# Evonik. Power to create.

# Morgan Stanley Investor Visit

Dr. Ulrich Küsthardt, Chief Innovation Officer Dr. Hans Henning Wenk, Head of R&D Biobased Materials Tim Lange, Head of Investor Relations



29 June, 2016

# Agenda



|               | Morgan Stanley Cannonball Run  |  |
|---------------|--|--|
| 9.00 – 9.15   | Arrival and registration   |  |
| 9.15 – 9.45   | R&D @ Evonik: How we strengthen our innovative power<br>Q&A session  | Dr. Ulrich Küsthardt<br>Chief Innovation Officer               |
| 9.45 – 10.10  | <b>Biosurfactants: How nature inspires us to make cleaning and care more sustainable</b><br><i>Q&amp;A session</i> | <b>Dr. Hans Henning Wenk</b><br>Head of R&D Biobased Materials |
| 10.10 – 10.45 | Acquisition of APD PM: Creating a global leader in Specialty & Coating Additives<br><i>Q&amp;A session</i>         | <b>Tim Lange</b><br>Head of Investor Relations                 |

# How we strengthen our innovative power

Dr. Ulrich Küsthardt, Chief Innovation Officer 21. Juni 2016, Essen



## We make our innovation power measurable



### **Innovation KPIs:**

What do we invest, what are the returns (KPIs)

# **Innovation excellence:**

How do we achieve it (processes, best practices)

# **Innovation reputation:**

How are we perceived (opinion survey)



# **Innovation KPIs at a glance**

57%

patent-driven sales

3.2%

**R&D** rate



increase in value of innovation pipeline

€434 m

**R&D** expenditure

2,700

10%

sales from new products and applications<sup>1</sup>

1) Younger than 5 years

# **Innovation KPIs:**

Our goals



## **Innovation excellence:** Our roadmap



#### **Innovation excellence Examples of activities** Definition of innovation goals Definition of Evonik growth fields Definition of strategic target portfolio Strategy . Strategic research (Creavis) Project houses Innovation and Entrepreneurship Award Organization Culture initiatives for error and learning culture and culture Corporate Foresight Ideation Jams I2P Process Processes Active portfolio management IP management

Source: A.T. Kearney

## **Innovation excellence:** Evonik growth field example





Additional contribution to sales of more than €1 billion by 2025

# The Evonik Growth Fields serve highly attractive markets combined with our core competencies



| Sustainable<br>Nutrition        | <ul> <li>Main trends and drivers:</li> <li>Resource consumption/ emissions</li> <li>Food chain safety and quality</li> <li>Animal wellbeing</li> </ul>   | Cosmetic<br>Solutions | <ul> <li>Main trends and drivers:</li> <li>Smart delivery systems</li> <li>Natural extracts</li> <li>Sustainability</li> </ul>  |
|---------------------------------|--|-----------------------|---|
| Healthcare<br>Solutions         | <ul> <li>Main trends and drivers:</li> <li>Drug delivery for biopharmaceuticals</li> <li>Personalized therapies and improved patient compliance</li> <li>Drug eluting medical devices</li> </ul> | Membranes             | <ul> <li>Main trends and drivers:</li> <li>Energy-efficient gas and liquid separation</li> <li>Compact and cost efficient membrane systems</li> </ul>   |
| Advanced<br>Food<br>Ingredients | <ul> <li>Main trends and drivers:</li> <li>Delivery systems for food ingredients</li> <li>Modern life style</li> </ul>   | Smart<br>Materials    | <ul> <li>Main trends and drivers:</li> <li>Functional materials for the digital world (special polymers, system solutions)</li> <li>Thermal insulation systems</li> <li>Resource efficient solutions</li> </ul> |

## Innovation excellence: Project house example

#### The setting

- Wide-ranging expertise (internal/external)
- One location, one innovation topic
- 50:50 financing between segments and Creavis
- 3-year period

#### The aims

- Close collaboration with partners along the value chain
- Promote the internationalization of research and development
- Develop new competencies





# Medical devices – increasing therapeutic needs of aging population





#### Therapeutic needs:

- Product lifetime corresponds to required function
- Physiological properties
- Patient-specific solutions
- Avoiding further surger

#### Today: reparative medicine:

- Treatment of symptoms
- Permanent medical devices

#### Vision: regeneratice medicine:

- Replace, produce, or regenerate cells, tissues, and organs
- Restore normal bodily functions

## **Application: coronary heart disease**

Need

<sup>2</sup>roblem

Goals

- Over two million stents are used throughout the world each year for the treatment of coronary heart disease - most of these are made of metal
- Five percent of patients experience a thrombosis or restenosis within 5 years of receiving a metal stent
- Treating the patient again with another stent is not an option because the old metal stent is still in place
- Roughly 4 percent of biodegradable stents rupture when inserted
- Improved material flow properties without sacrificing mechanical stability
- System solution using different biodegradable polymers
   and specific additives





## **Evolution of stent technology**





## Innovation excellence: Patent quality example





••••• Evonik Peer group Arkema, BASF, Clariant, DSM, DuPont, Lanxess, Solvay

Source: PatentSight, April 15, 2016

# 

# Key strategic objectives

| Focus the innovation portfolio  | Strengthen the innovation culture  | Measure success                                  | Vision   |
|---|--|--|--|
| <ul> <li>Fewer but therefore<br/>larger projects</li> <li>Larger share of mid-<br/>to long-term projects</li> <li>Collaborations along<br/>the value chain</li> </ul> | <ul> <li>Ideation Jams</li> <li>Entrepreneurship competition</li> <li>Culture initiatives for the learning culture</li> <li>Open Innovation</li> </ul> | Increase the innovation pipeline by €0.5 billion | Evonik is one of<br>the most innovative<br>companies in the<br>world |





Dr. Hans Henning Wenk





# Surfactants – The chemistry behind cleanliness and hygiene

- · Oils and fats do not mix with water
- · Surfactants enable water and oil to mix:
  - "hydrophilic" head mixes with water
  - "hydrophobic" tail mixes with oil
- Surfactants enable grease stains to be removed using water









# Surfactants in personal care and cleaning products

#### The most important ingredient, for example, in

- shower gels
- liquid soaps
  - laundry detergents
- shampoos
- household cleaners

• dishwashing detergents

#### A world without surfactants:







# The next generation of surfactants – Example: mildness



#### The most familiar surfactant:



- Not very mild to skin (pH)
- Low performance
- Sensitive to water hardness

Performance and mildness are still a compromise



#### Performance

# The next generation of surfactants – Example: foam

- Foam is a signal for cleansing and care for the consumer
- Completely bio-based surfactants so far have insufficient foam properties
- Achieving stable foam with hard water has proved especially difficult



# The next generation of surfactants – Raw materials





#### **Future challenges**

- Increase flexibility of the raw material base
- 100% Renewable Carbon Index (RCI)

## Biosurfactants – Natural surfactants from microorganisms



 Many microorganisms produce surfactants Natural purpose e.g. solubilization of oils as nutrients • Principle already used to clean oil-contaminated beaches Plant-based Sugars 80 raw materials (e.g. starch) **Biosurfactants Cleanliness and care – Inspired by nature** 

# Surfactants from renewable raw materials



#### The carbon cycle



## Industrial production of biosurfactants





# **Challenges for industrial manufacture**





# A classic chicken and egg problem calls for the courage to innovate





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# A strong innovation network





# **Biosurfactants – Sustainable growth** through innovation

- Differentiated performance + environmental and skin compatibility
- Successful development based on core competences
   in surfactant technology and industrial bioprocesses
- Focus on attractive markets in personal and home care
- The first product has already been introduced successfully
- Expansion of leading position through continued projects









# Creating a global leader in Specialty & Coating Additives

Acquisition of Air Products Performance Materials

Tim Lange



# APD Performance Materials<sup>1</sup> provides an excellent fit with Evonik



| Leadership<br>position               | <ul> <li>Creating a global leader in Specialty &amp; Coating Additives</li> <li>Leading market positions in performance-critical additives</li> </ul>   |
|--------------------------------------|---|
| Specialty product portfolio          | <ul> <li>Strengthening of growth segments Nutrition &amp; Care and Resource Efficiency</li> <li>Excellent fit of all acquired businesses with Evonik's growth segments</li> </ul>                     |
| Customer and innovation focus        | <ul> <li>Combining complementary chemistry, manufacturing processes and formulation know-how</li> <li>Customer- and solution-oriented businesses with complementary innovation pipeline</li> </ul>    |
| Truly<br>global footprint            | <ul><li>Expanding global footprint</li><li>Strengthening presence in North America and Asia</li></ul>   |
| Enhanced<br>financial<br>performance | <ul> <li>High margin and resilient business with low capital intensity and strong cash generation</li> <li>High synergy potential due to exceptional business and regional complementarity</li> </ul> |

<sup>1</sup> APD Performance Materials is the Specialty & Coating Additives business of Air Products' Materials Technologies Segment



### **Transaction overview**

| Structure            | <ul> <li>100% acquisition of the Specialty &amp; Coating Additives business of Air Products for cash</li> <li>Cash and debt free</li> <li>Acquisition is structured as a mix of assets and shares</li> </ul>   |
|----------------------|--|
| Financial<br>impact  | <ul> <li>Sustainable synergy level of ~\$80 m p.a.</li> <li>Asset step-up and accordingly higher D&amp;A leading to ~\$520 m NPV of tax benefits</li> <li>EPS accretive in the first full year</li> </ul>  |
| Transaction<br>value | <ul> <li>Acquisition price of \$3.8 bn representing 9.9x Enterprise Value / 2016E<sup>1</sup> EBITDA multiple including tax benefits and sustainable synergies</li> <li>Excluding tax benefits and sustainable synergies: 15.2x EV / 2016<sup>1</sup> EBITDA multiple</li> </ul> |
| Financing            | <ul> <li>Financing secured with half cash and half committed credit facility</li> <li>Rating upgrade from Moody's and rating confirmation from Standard and Poor's</li> </ul>  |
| Timing               | <ul> <li>Approved by Air Products' Board of Directors and Evonik's Supervisory Board</li> <li>Aiming for closing by the end of 2016, subject to regulatory approvals</li> </ul>  |

### APD Performance Materials A leader in Specialty & Coating Additives



| <b>\$1,078 m</b><br>2015 Sales  | Global leader                             | Global leadership positions in all three divisions   | 2015 Sales<br>by division                          |
|---|---|--|--|
| <b>\$242 m /</b><br><b>22.4%</b><br>2015 EBITDA /<br>EBITDA margin      | Mission-<br>critical<br>products          | <ul><li>Performance-critical, highly specialised solutions</li><li>Represent only small portion of total end product costs</li></ul>   | Specialty Curing<br>Additives Agents<br>28%<br>40% |
| <b>15-20%<sup>1</sup></b><br>of sales from<br>new products              | Innovation &<br>customer<br>focus         | <ul> <li>Strong innovation power for unique technologies</li> <li>In-depth knowledge of customer-specific requirements</li> <li>Diverse customer base and end-market exposure</li> </ul> | Polyurethane Additives<br>32%                      |
| <b>11</b> Plants <sup>2</sup><br><b>8</b> R&D centers                   | Global<br>infrastructure                  | <ul> <li>Best-in-class production and supply network</li> <li>Strong presence in North America and Asia</li> <li>Global customer service and R&amp;D network</li> </ul>                  | Europe Americas<br>24% 50%                         |
| <b>1,100</b> Employees<br>~ <b>240</b> in R&D and<br>applied technology | Best in class<br>financial<br>performance | <ul><li>High and resilient margin profile</li><li>Low capital intensity and high cash generation</li></ul>   | Asia<br>26%  |

Note: APD Performance Materials' fiscal year 2015 is September year-end

<sup>1</sup> Sales from products introduced within the last 5 years historically in 15-20% range

<sup>2</sup> Includes Pasadena (Texas, USA) site currently under construction

# Combining complementary companies in the specialty additives market



| Evonik  | Target industries   | APD Performance Materials   |
|---|---|---|
| <ul> <li>PU foam stabilizers</li> </ul>   | High value additives<br>for PU foam                                 | <ul> <li>PU foam catalysts</li> </ul>   |
| <ul> <li>Isophorone-based crosslinkers</li> <li>Coating additives and adhesives resins</li> </ul> | Additives/Ingredients<br>for Coatings & Adhesives                   | <ul><li>Amine-based crosslinkers</li><li>Epoxy curing agents</li><li>Specialty wetting agents</li></ul> |
| <ul> <li>Specialty surfactants for care and<br/>industrial applications</li> </ul>                | Specialty surfactants<br>for Industrial &<br>Institutional Cleaning | <ul> <li>Amine-based specialty<br/>surfactants</li> </ul>   |
| ~€2.5 bn 2015   | 5 Sales in Specialty and Coating Additives                          | ~€1 bn¹   |

#### Creation of a global leader in Specialty and Coating Additives with ~€3.5 bn in sales

<sup>1</sup> APD Performance Materials' sales calendarised to December year-end and translated at EUR/USD FX rate of 1.11 as of average 2015 Page 35

### Global leading portfolio of PU foam additives



# APD Performance Materials offers unique products and access to new markets





#### Key value drivers

- Global leader for formulations enabling environmentally-friendly / waterborne coatings
- Access to complementary APD Performance Materials' wetting agent technology with
  - Market-leading position
  - New end markets (automotive)
  - Additional customers to create crossselling opportunities
- Expanded toolkit and solutions expertise
- Truly global set-up
  - Leveraging APD Performance Materials' position in North American coatings market

#### The unique APD Performance Materials product line complements Evonik's existing coating additives portfolio



### Strong fit in Evonik's Growth Segments



# Synergy potential and tax benefits leading to an attractive price





# Excellent strategic and operational fit leading to significant synergies





#### Total annual synergies of ~\$80 m<sup>1</sup>

<sup>1</sup> Based on current assumptions and market conditions; ramp-up period of 3-4 years with cumulative implementation costs of ~\$80 m Page 40

### Key takeaways



Creating a global leader in Specialty and Coating Additives

Strengthening of growth businesses Nutrition & Care and Resource Efficiency

Excellent fit with Evonik's existing businesses

Substantial synergy potential and tax benefits

Fully aligned with M&A strategy

Enhanced rating profile after announcement



#### **Financing secured**





Financing secured with half cash and half committed credit facility consisting of bridge and term loans provided by bank consortium

Final financing structure to consist of mix of cash, term loans and bonds

Moody's rating upgraded from Baa2 (positive outlook) to Baa1 (stable outlook) Standard and Poor's rating confirmed at BBB+, outlook stable

# Exemplary purchase price allocation in asset deals





<sup>1</sup> In countries where applicable

### **Financial overview APD Performance Materials**





Note: APD Performance Materials' 2015 financials are September year-end

<sup>1</sup> Adjusted EBITDA before restructuring charges and corporate allocations, includes equity affiliates income

# Resilient and attractive margin profile with strong cash generation





- Growing demand of specialty
- Earnings driven by innovation and unique technologies
- High and stable margins



Note: APD Performance Materials' 2015 financials are September year-end

<sup>1</sup> Adjusted EBITDA before restructuring charges and corporate allocations, includes equity affiliates income

<sup>2</sup> Depreciation & amortization

# Additives with small quantity, but decisive impact in PU foam formulation





### **Evonik Investor Relations team**





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