

# RBC Capital Markets Global Industrials Conference

September 6, 2018

#### **General Disclosure**

This presentation includes "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. These forward-looking statements include statements concerning our plans, objectives, goals, strategies, future events, future revenue or performance, capital expenditures, financing needs, plans or intentions relating to acquisitions, business trends and other information that is not historical information. When used in this presentation, the words "estimates," "expects," "anticipates," "projects," "plans," "intends," "believes," "forecasts," or future or conditional verbs, such as "will," "should," "could" or "may," and variations of such words or similar expressions are intended to identify forward-looking statements. All forward-looking statements, including, without limitation, management's examination of historical operating trends and data, are based upon our current expectations and various assumptions. Our expectations, beliefs and projections are expressed in good faith, and we believe there is a reasonable basis for them. However, there can be no assurance that management's expectations, beliefs and projections will be achieved.

The forward-looking statements in this release are subject to uncertainty and changes in circumstances and involve risks and uncertainties that may affect the company's operations, markets, products, services, prices and other factors as discussed in the Huntsman companies' filings with the U.S. Securities and Exchange Commission. Significant risks and uncertainties may relate to, but are not limited to, volatile global economic conditions, cyclical and volatile product markets, disruptions in production at manufacturing facilities, reorganization or restructuring of Huntsman's operations, including any delay of, or other negative developments affecting the ability to implement cost reductions and manufacturing optimization improvements in Huntsman businesses and realize anticipated cost savings, and other financial, economic, competitive, environmental, political, legal, regulatory and technological factors. Any forward-looking statement should be considered in light of the risks set forth under the caption "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2017.

All forward-looking statements attributable to us or persons acting on our behalf apply only as of the date made. We undertake no obligation to update or revise forward-looking statements which may be made to reflect events or circumstances that arise after the date made or to reflect the occurrence of unanticipated events.

This presentation contains financial measures that are not in accordance with generally accepted accounting principles in the U.S. ("GAAP"), including EBITDA, adjusted EBITDA, adjusted EBITDA from discontinued operations, adjusted net income (loss), adjusted diluted income (loss) per share, free cash flow and net debt. Reconciliations of non-GAAP measures to GAAP are provided in the financial schedules attached to the earnings news release for the relevant period and available on the Company's website at http://ir.huntsman.com/

The Company does not provide reconciliations of forward-looking non-GAAP financial measures to the most comparable GAAP financial measures on a forward-looking basis because the Company is unable to provide a meaningful or accurate calculation or estimation of reconciling items and the information is not available without unreasonable effort. This is due to the inherent difficulty of forecasting the timing and amount of certain items, such as, but not limited to, (a) business acquisition and integration expenses, (b) merger costs, and (c) certain legal and other settlements and related costs. Each of such adjustments has not yet occurred, are out of the Company's control and/or cannot be reasonably predicted. For the same reasons, the Company is unable to address the probable significance of the unavailable information.



# Simple Strategy for Significant Value Creation Through 2020

#### **Downstream EBITDA Growth**

- Existing core business will grow at well above GDP
- EBITDA expected to grow at high single digits
- EBITDA margin expected to expand to high teens through downstream strategy

#### **Investment Grade Balance Sheet**

- Maintain Investment Grade profile and secure Investment Grade rating
- Monetize remaining Venator shares
- Generate >\$1.7 billion of free cash flow

#### **Capital Allocation**

- Maintain competitive dividend
- Invest up to \$2.2 billon in downstream growth through bolt-on acquisitions and additional growth capital
- Up to \$1.0 billion of share repurchases supported by Venator monetization and free cash flow

#### Value Creation

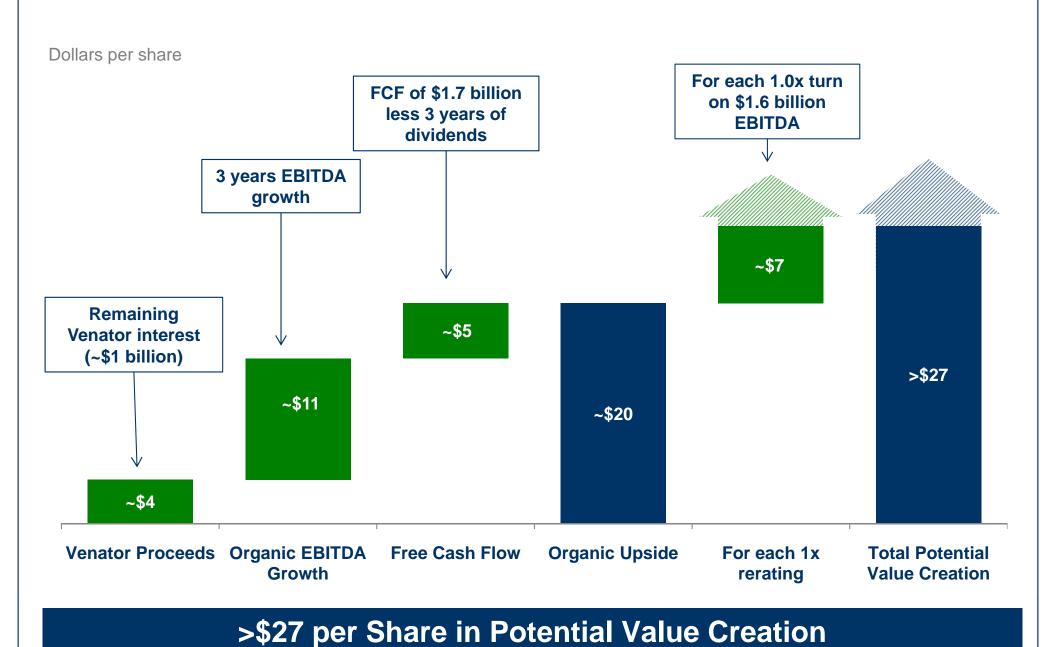
Potential value creation of >\$27/share





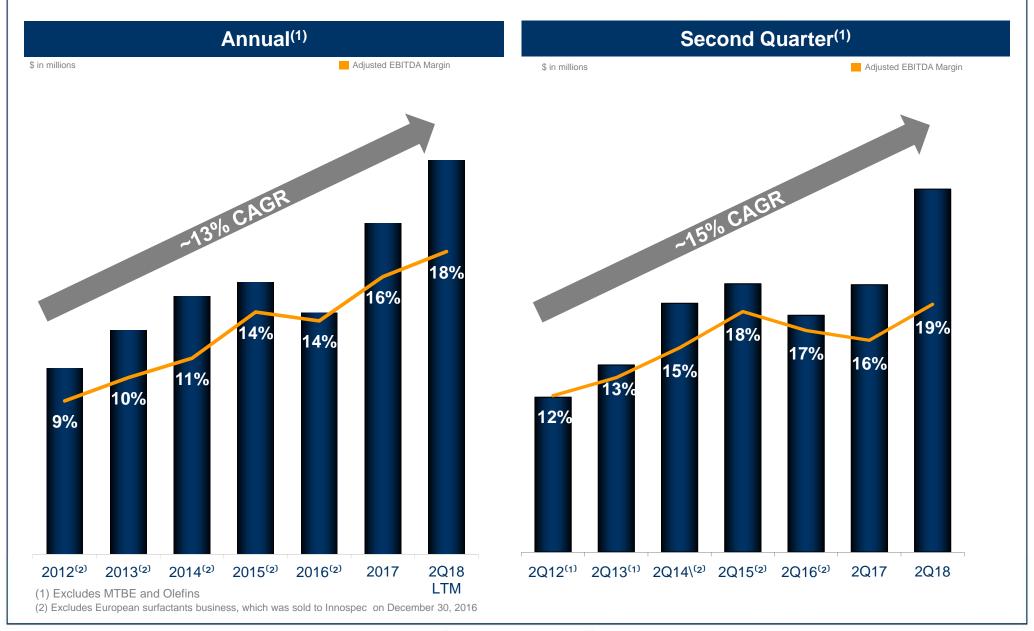


# **Significant Value Creation Upside**





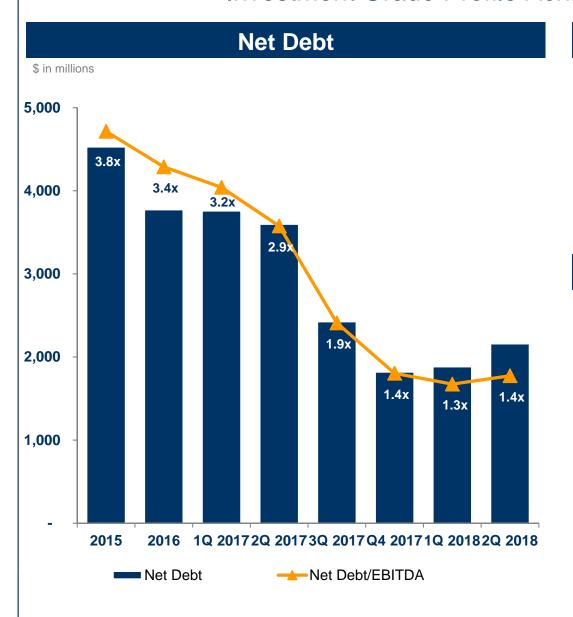
# Differentiated Adjusted EBITDA<sup>(1)</sup>





#### **Transformation of Huntsman Balance Sheet**

Investment Grade Profile Achieved and Sustainable



#### **New \$1.2B Investment Grade Revolver**

- Unsecured
- 5 year commitment
- Completed May 21<sup>st</sup>, 2018

#### Rating Agency Status – One Notch Below

# Moody's

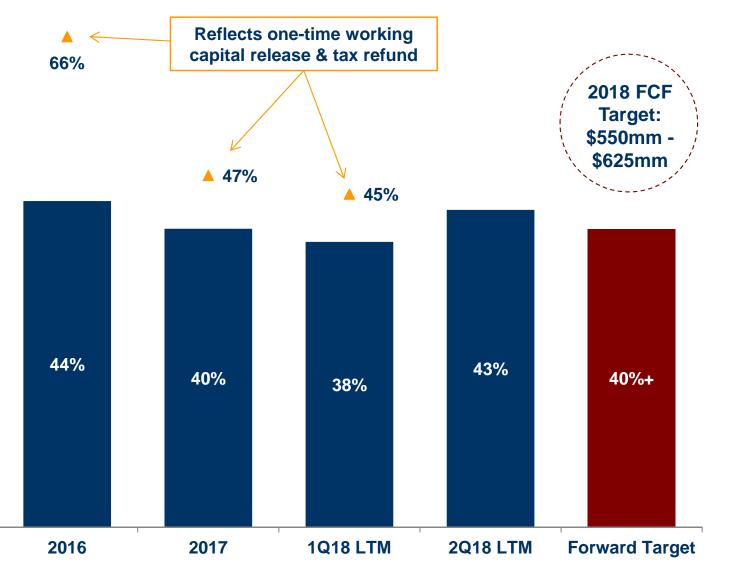
Corporate Rating Ba1
Outlook Positive



Corporate Rating BB+
Outlook Positive

# **Consistent Strong Free Cash Flow Generation**

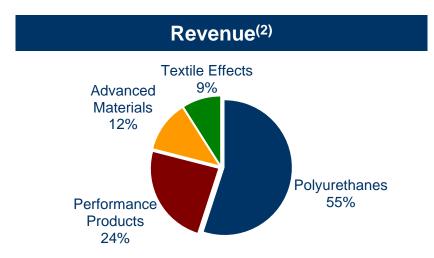
Over \$1.2 Billion in Free Cash Flow Generated in 2016 & 2017



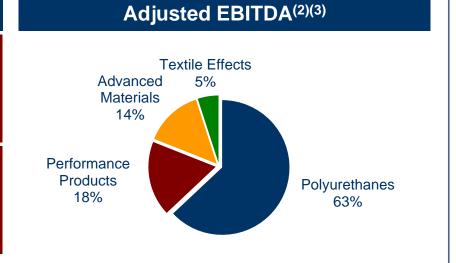


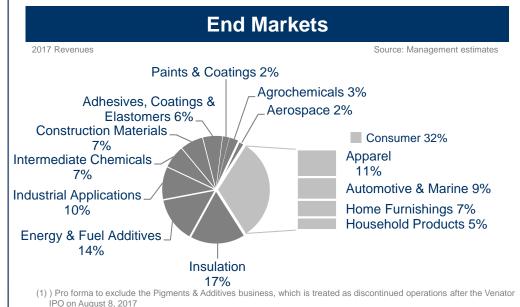
~40% Normalized FCF Conversion

# Portfolio Composition<sup>(1)</sup>











Adjusted EBITDA(3)

- (2) Segment allocation is before Corporate and other unallocated items
- (3) See Appendix for a reconciliation
- (4) Excludes European surfactants business, which was sold to Innospec on December 30, 2016



## **Polyurethanes**

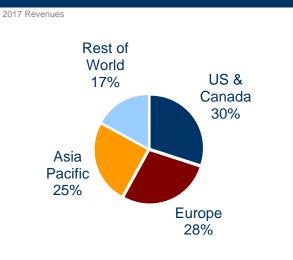
#### **MDI Urethanes End Markets** 2017 Revenues Source: Management Estimates Furniture 5% **Apparel** 2% **Appliances** Footwear 6% Insulation 39% Automotive 17% Intermediate Chemicals Adhesives. 1% Coatings & Composite Elastomers Industrial J Wood 13% **ApplicationsProducts** 3% 10% Consumer 34%

# 2Q18 LTM





#### Revenues









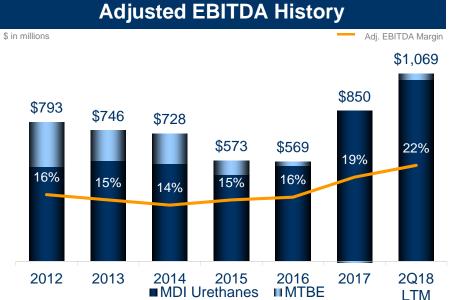


#### **MDI Competitive Intensity**





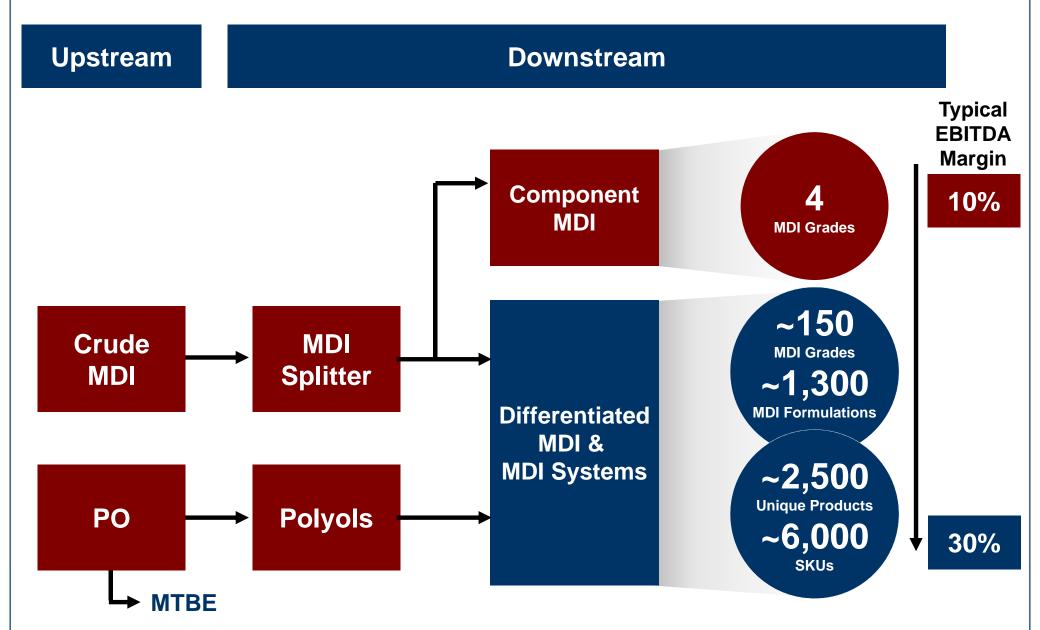
Source: Management Estimates





#### **MDI Urethanes Products**

Significant Opportunity to Differentiate

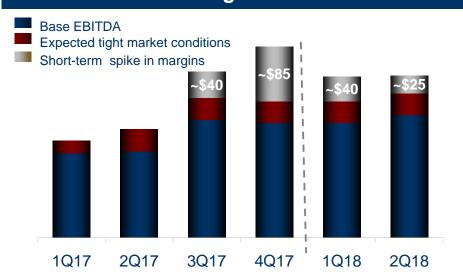


#### **MDI Market Outlook**

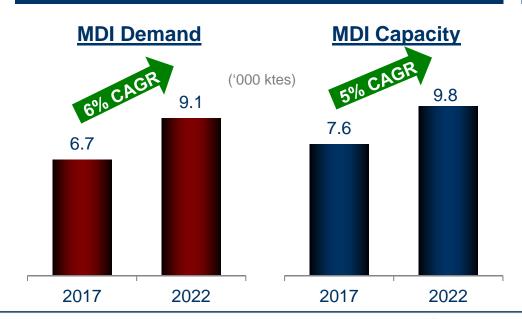
#### **Industry status**

- Current global effective operating rates are ~90%
- Differentiated margins and demand remain strong and stable globally
- Component MDI pricing:
  - China component MDI pricing stabilized in Q2 following decline in Q1
  - European component MDI pricing dropped ~10% in Q2
  - US spot prices came under some pressure in Q2 although region remains tight

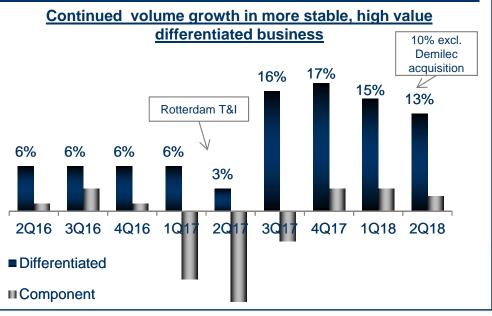
#### **Continued focus on growth in core business**



#### Longer-term market outlook remains tight



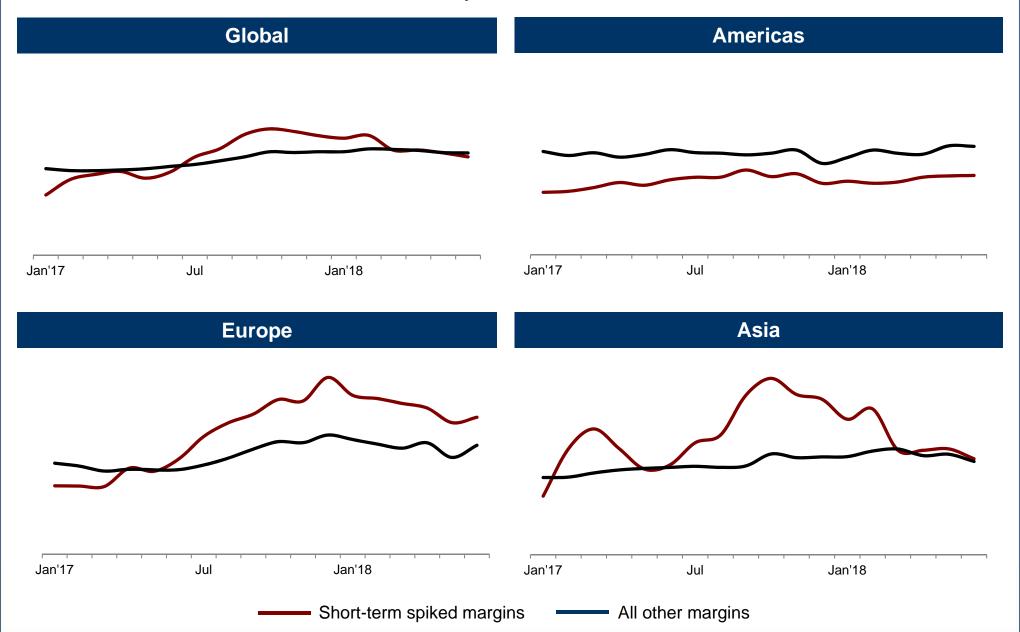
#### Focus on differentiated volume growth





# **Strategic Core Differentiated Business Remains Stable**

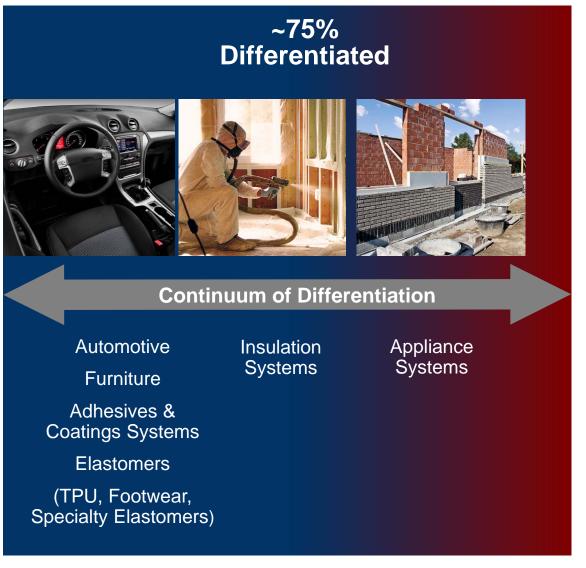
Polyurethanes





# **Huntsman Portfolio Composition**

Differentiation is a Continuum



~25% Component **Continuum of Differentiation** Adhesive Synthetic Insulation Leather Components Components Composite **Appliance** Wood Products Components

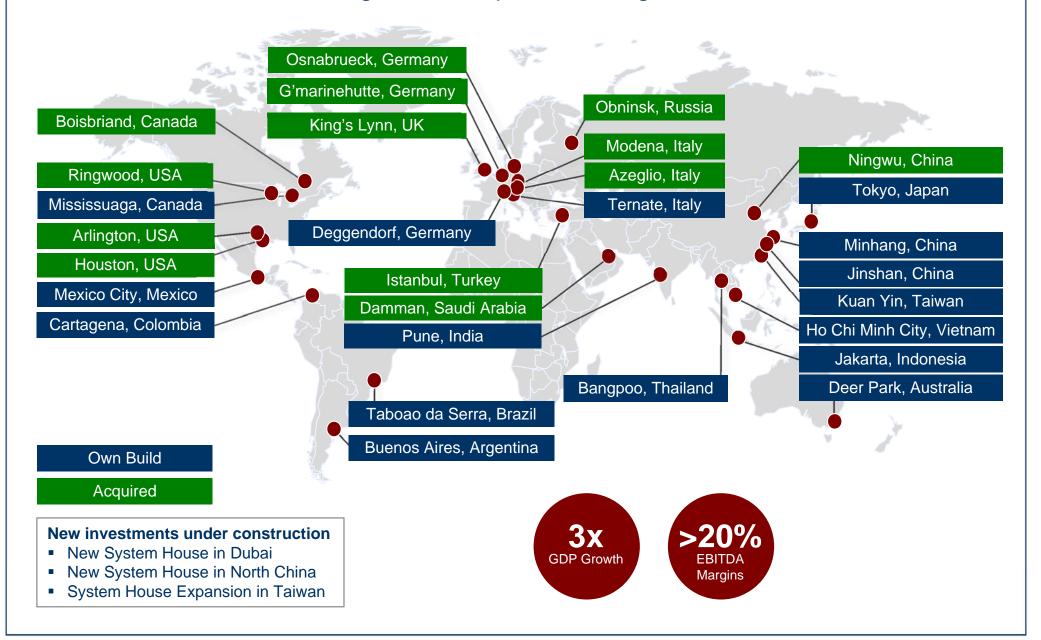
**Typical EBITDA Margin Range** 

15% to 30%

**EBITDA Margin Range** 10% to 20%

# **Downstream Footprint**

Significant Expansion Program







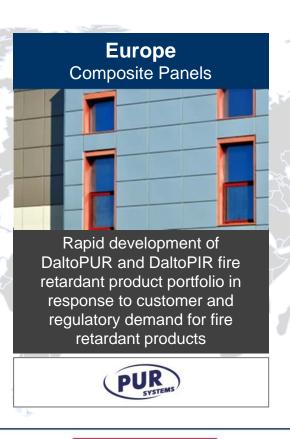
# **Growth in Insulation with Energy Saving Formulated Systems**

#### **MDI** Insulation

- MDI systems provide highest insulation value, air tightness and moisture barriers
- Largest MDI sector growing at 6%-7% per annum
- Sector requires equivalent of two new world scale MDI plants to meet demand in the next five years
- 40%-50% of all energy used to heat & cool buildings insulation is the most cost effective way of saving energy
- Huntsman focus on formulated insulation systems, back integrated into both MDI and TEROL polyester technology

#### **Huntsman Insulation Innovation**











#### **Global Elastomers Business**

Versatile High performance MDI / TPU systems

#### Global Elastomers ~2000 Ktes MDI Systems Market

Huntsman is a ~\$500 million global business
Highly fragmented customer base seeking custom solutions
Value pricing reflects need for formulation and innovation support

#### **Footwear**





- Accelerate growth to become the number 1 footwear PU company
- ~700 Huntsman SKUs
- >10% Growth (2017-2020)
- >20% EBITDA / revenue

#### **Specialty Elastomers**

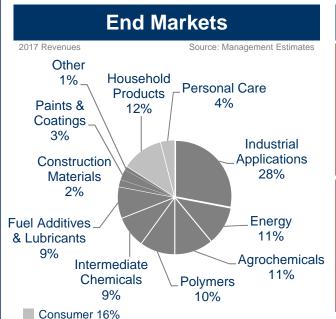


- With our customers deliver high quality sustainable solutions
- ~2,400 Huntsman SKUs
- 10% Growth (2017-2020)
- ~20% EBITDA / revenue

Leverage decades of global elastomer technology and innovation experience



#### **Performance Products**





million







# OILFIELD



#### **Huntsman Market Share**

Product	Market Share	Peers
Amines		
Polyetheramines (Global)	>60%	BASF
Ethyleneamines (Global)	45%	Dow, Tosoh, Delamine
Ethanolamines (Americas)	20%	Dow, Ineos, Oxiteno
Morpholine/DGA (Americas & EMEA)	50%	BASF
Specialty PU Catalysts (Global)	40%	BASF, Evonik, Momentive
Maleic Anhydride (Americas & EMEA)	40%	Lanxess, Flint Hills, Polynt, Bartek

#### Adjusted EBITDA History<sup>(1)</sup>

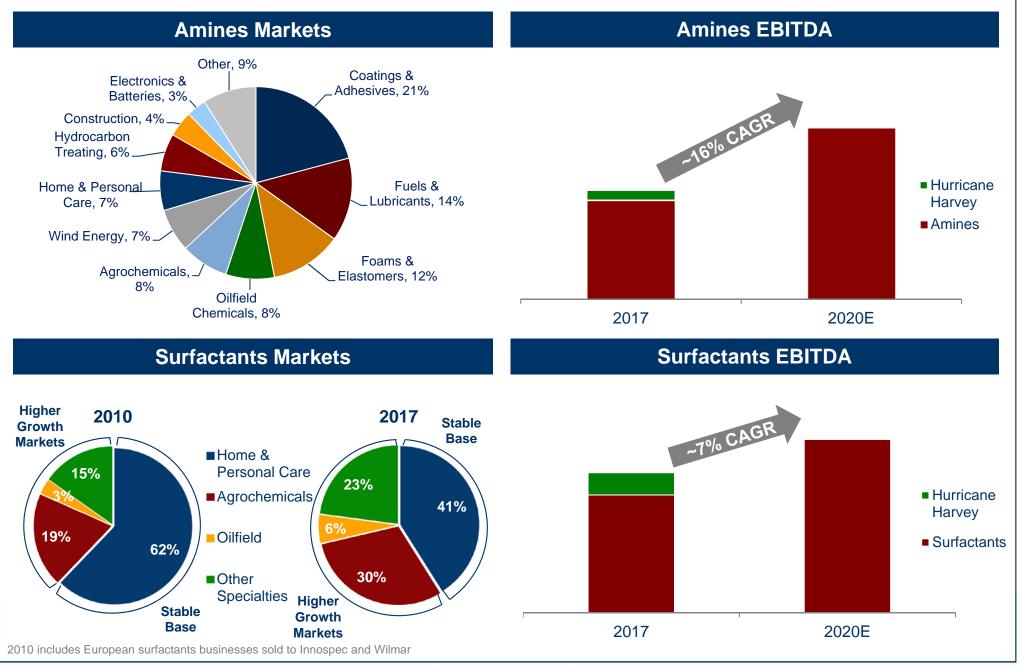


■ Differentiated ■ Upstream Intermediates ■ Harvey Impact

(1) Excludes European surfactants business, which was sold to Innospec in 2016



#### **Amines & Surfactants Poised for Growth**





#### **Performance Products Innovation**

#### **Delivering Functionality to Meet Market Needs**

- Marketing-led R&D with extensive customer collaboration
- 160 R&D professionals at seven centers across the globe
- 175 new uses across 20 markets launched annually

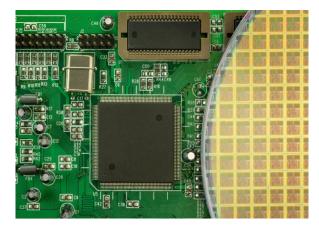
#### **Market-Specific Examples**

# Improving flow of crude oil



JEFF-FLOW™ oilfield flow assurance products help maintain flow of crude oil by preventing solids formation and plugging.

# Faster computing power



e-Grade® high-purity amines for use in semi-conductor manufacturing processes enable production of higher resolution chips.

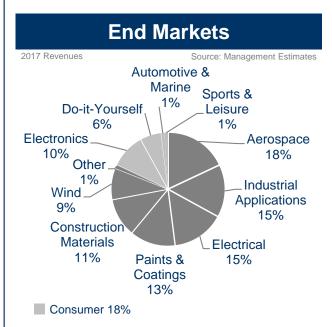
# Reducing emissions from fuels and industrial operations



JEFFTREAT® and DGA Agent® gas treating amines help refineries to more effectively capture sulfur from off gases to reduce atmospheric emissions.



#### **Advanced Materials**















#### **Competitive Landscape**

Primary Market	Select Competitors
Transportation & Industrial	Henkel, Sumitomo
Electrical & Electronic	Elantas, Xiongrun
Coatings & Construction Additives	Evonik, Allnex, BASF

#### **Adjusted EBITDA History**

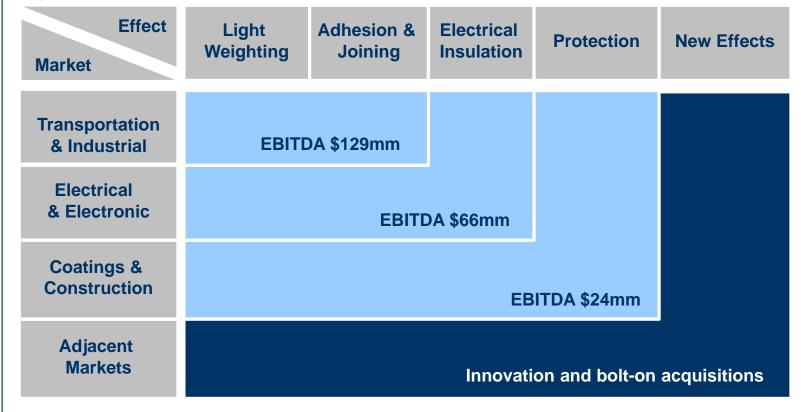




# **Platform for Specialty Growth**

Benefit by Leveraging Innovation and Acquisitions

2017 EBITDA











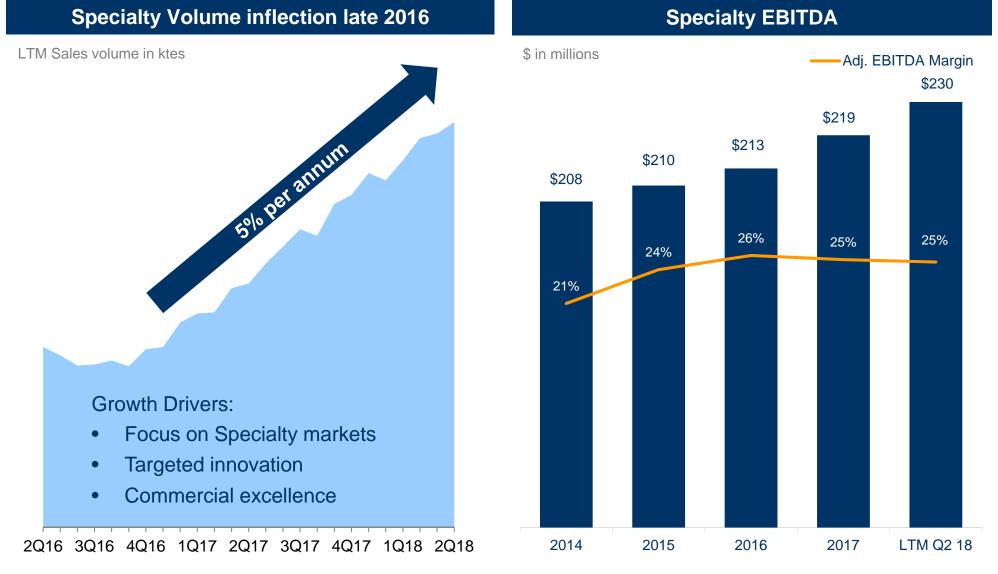




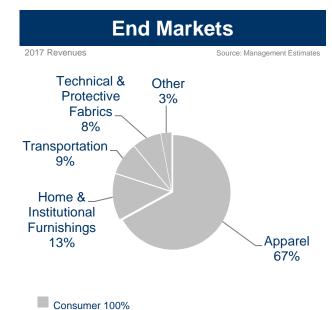
# **Specialty Business Growth**

Specialty Growth Drives EBITDA

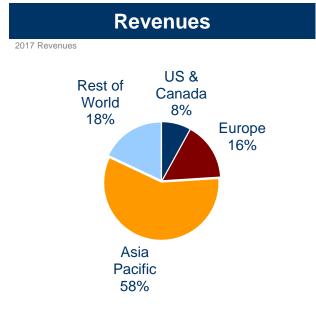




#### **Textile Effects**

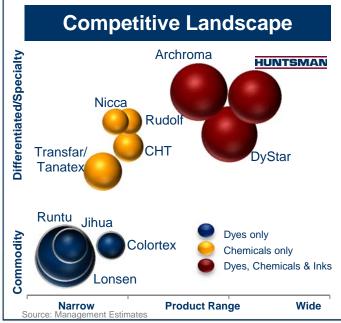


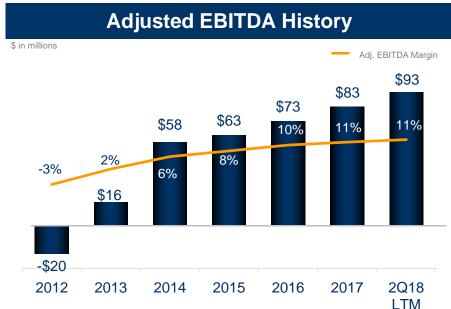


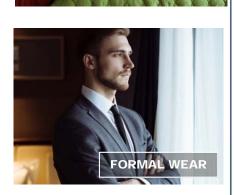












**HOME & FURNISHINGS** 



## **Delivering Sustainable Performance**

9 Straight Quarters of Volume Growth



Restructuring completed

Positioned for consistent profitable growth and cash generation





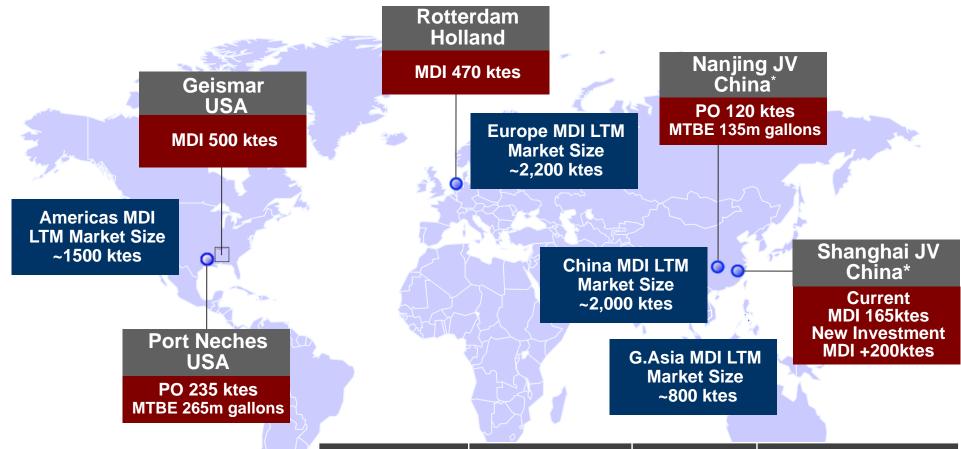
# **Attractive Downstream Portfolio with Strong Growth Metrics**

2020 Target Summary

		GDP Volume Growth	FCF conversion	EBITDA	EBITDA Margin
Polyurethanes	High growth through downstream substitution	2x MDI	>70%	>\$1 billion	~20%
Performance Products	Margin expansion and growth through downstream derivatization	1.5x Derivatives	~60%	>\$420 million	High Teens
Advanced Materials	Growth and consistent margins in specialty effects	2.0x Specialty	>75%	>\$270 million	>22%
Textile Effects	Consistent growth through sustainable solutions	2x	>50%	>\$110 million	Mid Teens
		Total HUN	~40%	>\$1.6 billion	High Teens

# **Upstream Footprint**

Partner Upstream And Stretch Existing Assets



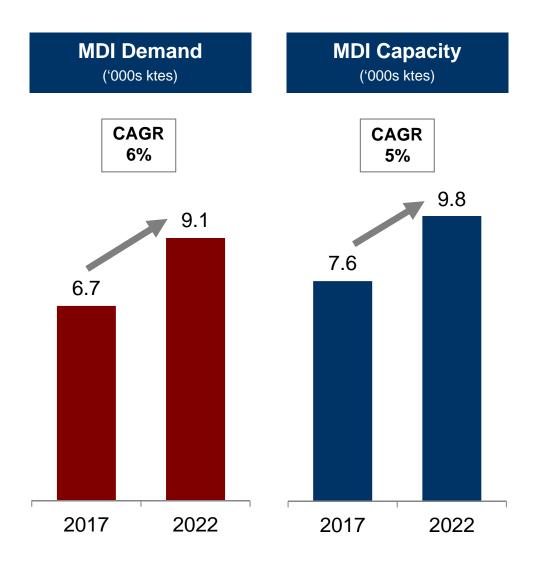
Capacity Additions	Туре	Amount	Comments
Rotterdam	MDI Debottleneck	+60ktes	Complete
Nanjing	PO Joint Venture	+120ktes	Complete/Ramp up
Caojing	MDI Expansion	+200ktes	Ramp up 2018-2020



<sup>\*</sup>Huntsman share of JV plant output Market Size, Source Nexant, Management

# **MDI Industry Capacity Utilization**

Over the Next 5 Years Demand Will Continue to Outstrip Supply Additions



New Investments 2018 - 2022											
Company	Country	ktes									
Wanhua	China	+800									
BASF	US	+300									
SLIC/HUN	China	+240 (HUN =200/240)									
Covestro	Germany	+200									
Covestro	China	+140									
K.Mitsui	Korea	+100									
Wanhua	Hungary	+60									
Covestro	Europe	+50									

Note: 2022 capacity bar charts to the left include BASF Chonqing and Sadara realization of full capacity.

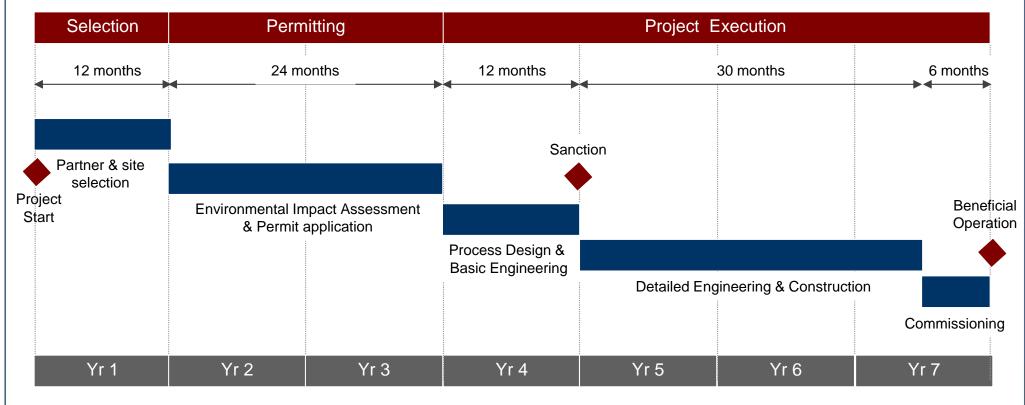
Note: \* Operating capacity Source: Management Estimates



#### **World Scale MDI Plant Timeline**

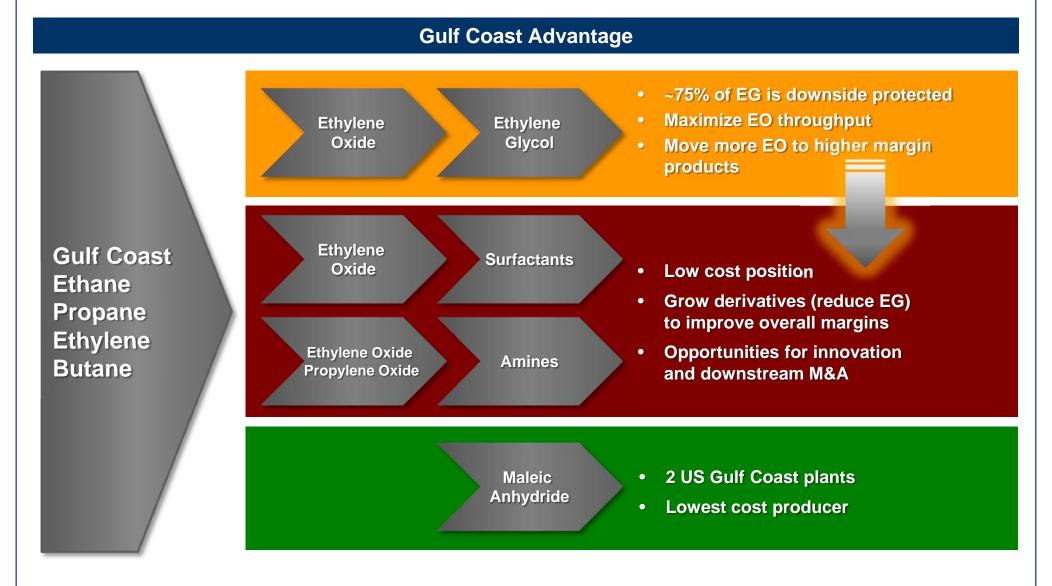
Approximately 7 Years from Project Start to Beneficial Operations

- Indicative timeline for planning, construction and commissioning of a greenfield world scale MDI plant
- Approximately 7 years from project start to plant beneficial operation
- World scale facility typically runs at <80% capacity in first year, takes 2-3 years to optimize production to 100% nameplate</li>





## **Performance Products Competitively Integrated Value Chain**



Two-thirds of global revenue from products produced in Gulf Coast Region



Adjusted EBITDA Reconciliation

(\$ in millions)	2	Q16	3	Q16		4Q16		1Q17	20	Q17	3	Q17	4	Q17	1Q18	2Q18
Net Income	\$	94	\$	64	\$	137	\$	92	\$	183	\$	179	\$	287	\$ 350	\$ 623
Net income attributable to noncontrolling interests		(7)		(9)		(9)		(16)		(16)		(32)		(41)	(76)	(209)
Net income (loss) attributable to Huntsman Corporation	\$	87	\$	55	\$	128	\$	76	\$	167	\$	147	\$	246	\$ 274	\$ 414
Interest expense, net	,	52	·	52	•	50	•	48	•	47	·	39	·	31	27	29
Income tax expense (benefit)		26		6		44		19		24		35		(14)	53	4
Depreciation and amortization		78		83		80		76		79		80		84	82	83
Interest, income taxes, depreciation and amortization in discontinued operations		35		23		14		33		50		34		37	29	95
Acquisition and integration expenses, purchase accounting adjustments		2		6		1		3		4		10		2	1	7
EBITDA from discontinued operations		(22)		(47)		(18)		(26)		(95)		(97)		(94)	(143)	(429)
Noncontrolling interest of discontinued operations U.S. tax reform impact on noncontrolling interest		3 -		3 -		3 -		- -		3		12 -		31 (6)	55 -	188
(Gain) loss on disposition of businesses/assets		-		-		(97)		-		(8)		-		(1)	-	-
Loss on early extinguishment of debt		2		1		-		-		1		35		18	-	3
Certain legal and other settlements and related expenses (income)  Plant incident remediation costs		-		-		1		-		1		13		(12) 3	7	1
Expenses associated with merger		-		-		-		-		6		12		10	-	1
Amortization of pension and postretirement actuarial losses		14		14		13		19		17		19		18	17	18
Restructuring, impairment, plant closing and transition costs (credits)		17		38		(9)		9		3		1		7	3	1
Adjusted EBITDA		294		234		210		260		299		340		360	405	415
Sale of European differentiated surfactants business <sup>(2)</sup>		(8)		(7)		(6)										
Proforma adjusted EBITDA	\$	286	\$	227	\$	204	\$	260	\$	299	\$	340	\$	360	\$ 405	\$ 415
	2	2012	2	2013	2	2014		2015	2	016	2	2017	2Q′	18 LTM		
Net Income	\$	373	\$	149	\$	345	\$	126	\$	357	\$	741	\$	1,439		
Net income attributable to noncontrolling interests	Ψ	(10)	Ψ	(21)	Ψ	(22)	Ψ	(33)	Ψ	(31)	Ψ	(105)	Ψ	(358)		
·	\$	363	\$	128	\$	323	\$	93	\$	326	\$	636	•	1,081		
Net income attributable to Huntsman Corporation	Ф	226	Ф	190	Ф	205	Ф	93 205	Φ	203	Ф	165	Ф	126		
Interest expense, net		104		109		205 59		60		109		64		78		
Income tax (benefit) expense		350		364		358		298		318		319		329		
Depreciation and amortization Interest, income taxes, depreciation and amortization in discontinued operations		330 144		98		336 77		296 85		89		154		329 195		
(Gain) loss on initial consolidation of subsidiaries		4		-		-		-		-		-		195		
Acquisition and integration expenses, purchase accounting adjustments		5		11		7		9		12		19		20		
EBITDA from discontinued operations		(350)		(78)		63		217		(81)		(312)		(763)		
Noncontrolling interest of discontinued operations		` -		` -		1		7		11		49		286		
U.S. tax reform impact on noncontrolling interest		-		-		-		-		-		(6)		(6)		
(Gain) loss on disposition of businesses/assets		-		-		(2)		1		(97)		(9)		(1)		
Loss on early extinguishment of debt		80		51		28		31		3		54		56		
Extraordinary (gain) loss on the acquisition of a business		(2)		-		-		-		-		-		-		
Certain legal and other settlements and related (income) expenses		2		4		-		1		1		(11)		(4)		
Plant incident remediation costs		-		-		-		-		-		16		16		
Purchase accounting inventory adjustments		-		1		2		-		-		-		-		
Expenses associated with merger		-		-		-		-		-		28		23		
Amortization of pension and postretirement actuarial losses		33		64		41		66		55		73		72		
Restructuring, impairment, plant closing and transition costs		105		160		102		87		48		20		12		
Adjusted EBITDA		1,064		1,102		1,264		1,160		997		1,259		1,520		
Acquisition of PU Systems house from Rockwood <sup>(1)</sup>		5		6		7		-		-		-		-		
Sale of European differentiated surfactants business <sup>(2)</sup>		(13)		(10)		(8)		(21)		(28)		-		-		
Proforma adjusted EBITDA	\$	1,056	\$	1,098	\$	1,263	\$	1,139	\$	969	\$	1,259	\$	1,520		

<sup>(1)</sup> Pro forma adjusted to include the Polyurethanes system house acquired from Rockwood in October 2014. (2) Pro forma adjusted for the sale of the European Surfactants business on December 30, 2016.



# Revenue, Adjusted EBITDA & Margin by Segment

Polyurehanes   S 976   S 891   S 964   S 903   S 1,022   S 1,197   S 1,227   S 1,222   S 1,313	revenue		ma(2)(3) (Q16	Pro For	ma(2)(3) Q16		ma(2)(3) Q16		oma(2) 1Q17		Foma(2) 2Q17		3Q17	- 2	4Q17		1Q18	20	218	
Copporate, LIFO and other   Sistem	Performance Products Advanced Materials	-	976 507 261		891 451 247		964 452 246		953 533 259		1,022 561 260	\$	1,197 501 263	7000	1,227 514 258	-	1,222 603 279		1,313 593 292	
Per Formac   Series			1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		-				0.70		100000000									
Polyurehanes   S	Total	S	1,909	\$	1,773	\$	1,841	\$	1,932	S	2,054	S	2,169	\$	2,203	\$	2,295	S	2,404	
Polyurethanes	Perente											Pro								
Performance Products												_								
Advanced Materials   1,325   1,267   1,248   1,103   1,000   1,040   1,002   1,004   1,002   1,004   1,002   1,004   1,002   1,004   1,002   1,004   1,002   1,004   1,002   1,004   1,002   1,004   1,002   1,004   1,002   1,004   1,002   1,004   1,002   1,004   1,002   1,004   1,002   1,004   1,002   1,004   1,002   1,004   1,002   1,004		3		3		3		3		3		3		3						
Corporate, LIFO and other roducts   Cabb																				
Total   S					100000000000000000000000000000000000000															
Pro Forma(2)   Pro Forma(2)(3)   Pro Forma(2)(3)   Pro Forma(2)(3)   Pro Forma(2)(3)   Pro Forma(2)   Pro For	Corporate, LIFO and other		(285)		(251)		(219)		(80)		(46)	_	34		(1)					
Adjusted EBITDA   1   1   1   1   1   1   1   1   1	Total	<u>\$</u>	9,281	\$	9,384	<u>\$</u>	9,673	\$	7,889	\$	7,277	\$	8,358	\$	9,071					
Polyurethanes	(\$ in millions)	Pro For	ma(2)(3)	Pro For	ma(2)(3)	Pro Fo	ma(2)(3)	Pro F	oma(2)	Pro	Forma(2)									
Performance Products   78	Adjusted EBITDA <sup>(1)</sup>	2	Q16	3	Q16	4	Q16		1Q17		2Q17		3Q17		4Q17		1Q18	20	218	
Advanced Materials 58 55 50 50 54 56 56 53 59 62 Textile Effects 24 17 14 21 24 19 19 26 29 Corporate, LIFO and other (45) (45) (52) (43) (50) (43) (50) (43) (53) (43) (39)  Total \$\$ 286 \$ 227 \$ 204 \$ 260 \$ 299 \$ 340 \$ 360 \$ 405 \$ 415 \$   Pro Forma(2)(3) Pro Forma(2) Pro Forma(2)  Adjusted EBITDA <sup>(1)</sup> 2012 2013 2014 2015 2016 2017 2018 LTM  Polyurethanes \$ 793 \$ 746 \$ 728 \$ 573 \$ 569 \$ 850 \$ 1,069 \$   Performance Products 366 393 465 439 288 296 306    Advanced Materials 98 131 199 220 223 219 230    Textile Effects (20) 16 58 63 73 83 93    Corporate, LIFO and other (1711) (188) (187) (156) (184) (189) (178)    Total \$\$ 1.056 \$ 1.088 \$ 1.263 \$ 1.139 \$ 9.69 \$ 1.259 \$ 1.520 \$    Adj. EBITDA Margin Polyurethanes 18% 15% 13% 15% 16% 200% 24% 21% 2018    Pro Forma(2) Pro Forma(2)(3) Pro Forma(2)(3) Pro Forma(2)(3) Pro Forma(2) Pro Forma(2) Pro Forma(2) Textile Effects 15% 14% 14% 14% 16% 16% 18% 13% 9% 17% 16% 20%    Performance Products 15% 14% 14% 16% 16% 16% 20% 20% 24% 21% 20% 21% 21% 16% 16% 16% 16% 16% 16% 16% 16% 16% 1	Polyurethanes	S	171	S	137	S	130	S	144	S	167	S	245	S	294	\$	261	\$	269	
Textile Effects	Performance Products		78		63		62		84		102		63		47		102		94	
Corporate, LIFO and other Total   Pro Forma(2)(3)   Pro Forma(2)	Advanced Materials		58		67,777		50		54		56				53		59			
Total   S   286   S   227   S   204   S   260   S   299   S   340   S   360   S   405   S   415	Textile Effects								21		24		19		19		26			
Adjusted EBITDA <sup>(1)</sup> 2012  2013  2014  2015  2016  2017  2018 LTM  Pro Forma(2)  2018 LTM  Pro Forma(2)  Pro Forma(2)  2018 LTM  2019 L																				
Adjusted EBITDA   1	Total	<u></u>	286	\$	227	<u>\$</u>	204	\$	260	\$	299	_\$	340	S	360	<u>s</u>	405	\$	415	
Polyurethanes   S		Pro For	ma(2)(3)	Pro For	ma(2)(3)	Pro Fo	ma(2)(3)	Pro F	oma(2)(3)	Pro	Forma(2)(3)	Pro	o Forma(2)	Pro	Forma(2)					
Performance Products   356   393   465   439   288   296   306   Advanced Materials   98   131   199   220   223   219   230   Textile Effects   (20)   16   58   63   73   83   93   Corporate, LIFO and other   (171)   (188)   (187)   (156)   (184)   (189)   (178)   (1																				
Performance Products   356   393   465   439   288   296   306   Advanced Materials   98   131   199   220   223   219   230   Textile Effects   (20)   16   58   63   73   83   93   Corporate, LIFO and other   (171)   (188)   (187)   (156)   (184)   (189)   (178)   (1	Adjusted EBITDA(1)	2	2012	2	013	2	2014		2015				2017	20	18 LTM					
Advanced Materials 98 131 199 220 223 219 230 Textile Effects (20) 16 58 63 73 83 93 Corporate, LIFO and other (171) (188) (187) (156) (184) (189) (178)  Total Pro Forma(2)(3) Pro Forma(2)(3) Pro Forma(2)(3) Pro Forma(2) 2Q17 3Q17 4Q17 1Q18 2Q18  Performance Products 15% 15% 13% 15% 16% 16% 20% 24% 21% 20% Performance Products 15% 14% 14% 16% 16% 18% 13% 9% 17% 16% Advanced Materials 22% 22% 20% 21% 21% 21% 21% 21% Textile Effects 12% 9% 8% 111% 13% 15% 16% 16% 10% 10% 13% 13% Total Pro Forma(2)(3) Pro Forma(2)(3) Pro Forma(2)(3) Pro Forma(2) Pro Forma(2) Pro Forma(2)  Pro Forma(2) Pro Forma(2)(3) Pro Forma(2)(3) Pro Forma(2) Pro Forma(2) Pro Forma(2)  Pro Forma(2) Pro Forma(2)(3) Pro Forma(2) Pro Forma(2) Pro Forma(2)										_	2016	s								
Corporate, LIFO and other (171) (188) (187) (156) (184) (189) (178	Polyurethanes		793		746		728		573	_	2016 569	\$	850		1,069					
Total S 1,056 S 1,098 S 1,263 S 1,139 S 969 S 1,259 S 1,520  Adj. EBITDA Margin Polyurethanes Performance Products Advanced Materials Polyurethanes Polyuret	Polyurethanes Performance Products		793 356		746 393		728 465		573 439	_	2016 569 288	s	850 296		1,069 306					
Adj. EBITDA Margin         Pro Forma(2)(3) 2Q16         Pro Forma(2)(3) 3Q16         Pro Forma(2)(3) 4Q16         Pro Forma(2) 1Q17         Pro Forma(2) 2Q17         3Q17         4Q17         1Q18         2Q18           Polyurethanes         18%         15%         13%         15%         16%         20%         24%         21%         20%           Performance Products         15%         14%         14%         16%         18%         13%         9%         17%         16%           Advanced Materials         22%         22%         20%         21%         22%         21%         21%         21%         21%         21%           Textile Effects         12%         9%         8%         11%         12%         10%         10%         13%         13%           Total         15%         13%         11%         13%         15%         16%         16%         18%         17%	Polyurethanes Performance Products Advanced Materials		793 356 98		746 393 131		728 465 199		573 439 220	_	2016 569 288 223	s	850 296 219		1,069 306 230					
Adj. EBITDA Margin         2Q16         3Q16         4Q16         1Q17         2Q17         3Q17         4Q17         1Q18         2Q18           Polyurethanes         18%         15%         13%         15%         16%         20%         24%         21%         20%           Performance Products         15%         14%         14%         16%         18%         13%         9%         17%         16%           Advanced Materials         22%         22%         20%         21%         22%         21%	Polyurethanes Performance Products Advanced Materials Textile Effects		793 356 98 (20)		746 393 131 16		728 465 199 58		573 439 220 63	_	2016 569 288 223 73	s	850 296 219 83		1,069 306 230 93					
Polyurethanes         18%         15%         13%         15%         16%         20%         24%         21%         20%           Performance Products         15%         14%         14%         16%         18%         13%         9%         17%         16%           Advanced Materials         22%         22%         20%         21%         22%         21%	Polyurethanes Performance Products Advanced Materials Textile Effects Corporate, LIFO and other	\$	793 356 98 (20) (171)	s	746 393 131 16 (188)		728 465 199 58 (187)		573 439 220 63 (156)	_	2016 569 288 223 73 (184)		850 296 219 83 (189)	s	1,069 306 230 93 (178)					
Performance Products         15%         14%         14%         16%         18%         13%         9%         17%         16%           Advanced Materials         22%         22%         20%         21%         22%         21% <td< td=""><td>Polyurethanes Performance Products Advanced Materials Textile Effects Corporate, LIFO and other</td><td>\$</td><td>793 356 98 (20) (171) 1,056</td><td>S</td><td>746 393 131 16 (188) 1,098</td><td>s</td><td>728 465 199 58 (187) 1.263</td><td>\$</td><td>573 439 220 63 (156) 1,139</td><td>\$</td><td>2016 569 288 223 73 (184) 969</td><td></td><td>850 296 219 83 (189)</td><td>s</td><td>1,069 306 230 93 (178)</td><td>£</td><td></td><td></td><td></td><td></td></td<>	Polyurethanes Performance Products Advanced Materials Textile Effects Corporate, LIFO and other	\$	793 356 98 (20) (171) 1,056	S	746 393 131 16 (188) 1,098	s	728 465 199 58 (187) 1.263	\$	573 439 220 63 (156) 1,139	\$	2016 569 288 223 73 (184) 969		850 296 219 83 (189)	s	1,069 306 230 93 (178)	£				
Advanced Materials         22%         22%         20%         21%         22%         21%         21%         21%           Textile Effects         12%         9%         8%         11%         12%         10%         10%         13%         13%           Total         15%         15%         11%         13%         15%         16%         16%         18%         17%   Pro Forma(2)(3) Pro Forma(2) Pro Forma(2) Pro Forma(2) Pro Forma(2)	Polyurethanes Performance Products Advanced Materials Textile Effects Corporate, LIFO and other Total	\$ S	793 356 98 (20) (171) 1,056	S S Pro For	746 393 131 16 (188) 1,098	S S	728 465 199 58 (187) 1.263	\$ S	573 439 220 63 (156) 1,139	\$ S	2016 569 288 223 73 (184) 969		850 296 219 83 (189) 1,259	\$	1,069 306 230 93 (178) 1,520		1018	20	218	
Textile Effects         12%         9%         8%         11%         12%         10%         10%         13%         13%           Total         15%         15%         15%         16%         16%         18%         17%	Polyurethanes Performance Products Advanced Materials Textile Effects Corporate, LIFO and other Total  Adj. EBITDA Margin	\$ S	793 356 98 (20) (171) 1,056	S S Pro For	746 393 131 16 (188) 1,098 ma(2)(3) Q16	S S	728 465 199 58 (187) 1,263 (ma(2)(3) Q16	\$ S	573 439 220 63 (156) 1,139	\$ S	2016 569 288 223 73 (184) 969 Forma(2) 2Q17		850 296 219 83 (189) 1,259	\$	1,069 306 230 93 (178) 1,520					
Total         15%         13%         11%         13%         15%         16%         16%         18%         17%           Pro Forma(2)(3)         Pro Forma(2)(3)         Pro Forma(2)(3)         Pro Forma(2)(3)         Pro Forma(2)(3)         Pro Forma(2)(3)         Pro Forma(2)         Pro	Polyurethanes Performance Products Advanced Materials Textile Effects Corporate, LIFO and other Total  Adj. EBITDA Margin Polyurethanes	\$ S	793 356 98 (20) (171) 1,056 ma(2)(3) (Q16 18% 15%	S S Pro For	746 393 131 16 (188) 1,098 ma(2)(3) Q16 15% 14%	S S	728 465 199 58 (187) 1.263 0ma(2)(3) Q16 13% 14%	\$ S	573 439 220 63 (156) 1,139 oma(2) 1Q17 15% 16%	\$ S	2016 569 288 223 73 (184) 969 Forma(2) 2Q17 16%		850 296 219 83 (189) 1.259 3Q17 20% 13%	\$	1,069 306 230 93 (178) 1,520 4Q17 24%		21%	20	20%	
Pro Forma(2)(3) Pro Forma(2)(3) Pro Forma(2)(3) Pro Forma(2)(3) Pro Forma(2) Pro Forma(2)	Polyurethanes Performance Products Advanced Materials Textile Effects Corporate, LIFO and other Total  Adj. EBITDA Margin Polyurethanes Performance Products Advanced Materials	\$ S	793 356 98 (20) (171) 1,056 ma(2)(3) (Q16 18% 15% 22%	S S Pro For	746 393 131 16 (188) 1,098 ma(2)(3) Q16 15% 14% 22%	S S	728 465 199 58 (187) 1.263 0ma(2)(3) Q16 13% 14% 20%	\$ S	573 439 220 63 (156) 1,139 coma(2) 1Q17 15% 16% 21%	\$ S	2016 569 288 223 73 (184) 969 Forma(2) 2017 16% 18% 22%		850 296 219 83 (189) 1.259 3Q17 20% 13% 21%	\$	1,069 306 230 93 (178) 1,520 4Q17 24% 9% 21%		21% 17% 21%	20	20% 16% 21%	
M. F	Polyurethanes Performance Products Advanced Materials Textile Effects Corporate, LIFO and other Total  Adj. EBITDA Margin Polyurethanes Performance Products Advanced Materials Textile Effects	\$ S	793 356 98 (20) (171) 1,056 ma(2)(3) (Q16 18% 15% 22% 12%	S S Pro For	746 393 131 16 (188) 1,098 ma(2)(3) Q16 15% 14% 22% 9%	S S	728 465 199 58 (187) 1.263 mma(2)(3) Q16 13% 14% 20% 8%	\$ S	573 439 220 63 (156) 1,139 0ma(2) 1Q17 15% 16% 21% 11%	\$ S	2016 569 288 223 73 (184) 969 Forma(2) 2017 16% 18% 22% 12%		850 296 219 83 (189) 1.259 3Q17 20% 13% 21% 10%	\$	1,069 306 230 93 (178) 1,520 4Q17 24% 9% 21% 10%		21% 17% 21% 13%	20	20% 16% 21% 13%	
Additional and the second seco	Polyurethanes Performance Products Advanced Materials Textile Effects Corporate, LIFO and other Total  Adj. EBITDA Margin Polyurethanes Performance Products Advanced Materials Textile Effects	\$ S	793 356 98 (20) (171) 1,056 ma(2)(3) (Q16 18% 15% 22% 12%	S S Pro For	746 393 131 16 (188) 1,098 ma(2)(3) Q16 15% 14% 22% 9%	S S	728 465 199 58 (187) 1.263 mma(2)(3) Q16 13% 14% 20% 8%	\$ S	573 439 220 63 (156) 1,139 0ma(2) 1Q17 15% 16% 21% 11%	\$ S	2016 569 288 223 73 (184) 969 Forma(2) 2017 16% 18% 22% 12%		850 296 219 83 (189) 1.259 3Q17 20% 13% 21% 10%	\$	1,069 306 230 93 (178) 1,520 4Q17 24% 9% 21% 10%		21% 17% 21% 13%		20% 16% 21% 13%	
Adj. Editor Haligiii 2012 2010 2014 2010 2010 2017 2010 21111	Polyurethanes Performance Products Advanced Materials Textile Effects Corporate, LIFO and other Total  Adj. EBITDA Margin Polyurethanes Performance Products Advanced Materials Textile Effects	S Pro Foi	793 356 98 (20) (171) 1,056 1,056 18% 15% 22% 12% 15%	\$ Pro Fori	746 393 131 16 (188) 1,098 ma(2)(3) Q16 15% 14% 22% 9% 13%	S Pro Fo	728 465 199 58 (187) 1,263 1,263 13% 14% 20% 8% 11%	\$ Pro F	573 439 220 63 (156) 1,139 0ma(2) 1Q17 15% 16% 21% 11% 13%	S S	2016 569 288 223 73 (184) 969 Forma(2) 2017 16% 18% 22% 12% 15%	\$	850 296 219 83 (189) 1,259 3Q17 20% 13% 21% 10% 16%	\$	1,069 306 230 93 (178) 1,520 4Q17 24% 9% 21% 10% 16%		21% 17% 21% 13%		20% 16% 21% 13% 17%	
Polyticularies 15% 15% 15% 15% 15% 15% 22% (2) Proforms adjusted to exclude the	Polyurethanes Performance Products Advanced Materials Textile Effects Corporate, LIFO and other Total  Adj. EBITDA Margin Polyurethanes Performance Products Advanced Materials Textile Effects Total  Adj. EBITDA Margin	S Pro Foi	793 356 98 (20) (171) 1.056 ma(2)(3) Q16 15% 12% 12% 15%	\$ Pro For	746 393 131 16 (188) 1,098 ma(2)(3) Q16 15% 14% 22% 9% 13%	\$ Pro Fo 4	728 465 199 58 (187) 1.263  ma(2)(3) Q16 13% 20% 8% 11%	\$ Pro F	573 439 220 63 (156) 1,139 0ma(2) 1Q17 15% 16% 21% 11% 13%	S S Pro	2016 569 288 223 73 (184) 969 Forma(2) 2017 16% 22% 15% 5orma(2)(3) 2016	\$	850 296 219 83 (189) 1,259 3Q17 20% 13% 21% 10% 16%	S S	1,069 306 230 93 (178) 1,520 4Q17 24% 9% 21% 10% 16% Forma(2) 18 LTM		21% 17% 21% 13%	(1) F	20% 16% 21% 13% 17%	nciliation see previous
Performance Products 14% 15% 17% 20% 15% 14% 14% Pigments & Additives business	Polyurethanes Performance Products Advanced Materials Textile Effects Corporate, LIFO and other Total  Adj. EBITDA Margin Polyurethanes Performance Products Advanced Materials Textile Effects Total  Adj. EBITDA Margin Polyurethanes	S Pro Foi	793 356 98 (20) (171) 1,056 ma(2)(3) (216 18% 15% 22% 15% 15%	\$ Pro For	746 393 131 16 (188) 1,098 ma(2)(3) Q16 15% 14% 22% 9% 13%	\$ Pro Fo 4	728 465 199 58 (187) 1,263 ima(2)(3) Q16 13% 20% 11% ima(2)(3) 2014 14%	\$ Pro F	573 439 220 63 (156) 1,139 0ma(2) 1Q17 15% 16% 21% 11% 13%	S S Pro	2016 569 288 223 73 (184) 969 Forma(2) 2017 16% 22% 12% 15% Forma(2)(3) 2016 16%	\$	850 296 219 83 (189) 1,259 3Q17 20% 13% 21% 10% 16%	S S	1,069 306 230 93 (178) 1,520 4Q17 24% 9% 21% 10% 16% Forma(2) 18 LTM 22%		21% 17% 21% 13%	(1) F page	20% 16% 21% 13% 17%	•
(Totale), Milet to trouted as	Polyurethanes Performance Products Advanced Materials Textile Effects Corporate, LIFO and other Total  Adj. EBITDA Margin Polyurethanes Performance Products Advanced Materials Textile Effects Total  Adj. EBITDA Margin Polyurethanes Performance Products	S Pro Foi	793 356 98 (20) (171) 1,056 ma(2)(3) (216 15% 22% 15% 15% ma(2)(3) (2012 16% 14%	\$ Pro For	746 393 131 16 (188) 1,098 ma(2)(3) Q16 15% 14% 22% 9% 13% ma(2)(3) 013 15% 15% 15%	\$ Pro Fo 4	728 465 199 58 (187) 1,263 2016 13% 14% 20% 8% 11% 0ma(2)(3) 2014 14% 17%	\$ Pro F	573 439 220 63 (156) 1,139 0ma(2) 1Q17 15% 16% 21% 11% 13% 0ma(2)(3) 2015 15% 20%	S S Pro	2016 569 288 223 73 (184) 969 Forma(2) 2017 16% 12% 12% 15% Forma(2)(3) 2016 16% 15%	\$	850 296 219 83 (189) 1.259 3Q17 20% 13% 21% 10% 16% 0 Forma(2) 2017 19% 14%	S S	1,069 306 230 93 (178) 1,520 4Q17 24% 9% 21% 10% 16% Forma(2) 18 LTM 22% 14%		21% 17% 21% 13%	(1) F page (2) P	20% 16% 21% 13% 17% For a record	adjusted to exclude the
Textile Effects -3% 2% 6% 8% 10% 11% 11% discontinued operations.	Polyurethanes Performance Products Advanced Materials Textile Effects Corporate, LIFO and other Total  Adj. EBITDA Margin Polyurethanes Performance Products Advanced Materials Textile Effects Total  Adj. EBITDA Margin Polyurethanes Performance Products Advanced Materials Total	S Pro Foi	793 356 98 (20) (171) 1,056  ma(2)(3) (216 18% 15% 22% 15% 15%  ma(2)(3) (012 16% 14% 7%	\$ Pro For	746 393 131 16 (188) 1,098 ma(2)(3) Q16 15% 14% 22% 9% 13% ma(2)(3) 013 15% 15% 1013	\$ Pro Fo 4	728 465 199 58 (187) 1,263 2016 13% 14% 20% 8% 11% 0ma(2)(3) 2014 14% 17% 16%	\$ Pro F	573 439 220 63 (156) 1,139  oma(2) 1017 15% 16% 21% 11% 13%  oma(2)(3) 2015 15% 20% 20%	S S Pro	2016 569 288 223 73 (184) 969 Forma(2) 2017 16% 12% 12% 15% Forma(2)(3) 2016 16% 15% 22%	\$	850 296 219 83 (189) 1.259 3Q17 20% 13% 21% 10% 16% 0 Forma(2) 2017 19% 14% 21%	S S	1,069 306 230 93 (178) 1,520 4Q17 24% 9% 21% 16% 16% Forma(2) 18 LTM 22% 14% 21%		21% 17% 21% 13%	(1) F page (2) P Pigm (Ven	20% 16% 21% 13% 17%  for a recore. Pro forma a nents & Adator), which	adjusted to exclude the ditives business ch is treated as
Total 11% 12% 13% 14% 13% 15% 15% (3) Pro forma adjusted for the sale of the European Surfactants business on December 30, 2016.	Polyurethanes Performance Products Advanced Materials Textile Effects Corporate, LIFO and other Total  Adj. EBITDA Margin Polyurethanes Performance Products Advanced Materials Textile Effects Total  Adj. EBITDA Margin Polyurethanes Performance Products Advanced Materials Textile Effects Total	S Pro Foi	793 356 98 (20) (171) 1,056  ma(2)(3) (216 18% 15% 22% 15% 15%  ma(2)(3) 2012 16% 14% 7% -3%	\$ Pro For	746 393 131 16 (188) 1,098  ma(2)(3) Q16 15% 14% 9% 13%  ma(2)(3) 013 15% 15% 10% 2%	\$ Pro Fo 4	728 465 199 58 (187) 1,263  ima(2)(3) Q16 13% 14% 20% 8% 11%  ima(2)(3) 2014 14% 17% 16% 6%	\$ Pro F	573 439 220 63 (156) 1,139 0ma(2) 1Q17 15% 16% 21% 11% 13% 0ma(2)(3) 2015 15% 20% 20% 8%	S S Pro	2016 569 288 223 73 (184) 969 Forma(2) 2017 16% 12% 15% 2016 16% 15% 22% 10%	\$	850 296 219 83 (189) 1.259 3Q17 20% 13% 21% 10% 16% 0 Forma(2) 2017 19% 14% 21% 11%	S S	1,069 306 230 93 (178) 1,520 4Q17 24% 9% 21% 16% 16% Forma(2) 18 LTM 22% 14% 21% 11%	_ 8	21% 17% 21% 13%	(1) F page (2) P Pigm (Ven disco	20% 16% 21% 13% 17%  for a record experies & Acator), which included continued continu	adjusted to exclude the dditives business ch is treated as operations.

