

# Agenda

Trends in the chemicals market

Chemicals segment within BASF

Chemicals: At the core of the Verbund

**Chemicals support growth of BASF**

Capital expenditures drive profit growth

Shale Gas – An opportunity

Chemicals 2020



# Chemicals supplies key raw materials to Performance Products

## Performance Products

### Care Chemicals

- Acrylic acid
- Ethylene oxide
- Propylene oxide
- Vinylpyrrolidone
- Specialty Amines

### Nutrition & Health

- Isobutene
- Diethylketone
- Formic acid
- Propionic acid

**~40%** of  
raw material  
demand  
covered by  
Chemicals

### Performance Chemicals

- Isobutene
- Mono ethylene glycol
- Acrylates
- Amines
- Kerocom PIBA

### Paper Chemicals

- Acrylates
- Acrylic acid
- Butadiene
- Sodium hydroxide

### Dispersions & Pigments

- Acrylic acid
- Acrylates
- Butadiene
- Hydrochloric acid

# Chemicals supplies key raw materials to Functional Materials & Solutions

## Functional Materials & Solutions

### Performance Materials

- MDI & TDI
- Polyamides
- Mono ethylene glycol
- PBT
- PolyTHF®
- Propylene oxide

### Construction Chemicals

- Acrylic acid
- Acrylates
- Plasticizers
- Vinylethers
- TDI

### Coatings

- Acrylates
- Plasticizers
- MDI
- Hexanediol

### Catalysts

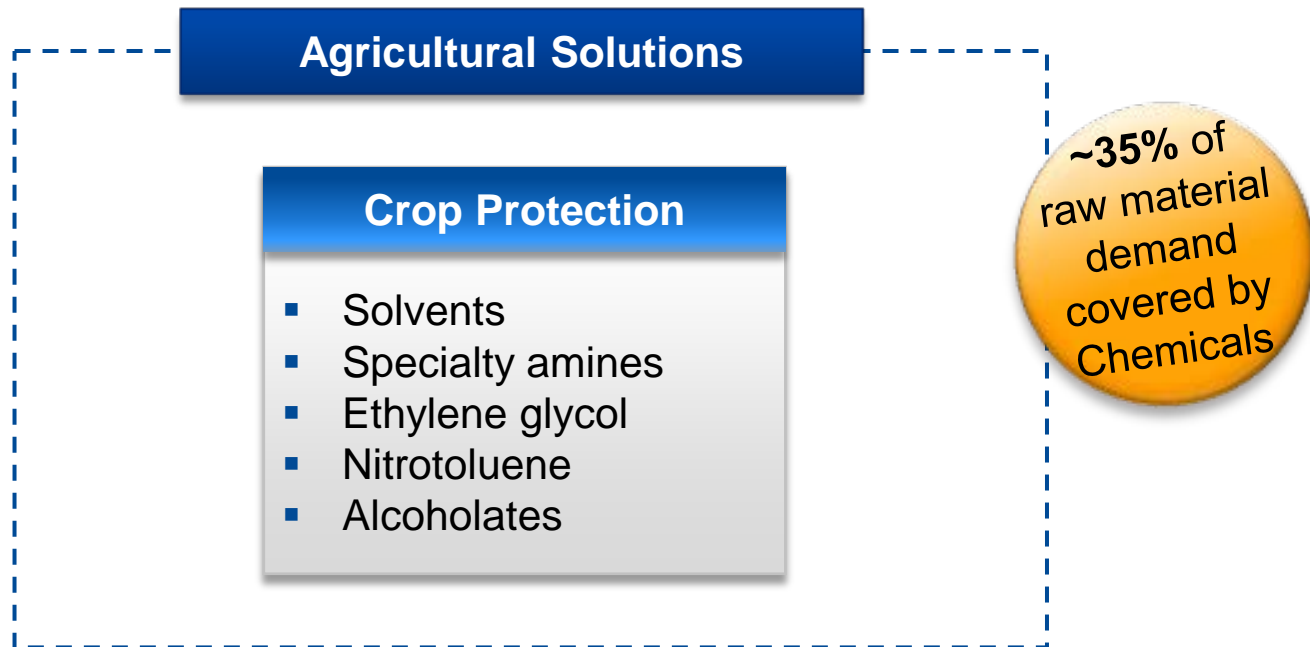
- Solvents
- Zeolite templates

~30% of  
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### Chemicals Segment

- Process catalysts

# Chemicals supplies key raw materials to BASF Crop Protection



# Close to entire cracker output in Ludwigshafen is used within Verbund

## Cracker products Ludwigshafen

- Ethylene
- Propylene
- Butadiene
- Raffinates
- Aromatics
- ...

<5%

Merchant  
Market

>95%

Value chains  
of the  
BASF  
Verbund

BASF-YPC Nanjing  
supply for captive demand:

2006: 60%

2014: 75%

# High captive share of MDI for BASF's polyurethane systems



 **Captive demand**     **3<sup>rd</sup> Party sales**

## MDI sales to downstream businesses

- Polyurethane system houses
- Thermoplastic polyurethanes

## Global production network (capacity: 1,340 kt)

- Antwerp
- Geismar
- Caojing
- Yeosu (Korea)

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# High captive share of acrylic acid for BASF's SAP\* and dispersions



## Acrylic acid sales to downstream businesses

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- Dispersions
- Esters
- Resins
- Surfactants

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# Growing captive share of caprolactam for BASF's downstream polyamide polymers



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- Engineering plastics
- Polymers for packaging films
- Monofilaments

## Operational excellence in existing plants

(capacity: 800 kt)

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