

# **Huntsman Advanced Materials**

**Overview Presentation** 



# **Huntsman Corporation Divisions**



#### **Differentiated**

#### Polyurethanes

MDI

Polyols

PO/MTBE

**TPU** 

**Systems** 

# Performance Products

Performance Specialties

Performance Intermediates

# Advanced Materials

**Base Resins** 

Formulated Systems

Specialty Components

## Inorganic

#### **Pigments**

Titanium Dioxide









**Textile Effects** 

Apparel & Home

**Specialty Textiles** 

Textiles



## **Focused Industries**

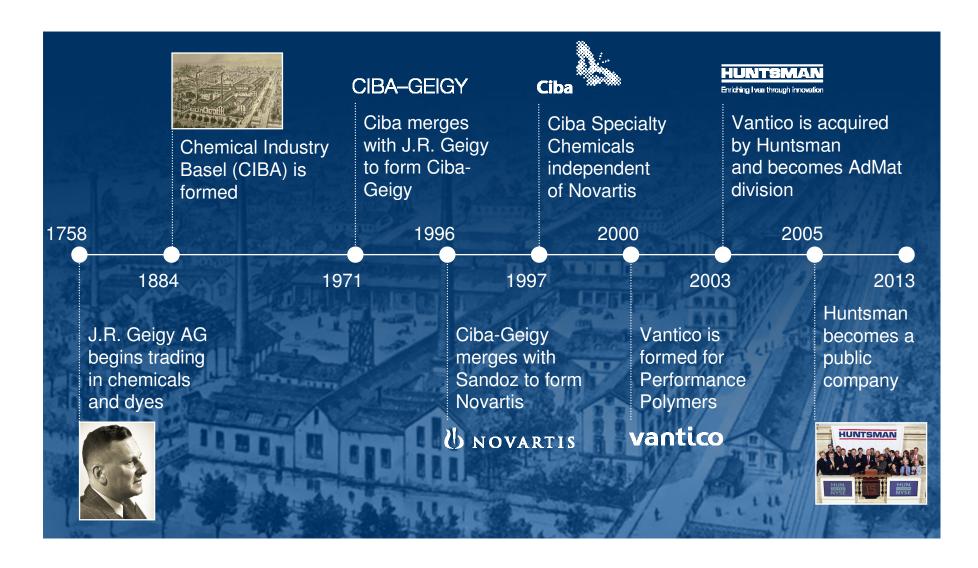


### Improving product performance through chemistry



# **Our History**





## **Our Innovation**



	<b>Epocast</b> •		<b>Uralane</b> <sup>®</sup>		<b>Arathane</b> •		<b>Eposert</b> °	
	Furane introduces Epocast® to the electronics market		Uralane® is introduced to the aerospace industry		Arathane® polyurethane adhesives are launched		Performed Eposert® syntactic inserts introduced to the market	
1946	195	5	198	35	198	38	200	0
195	4	197	9	198	7	199	3	2013
Araldite® i introduced the adhes market	d to	Furane int duces Epi to the adh market	bond®	RenShape tooling bo introduced market	ards are	AroCy® is introduced several m		Vantico rebrands its line of epoxy curing agents to Aradur®
Araldite	e	<b>Epibond</b>		RenShap	De°	AroCy <sup>®</sup>		Aradur <sup>®</sup>

## **Our Products**









Base Resins	Specialty Co	omponents	Formulations		
Liquid epoxy resins	Curing Agents	Multifunctionals	Adhesives	Encapsulation	
Solid epoxy resins	Matting agents	Crosslinkers	Tooling	Insulation	
Epoxy solutions	Reactive Diluents	BisF/EPN/ECN	Composites	Protection	
	Waterbornes	Reactive PAA	Laminates		

# **Our Technology**









### **Base Resins**

100% Epoxy chemistry

### **Specialty Components**

7% Polyimides, BMI, CE, Benzox

18% Amines, Anhydrides and others

75% High performance epoxy

### **Formulations**

6% Other Specialties

8% Polyurethanes formulations

9% Acrylics formulations

77% Epoxy formulations

### **End Markets**









**Base Resins** 

**Specialty Components** 

**Formulations** 

Coating

Construction

Wind

Industrial Composites

Aerospace

Electronics

Sports and Leisure

Power/Energy

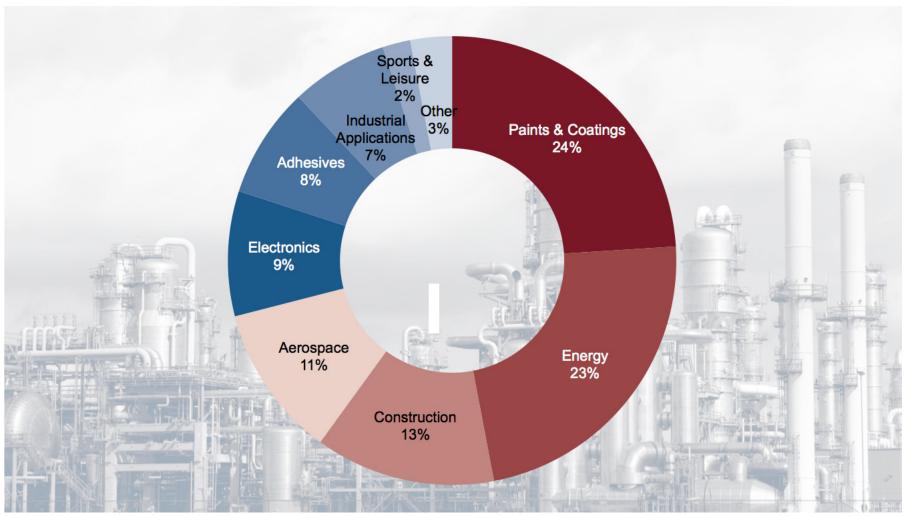
Automotive

Industrial Adhesives

ARALDITE-Do it yourself

## **Market Presence**





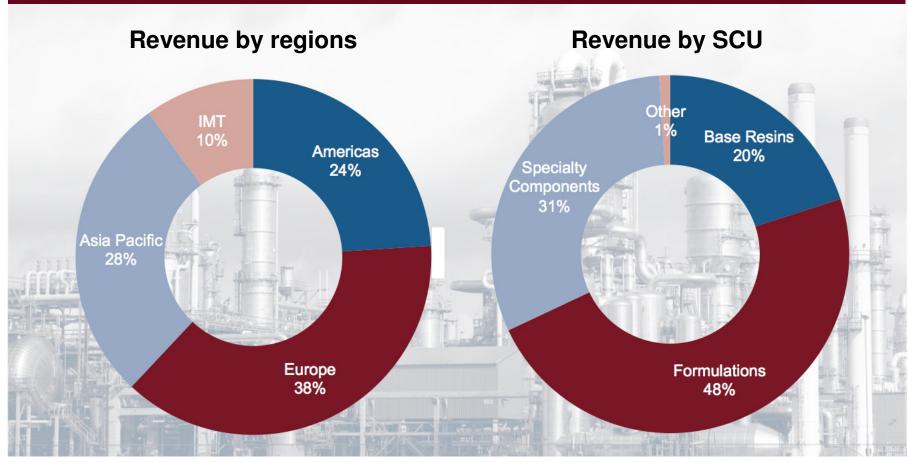
Size represents revenue percentage



## **The Numbers**



### Revenue 2012: **\$ 1.3 b** – Adjusted EBITDA 2012: **\$ 92 m**



Figures based on 2012



## **Global Presence**



More than 2,000 employees in 30 countries, serving over 2,000 customers with 1,500 products

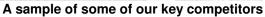




# **Major Industries Players**









### **Global Partners**



Aerospace









**Automotive** 





Electrical Engineering







Wind





Construction & Coatings









**Electronics** 







## **Aerospace**

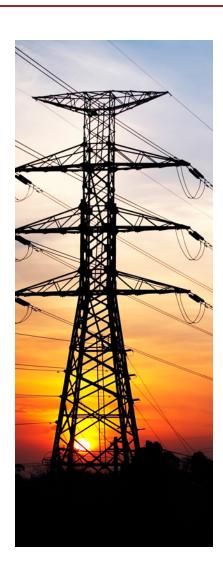




- Our products are extensively qualified to specifications of prepreggers and aircraft part manufacturers
- We supply specialty chemicals, adhesives and tooling systems to OEMs, formulators and part producers
- Our components make aircraft lighter, stronger and more energy efficient
- Qualified in next generation commercial aircrafts: Boeing 787, Airbus 350 & 380
- Composite usage in aircraft has increased from 10% to more than 50% in the last 10 years

# **Electrical Engineering**

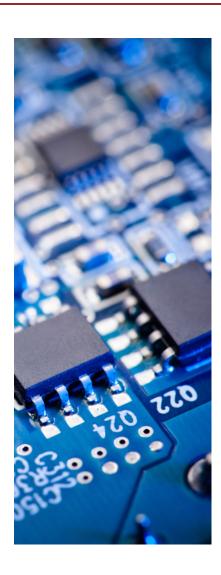




- Huntsman innovations are throughout the energy value chain, from power generation to transmission, distribution and storage—including solar and wind energy
- We accompany and support our global key accounts and OEMs in Electrical Engineering having headquarters in Europe and setting the global trends.
- Since six decades we develop innovative solutions in all kind of electrical applications, such as the Araldite HCEP, the hydrophobic, water repellant epoxy for outdoor insulators

## **Electronics**





- A trusted partner in the Electronics industry for protection, safety and sustainability issues
- Huntsman has developed innovative solutions that are used during every stage in the production of printed circuit boards and electronic devices
- Our know-how and expertise allow us to develop epoxy and polyurethane systems that answer the most stringent requirements for electronics applications

# **Coatings & Construction**





- More than a third of our global turnover comes from the Coatings & Construction industries
- One of the broadest portfolios, providing a complete range of building blocks for application solutions
- Our powder and liquid coatings products can be found in industries such as Transportation, Marine, Automotive, Architectural and Consumer White Goods
- Commitment to environmentally friendly systems while addressing customer needs and market requirements

## **Automotive**





- Our resin systems and building blocks are supplied to part manufacturers, prepreggers and OEMs
- High penetration of carbon composite parts
   in Formula One and other high end consumer vehicles
- Strong market drivers include performance, safety and lighter weight
- Adoption of composite materials in mass market vehicles represents a huge opportunity for Huntsman

# Wind energy





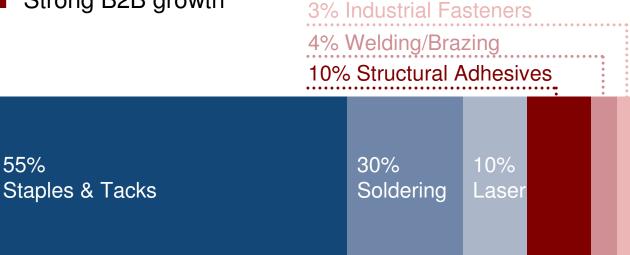
- More than 20 years commitment to the wind turbine industry
- Significant growth opportunities in the European offshore market and Asia Pacific
- Comprehensive range of lighter, stronger, longer-lasting materials
- Specialty components for prepreggers
- Formulated systems for blade, turbine and mould makers

## **Industrial and Consumer Adhesives**





- ARALDITE® covers a broad range of applications for the industrial and consumer markets
- A leading brand in Europe for over 60 years
- Strong brand recognition in emerging markets such as India and Brazil
- Several chemistries and different technologies
- ARALDITE® adhesives can bond virtually anything
- Strong B2B growth



# **Sports & Leisure**





- In Sport & Leisure every gram counts
- Lightweight, strength, flexibility, design freedom and fatigue resistance are key factors affecting athletic performance
- Advanced Materials has over 50 years experience of combining design materials, composite resins and adhesives for consumer products
- We enable Sports & Leisure manufacturers to exceed the high performance expectations of their customers
- Largely EU based and built on brand awareness







- Trusted, long-term customer relationships
- Global manufacturing footprint designed for developing markets
- Diverse portfolio
- High technical and scientific expertise
- Product quality and reliability
- Recognized solutions provider



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