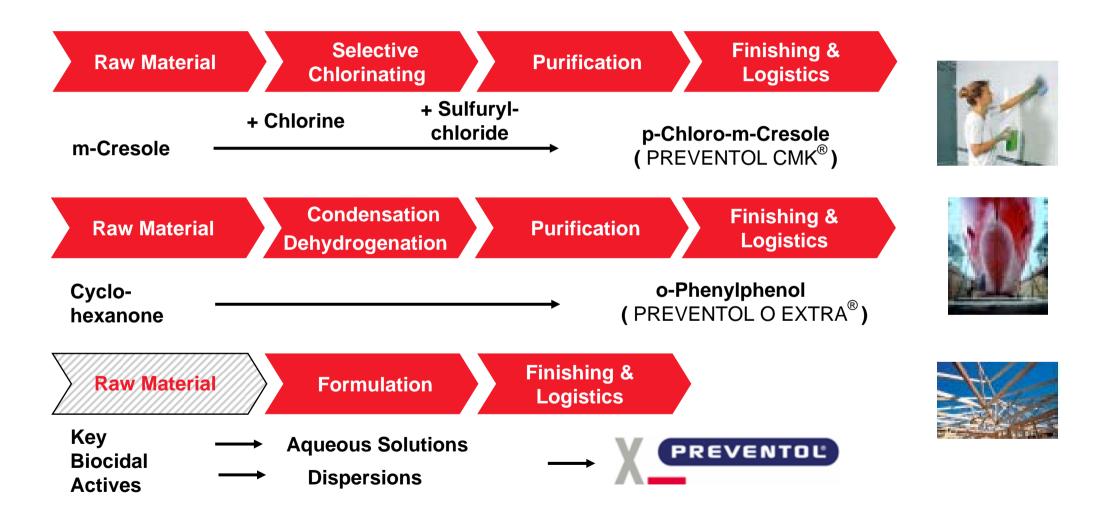
## **Products** Preservatives / Biocides PREVENTO **BIOCHEK**<sup>®</sup> METASOL **TEKTAMER**<sup>®</sup> Cold sterilisation agent for the Beverage Industry VELCORIN®

### **Main Applications**

- Wood protection
- Antifouling paints
- Industrial preservation
- Disinfection
- Beverages stabilization



# A Leading Producer of Biocides and Biocidal Formulations





## MPP Uses Broad Expertise in Biocides to Provide Customer Specific Solutions

### **Competitive Advantages**

- Broad and innovative portfolio with unique properties
- Strong development capabilities
- Global sales and service network
- High expertise in regulatory matters and broad portfolio of biocidal registrations

## Challenges

- Increasing regulatory requirements
- Low cost Chinese / Indian competition in biocidal actives





**Overview** 

**Performance Rubber** 

**Engineering Plastics** 

**Chemical Intermediates** 

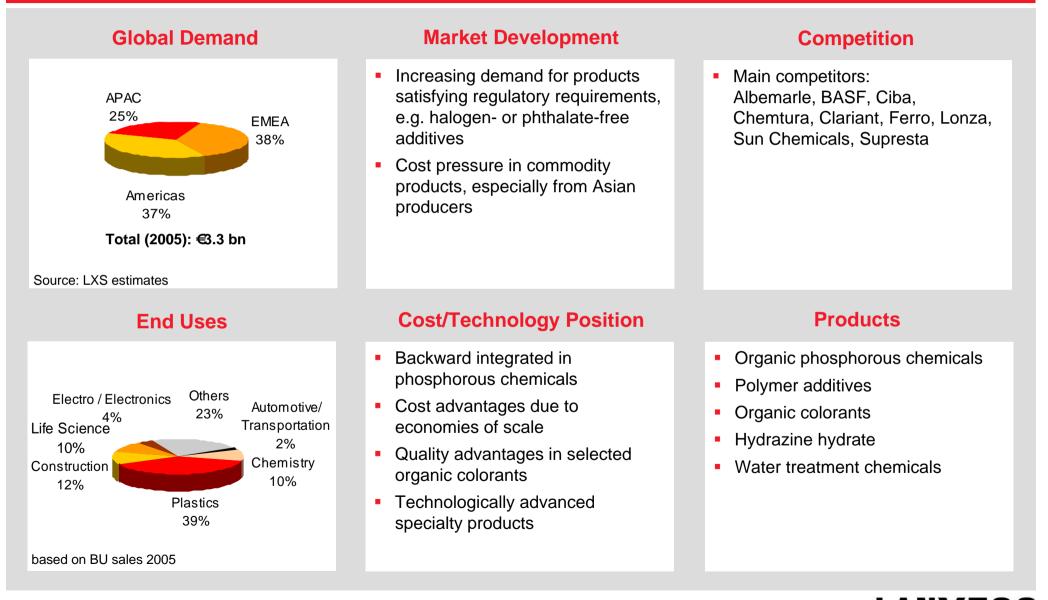
**Performance Chemicals** 

Material Protection Products (MPP) Functional Chemicals (FCC) Leather (LEA) Textile Processing Chemicals (TPC) Rhein Chemie (RCH) Rubber Chemicals (RUC) Ion Exchange Resins (ION)



#### Performance Chemicals – Functional Chemicals

# Broad Product Portfolio for Plastics, Chemicals and Other Applications



# Numerous Applications Provided to a Variety of Industries

## **Products**

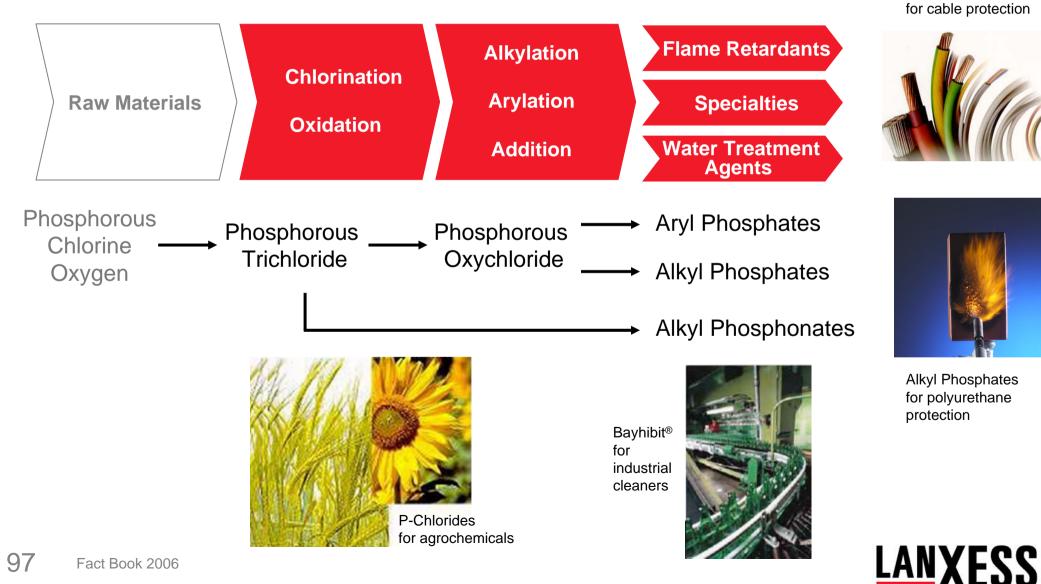
- Flame retardants: DISFLAMOLL<sup>®</sup>, BAYFOMOX<sup>®</sup>, LEVAGARD<sup>™</sup>
- Plasticisers: MESAMOLL<sup>®</sup>, ADIMOLL<sup>®</sup>, ULTRAMOLL<sup>®</sup>, UNIMOLL<sup>®</sup>, Triacetin
- Blowing agents: POROFOR<sup>®</sup>, FICEL<sup>™</sup>, GENITRON<sup>™</sup>
- Organic colorants: BAYSCRIPT<sup>®</sup>, MACROLEX<sup>®</sup>, BAYPLAST<sup>™</sup>, SOLFORT<sup>™</sup>, LEVANYL<sup>®</sup>, LEVANOX<sup>®</sup>, BAYFAST<sup>™</sup>
- Synthesis chemicals: Hydrazine Hydrate, LEVOXIN<sup>™</sup>, Phosphites
- Water treatment chemicals: BAYHIBIT<sup>®</sup>, BAYPURE<sup>®</sup>

### **Main Applications**

- Rigid and flexible PVC
- Polyurethane foam
- Engineering plastics
- Paints and coatings
- Water treatment
- Laundry and cleaning
- Printing inks
- Detergents
- Cosmetics



# **One of the Largest Integrated Production for Phosphorous Chemicals**



**Aryl Phosphates** 

# Strong Market and Technology Positions in Niches with Excellent Customer Relationships

## **Competitive Advantages**

- Economies of scale in one of the largest integrated production for phosphorous chemicals
- Long-term patent protection for product technologies
- High expertise and know-how
- Established solution provider
- Strong existing customer relationships in key markets
- A market leader for phosphorous flame retardants, bonding agents, specialty plasticisers, hydrazine hydrate and solvent dyes for plastics

## Challenges

- Sustainability of market positions
- Change in the competitive environment due to further consolidation
- High volatility of raw material prices
- Increasing price pressure in commodity segments
- Continuous market shift to Far East





**Overview** 

**Performance Rubber** 

**Engineering Plastics** 

**Chemical Intermediates** 

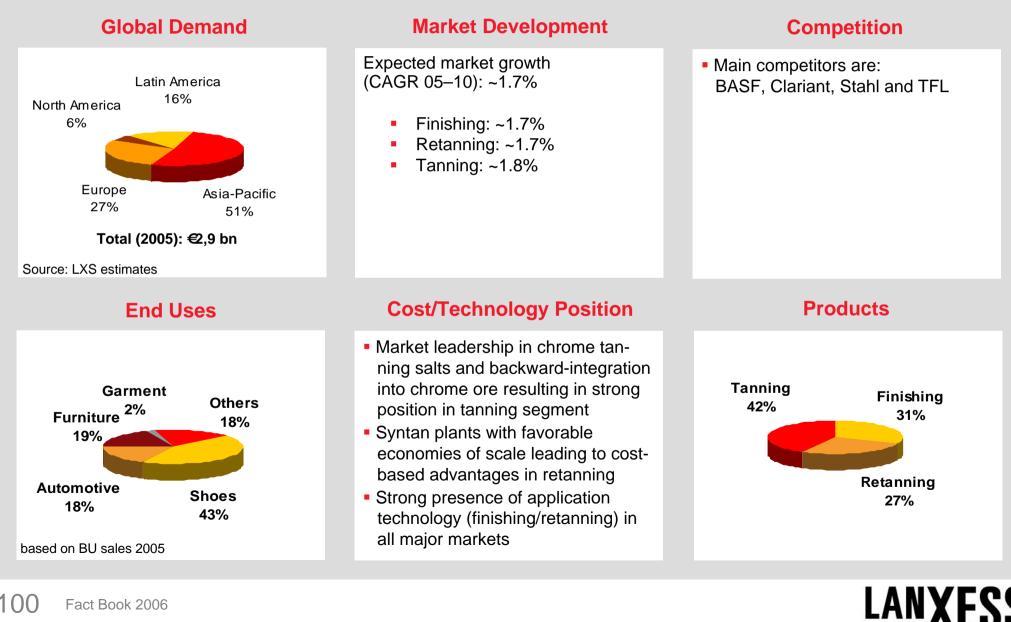
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#### Performance Chemicals – Leather

# Leather has a Broad Product Portfolio and **Leading Market Positions**



# Provider of Full Product Portfolio for Leather Industry

## **Products**

- BAYMOL®, BAYKANOL®, CISMOLLAN ®, PREVENTOL®
- BAYCHROM®, CHROMOSAL®, BLANCOROL®
- SETA<sup>™</sup>\*, EUREKA ®\*\*, ATLASOL ®\*\*
- BAYKANOL®, LEUKOTAN®\*\*\*, LEVOTAN®, LUBRITAN™\*\*\*, RETINGAN®, TANIGAN®
- ACIDERM®, BAYCOLOR™, BAYGENAL®, BAYDERM®, EUDERM®, EUKANOL®, LEVADERM®
- AQUADERM ®, BAYDERM®, EUDERM®, HYDRHOLAC<sup>™\*\*\*</sup>, PRIMAL®<sup>\*\*\*</sup>
- ACRYSOL<sup>™</sup>\*\*\*, AQUADERM ®, BAYSIN<sup>™</sup>, EUDERM®, EUKANOL®, EUSIN®, ISODERM®, PRIMAL®\*\*\*, XERODERM®
- BAYDERM®, EUSIN®, ISODERM®
- BAYGEN®, LEVACAST®

## **Main Applications**

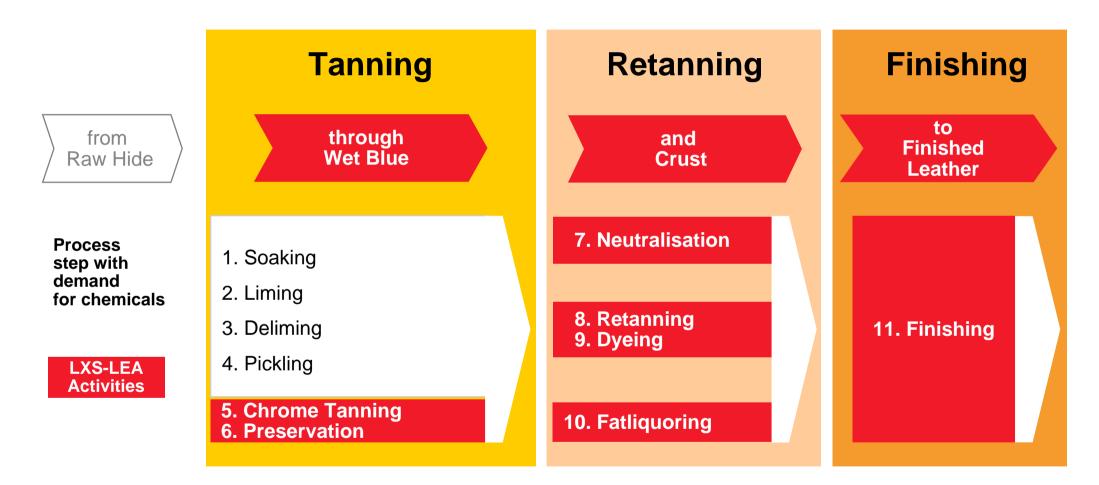
- Wet-end auxiliaries
- Mineral tanning and retanning materials
- Vegetable tanning and retanning materials
- Synthetic organic tanning materials and dyeing auxiliaries
- Colorants
- Finishing resins, polymer dispersions
- Finishing auxiliaries
- Solvent-containing top coats
- Special processes (for patent leather and upgrading splits)

\*trademark of SETA S/A \*\* registered trademark of Atlas Refinery, Inc \*\*\*trademark of Rohm & Haas



Performance Chemicals – Leather

## A Backward Integrated Leading Producer of Leather Chemicals in all Three Process Steps



LANXESS operates a chrome mine and processes the ore to chromic acid, sodium dichromate and chrome tanning salts for tanning purposes



# Good Customer Relationships due to Strong Application Know-How and Technical Service

### **Competitive Advantages**

- Strong network of technical service personnel supporting customer needs
- Local production and compounding facilities providing cost and service advantages
- Application know-how providing flexibility to respond to changing market demands
- Partnership in the field of Acrylics with Rohm & Haas
- Partnership in the field of fatliquors with ATLAS Refinery, Inc.
- Partnership in the field of PUR-dispersions with BMS
- Backward-integration into chrome mining
- Strong and established customer relationships
- Broad product portfolio offering complete solutions to the customer

## Challenges

- Increasing competitive pressure due to overcapacities in retanning and finishing chemicals
- Increasing trend towards partnering with competitors
- Country risk due to production in politically volatile countries
- Continuous need for innovation and product development in all segments
- Increasing demand for fashion oriented leather articles





**Overview** 

**Performance Rubber** 

**Engineering Plastics** 

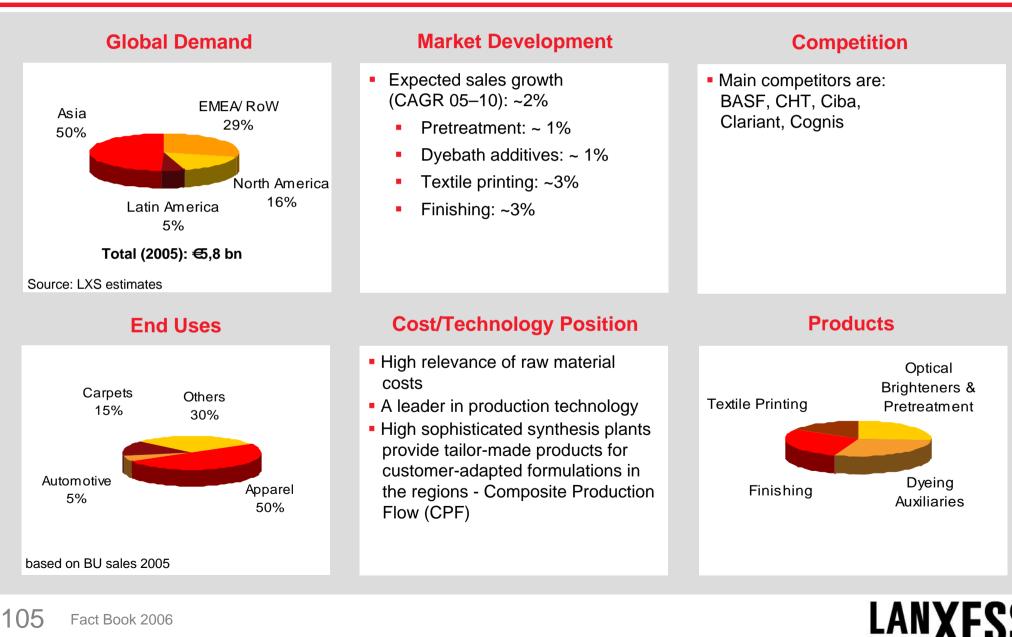
**Chemical Intermediates** 

**Performance Chemicals** 

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# **Global Producer of Textile Auxiliaries**



# **BAYGARD<sup>®</sup>** and **BAYPROTECT<sup>®</sup>** Offer a Variety of Applications in the Textile Industry

### **Products**

Pretreatment:

BAYLASE®, BAYSOLEX®, DIADAVIN®, ERKANTOL®, LEVAPON®, PLEXENE™, TANATERGE®, TANNEX®

Dyeing Auxiliaries:

ASTRAGAL®, AVOLAN®, LEVEGAL®, LEVOGEN®, LUBIT®, TANASPERSE™, TANAPAL®, TANADEL™, TANEDE™

Finishing:

BAYGARD®, BAYPRET®, CELLOLUBE™, PERSOFTAL®, SYNTHAPPRET®, EULAN™

Textile Printing:

ACRACONZ<sup>™</sup>/ACRACONC<sup>™</sup>, ACRAFIX®, ACRAMIN®, NOFOME<sup>™</sup>, TANAPRINT®

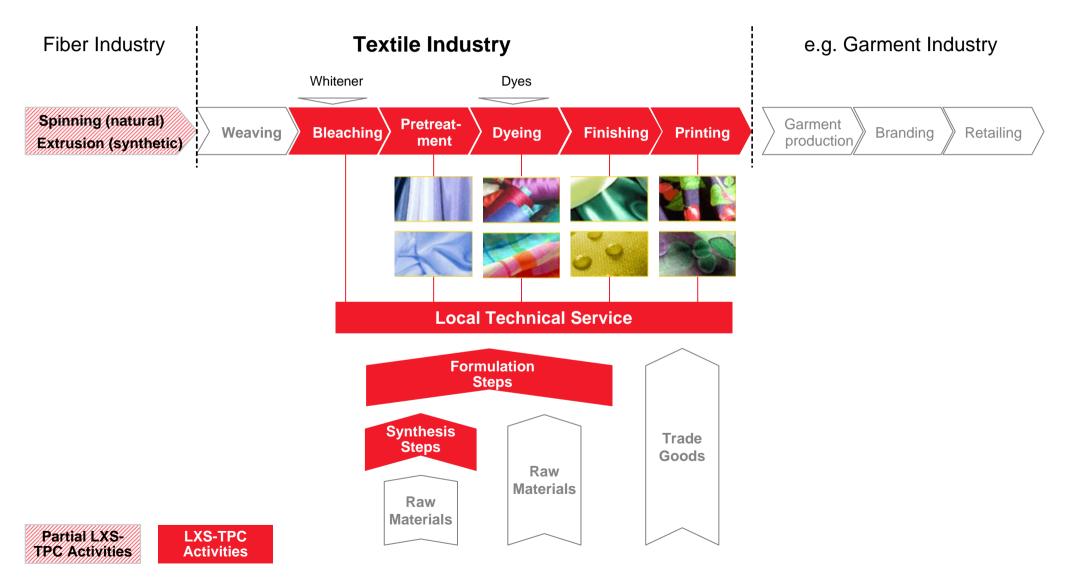
- Main Applications
- Apparel
- Carpet / Home textiles
- Automotive
- Technical textiles
- Fibers



107

Fact Book 2006

# **Textile Processing Chemicals Offers a Broad Product Portfolio for the Textile Industry**





# Strong Technology and Manufacturing Expertise for High Product Quality

### **Competitive Advantages**

- High product quality and reliability of delivery
- A market leader in chromojet applications
- High degree of expertise in manufacturing/ technology leadership
- Strong product stewardship
- New environmentally required products for pretreatment and dyebath additives

- Customers further moving into low-cost countries
- Acceleration of fashion lifecycles requiring need for innovation/ active portfolio management
- Increasing price pressure





**Overview** 

**Performance Rubber** 

**Engineering Plastics** 

**Chemical Intermediates** 

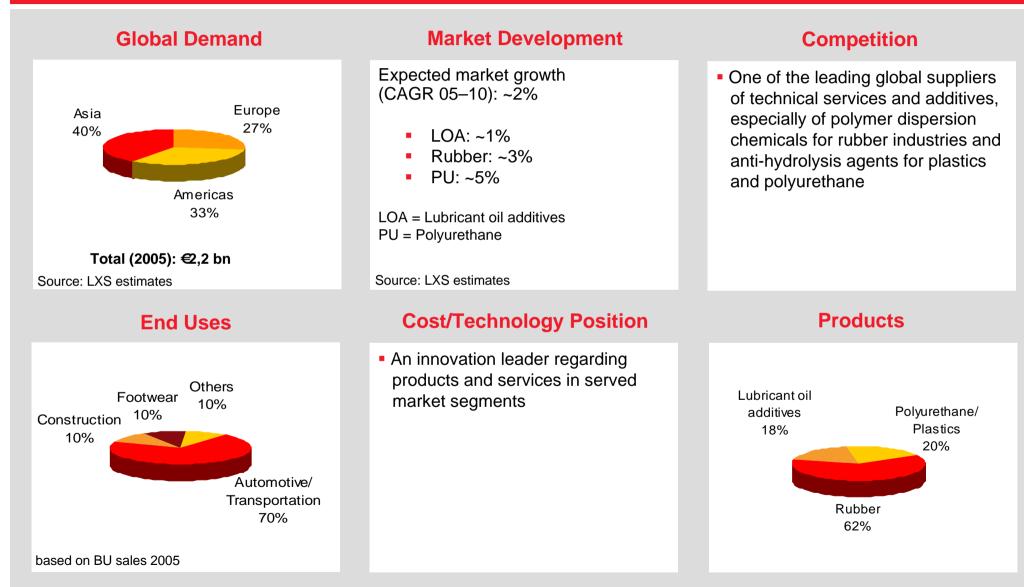
**Performance Chemicals** 

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#### Performance Chemicals – Rhein Chemie

# Rhein Chemie has Strong Service and Application Expertise





# Strong Supplier of Diverse Product Portfolio, Mainly to the Automotive Industry

### **Products**

#### Rubber

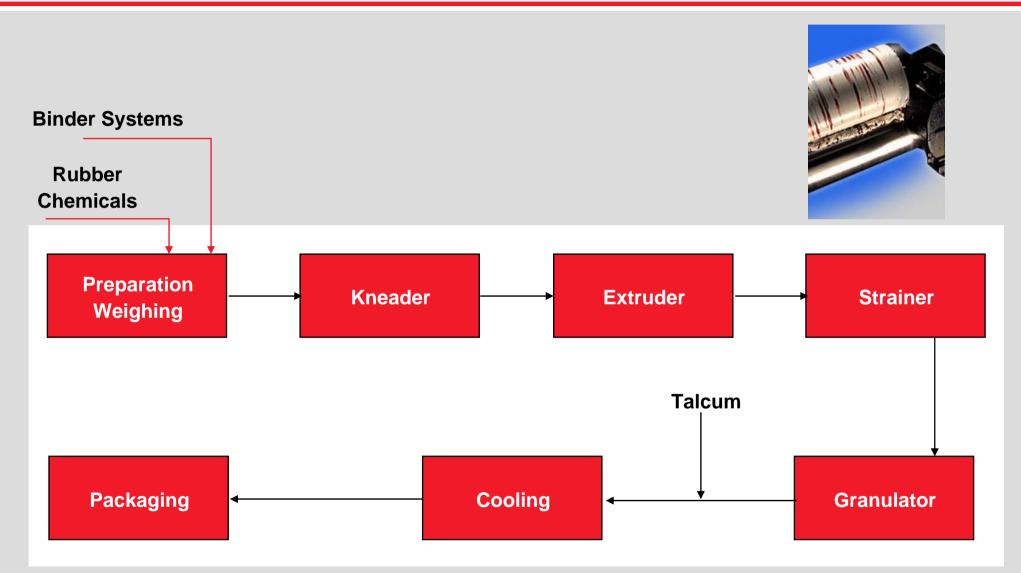
- Polymer-bound chemicals: RHENOGRAN<sup>®</sup>, POLYDISPERSION<sup>®</sup>
- Polymer-bound additive packages: ONE SLAB<sup>®</sup>
- Processing promoters: AKTIPLAST<sup>®</sup>, AFLUX<sup>®</sup>
- Specialty polymers: UREPAN<sup>®</sup>, RHENOBLEND<sup>®</sup>
- Antiozonants: ANTILUX<sup>®</sup>
- Release agents: RHENODIV<sup>®</sup>
- Vulcanization activators: RHENOFIT<sup>®</sup>
- Service Technologies, Multi ingredient preweighs: BATCH-READY<sup>®</sup>
- Polyurethane/Plastics
  - Hydrolysis protection: STABAXOL<sup>®</sup>
- Lubricant oil additives
  - Corrosion inhibitors: ADDITIN<sup>®</sup>
  - Sulfur carriers and anti-wear agents: ADDITIN<sup>®</sup>

### **Main Applications**

- Rubber
- Technical rubber goods (e.g. profiles, hoses)
- Tires
- Polyurethane/Plastics
- Technical plastic additives
- Lubricant oil
- Metalworking fluids
- Hydraulic oils
- Industrial gear oils
- Rust preventive oils
- Greases



# Polymer-Bound Chemicals and Formulations for Tailor-Made Products





# Strong Technical and R&D Know-How with Global Service Network

### **Competitive Advantages**

- Supplier of customized solutions
- Strong technical know-how
- Close customer relationships
- Strong global sales and service network
- Strong brands
- Big parts of value chain are covered
- Leading capabilities in new product development

- Constantly rising demand for new, innovative products and solutions
- Consolidation in rubber and automotive industry





**Overview** 

**Performance Rubber** 

**Engineering Plastics** 

**Chemical Intermediates** 

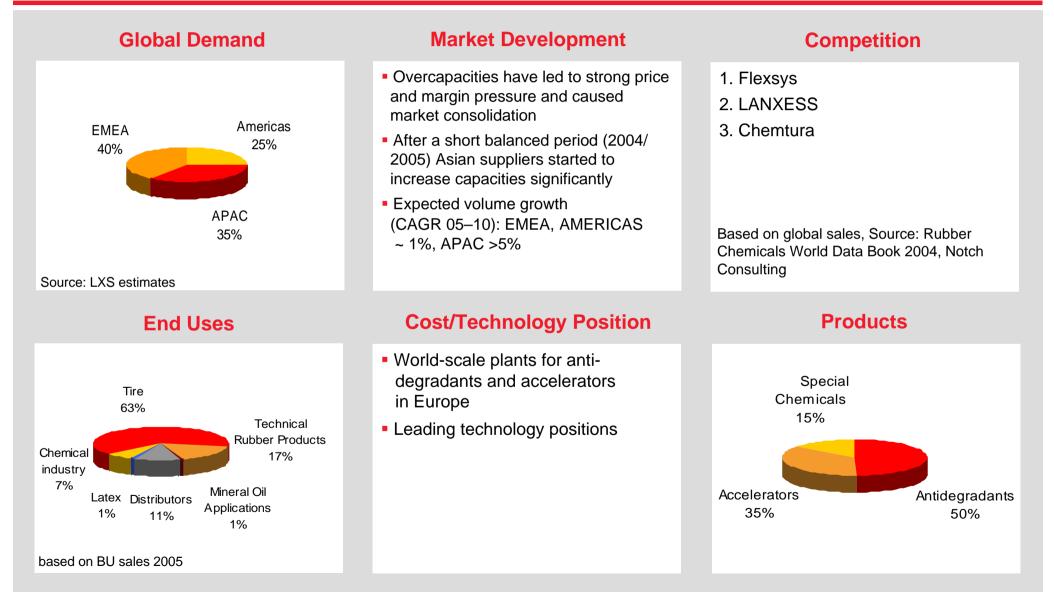
**Performance Chemicals** 

Material Protection Products (MPP)
Functional Chemicals (FCC)
Leather (LEA)
Textile Processing Chemicals (TPC)
Rhein Chemie (RCH)
Rubber Chemicals (RUC)
Ion Exchange Resins (ION)



#### Performance Chemicals – Rubber Chemicals

# **RUC has Leading Market and Technology Positions in a Challenging Environment**



# Broad Product Portfolio to Enhance Rubber Properties

## **Products**

#### **Accelerators**

- Thiazoles
- Sulphenamides

#### **Antidegradants**

- Phenylendiamines
- Quinolines

#### Specialities used as

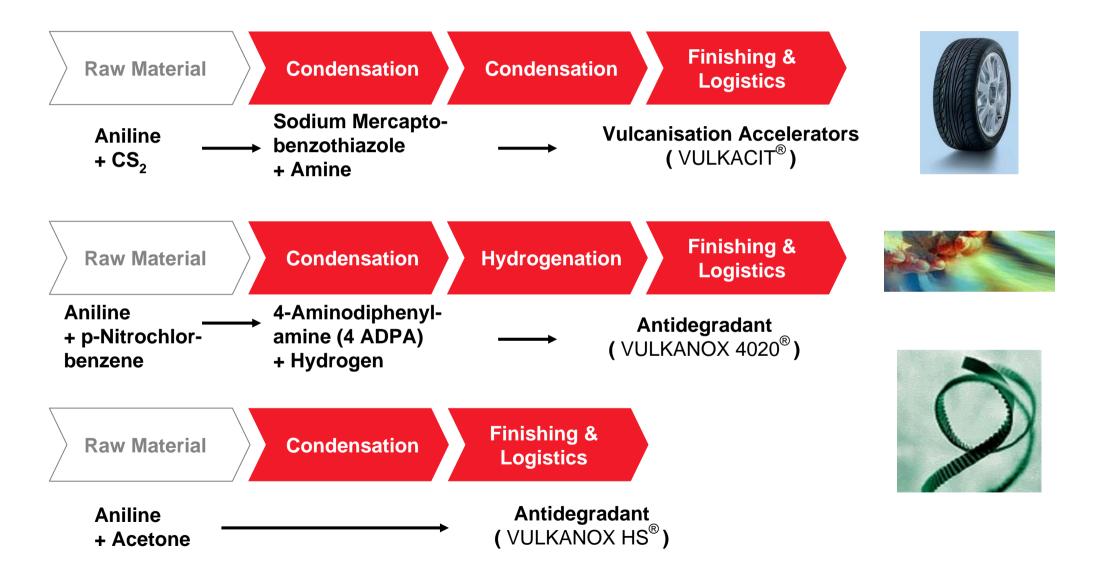
- Bonding agents
- Cross linkers
- Curing agents
- Emulsifiers
- Fillers
- Latex chemicals
- Peptizing agents
- Retarders
- Stabilisers
- Synthetic plasticisers
- Heat sensitizers
- Vulcanization activators

### **Main Applications**

- Enhance the mixing and/ or processability of elastomers, blends or their rubber compounds
- Protect an end product against effects on its properties or from degradation (e.g. oxidation) under in-service conditions
- Achieve certain properties in the elastomer or the finished rubber article/ latex product, e.g. by means of cross-linking (vulcanisation)



# A Leading Producer of Rubber Chemicals for Tyre Industry and Technical Rubber Products





# Established Market Positions for Broad Product Portfolio in all Relevant Global Markets

### **Competitive Advantages**

- World-scale plant for antidegradants and accelerators in Europe
- Establishment of an Antidegradant production JV in China with two Chinese partners
- Reputation as provider of high quality products
- Broad product portfolio
- Global supply and production network
- Coverage of all relevant global markets through a well established market position

- Market further moving to Asia
- Increasing competition from low-cost countries especially China
- A high number of Rubber Chemicals producers is already present in China; capacities are growing further
- Increasing pressure on margins and substitution of volumes of traditional suppliers is likely





**Overview** 

**Performance Rubber** 

**Engineering Plastics** 

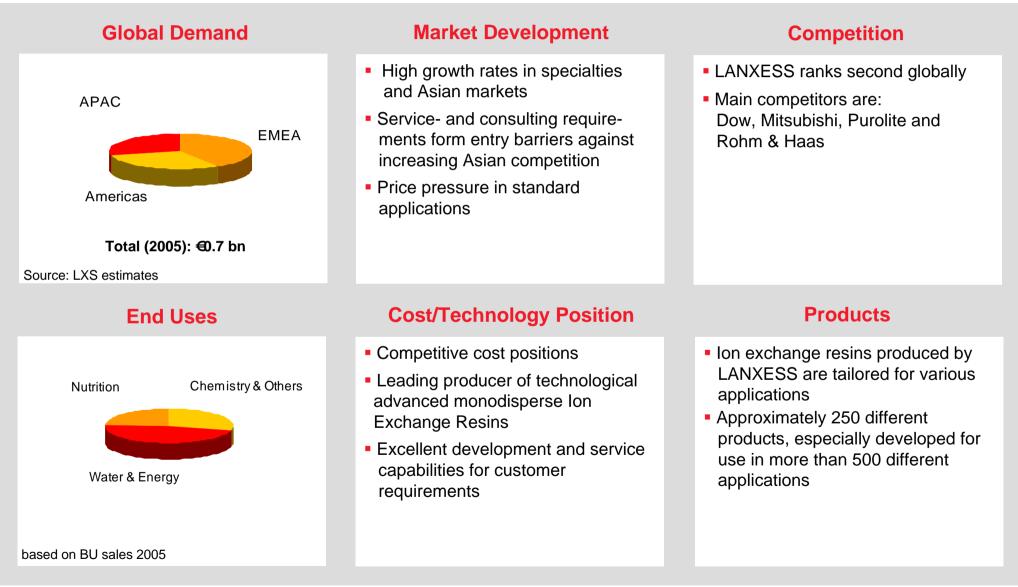
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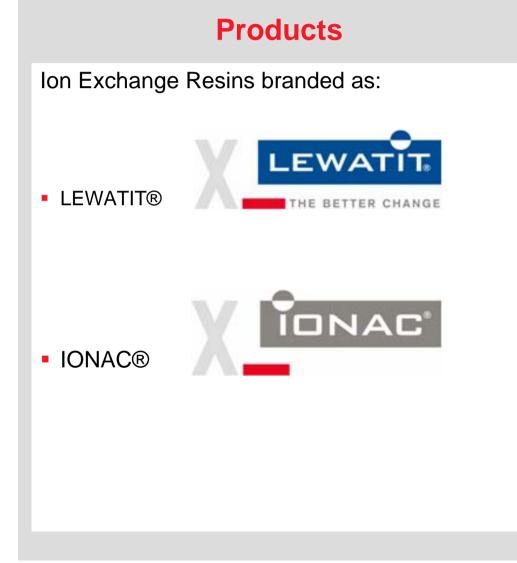
# ION Offers a Broad Product Range for Water Treatment and Various Other Applications





Performance Chemicals – Ion Exchange Resins

# Product Portfolio for Water, Foodstuff and Chemical Applications



### **Main Applications**

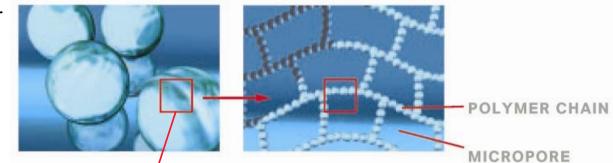
- Products supplied into the following industries & applications:
  - Water & energy
  - Microelectronics
  - Food & nutrition
  - Chemicals processing
  - Pharmaceuticals (e.g. biofermentation)
  - Ground- and wastewater
  - Mining



Performance Chemicals – Ion Exchange Resins

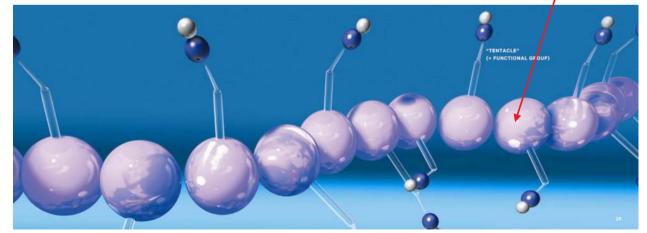
# ION - A Solution Provider, Manufacturing Custom Designed Products

 Ion exchange resins are functionalized polymer beads produced by combining styrene & DVB\*
 \* Divinylbenzene



- Structure like ball of wool (polymer chains)

- Fine network with many cavities (micropores)



- Polymer basis specifically manipulated so components can be captured/ exchanged from surrounding solutions
- Chemical Exchange:
  - Anion/Cation Exchange
  - Chelating Resins
- Physical Exchange:
  - Adsorbers



# Strong Technical and Process Expertise Underpins Reputation as a Premium Quality Supplier

### **Competitive Advantages**

- Global market presence and distribution network
- Service and quality ranked among the best in industry
- Unique portfolio of production technologies and corresponding structures are base for competitive advantage
- Leadership in monodisperse Ion Exchange technology
- Megatrends fueling future demand

- Price pressure in standard applications
- Substitution threat through reverse osmosis (R/O) in selected water treatment applications
- Continuous raw material price increases

