

# The 6th Conference of Asia Regional Adhesive Council The 21st China Adhesive and Tape Annual Conference

## Status and Development Trend of China Adhesive and Tape Industry

Michael Yang, Vice President & Secretary General

**China Adhesives and Tape Industry Association (CATIA)**

# Agenda

**1. Overview of Adhesive and Tape Industry in Mainland China**

**2. Environmental Policy & Standard Development**

**3. Prospect and Outlook**

## 1. Overview of Adhesive and Tape Industry in Mainland China

**Tab. 1 Adhesive volume, sales value and growth rate during 2013-2017**

Type Year	Sales Volume (million tons)	Sales Value (billion RMB)	Growth Rate (%)	
			Sales Volume	Sales Value
<b>2013</b>	6.112	77.57	9.0	9.4
<b>2014</b>	6.587	82.31	7.8	6.1
<b>2015</b>	6.868	84.43	4.3	2.6
<b>2016</b>	7.339	89.71	6.9	6.3
<b>2017</b>	<b>7.887</b>	<b>98.78</b>	<b>7.5</b>	<b>10.1</b>

**Tab. 2 Classification of adhesive in mainland China in 2017**

Type of Adhesive	Name of Adhesive	Year of 2017	
		Sales Volume (1,000 tons)	Sales Value (billion RMB)
Water-based Adhesive	PAE Emulsion	3,300	24.60
	PVAc Emulsion	780	3.51
	VAE Emulsion	495	3.60
	PU Dispersion	40	1.24
	CR Latex	4.5	0.15
	<b>Total</b>	<b>4,619.5</b>	<b>33.10</b>

## Classification of adhesive in mainland China in 2017 *(Cont'd)*

Type of Adhesive	Name of Adhesive	Year of 2017	
		Sales Volume (1,000 tons)	Sales Value (billion RMB)
Solvent-based Adhesive	SBS Resin	190	2.45
	CR	110	2.00
	PA	190	2.65
	<b>Total</b>	<b>490</b>	<b>7.10</b>
Hot Melt Adhesive	EVA Resin	412	6.74
	Synthetic Rubber	287	5.16
	Others	240	5.33
	<b>Total</b>	<b>939</b>	<b>17.23</b>

## Classification of adhesive in mainland China in 2017 *(Cont'd)*

Type of Adhesive	Name of Adhesive	Year of 2017	
		Sales Volume (1,000 tons)	Sales Value (billion RMB)
Reactive Adhesive	PU	745	14.00
	Epoxy	175	5.50
	Cyanoacrylate	24.0	1.40
	Modified Acrylate	11.0	0.50
	Anaerobic	3.3	0.50
	<b>Total</b>	<b>958.3</b>	<b>21.90</b>
Others	Silicone	820	18.00
	Polysulfide	15	0.45
	Polyurethane	45	1.00
	<b>Total</b>	<b>880</b>	<b>19.45</b>

## Adhesive Import and Export

**Tab. 3 Adhesive import and export during 2013-2017**

Year	Import				Export			
	Amount		Value		Amount		Value	
	1,000 Tons	G.R. (%)	Billion USD	G.R. (%)	1,000 Tons	G.R. (%)	Billion USD	G.R. (%)
2013	187.3	3.08	2.197	-0.53	395.9	7.35	1.432	8.89
2014	259.8	38.71	2.974	35.36	576.2	45.54	2.133	48.97
2015	197.8	-23.86	2.081	-30.03	461.4	-19.92	1.660	-22.15
2016	205.0	3.64	2.120	1.90	492.0	6.63	1.623	-2.25
<b>2017</b>	<b>208.8</b>	<b>1.85</b>	<b>2.346</b>	<b>10.64</b>	<b>602.4</b>	<b>22.44</b>	<b>1.904</b>	<b>17.33</b>

## Adhesive Import and Export *(Cont'd)*

**Top 10 Import Country/Region in 2017**

Japan	48,346 M.T.
Taiwan Region	36,296 M.T.
Korea	34,063 M.T.
Germany	23,919 M.T.
USA	22,292 M.T.
Malaysia	8,798 M.T.
Italy	6,715 M.T.
France	4,183 M.T.
Singapore	3,045 M.T.
Switzerland	2,768 M.T.

**Top 10 Export Country/Region in 2017**

USA	59,600 M.T.
Vietnam	55,093 M.T.
India	37,334 M.T.
Indonesia	25,139 M.T.
Japan	22,637 M.T.
Thailand	22,067 M.T.
Hong Kong	20,667 M.T.
Korea	19,860 M.T.
Taiwan Region	18,955 M.T.
Philippines	18,825 M.T.



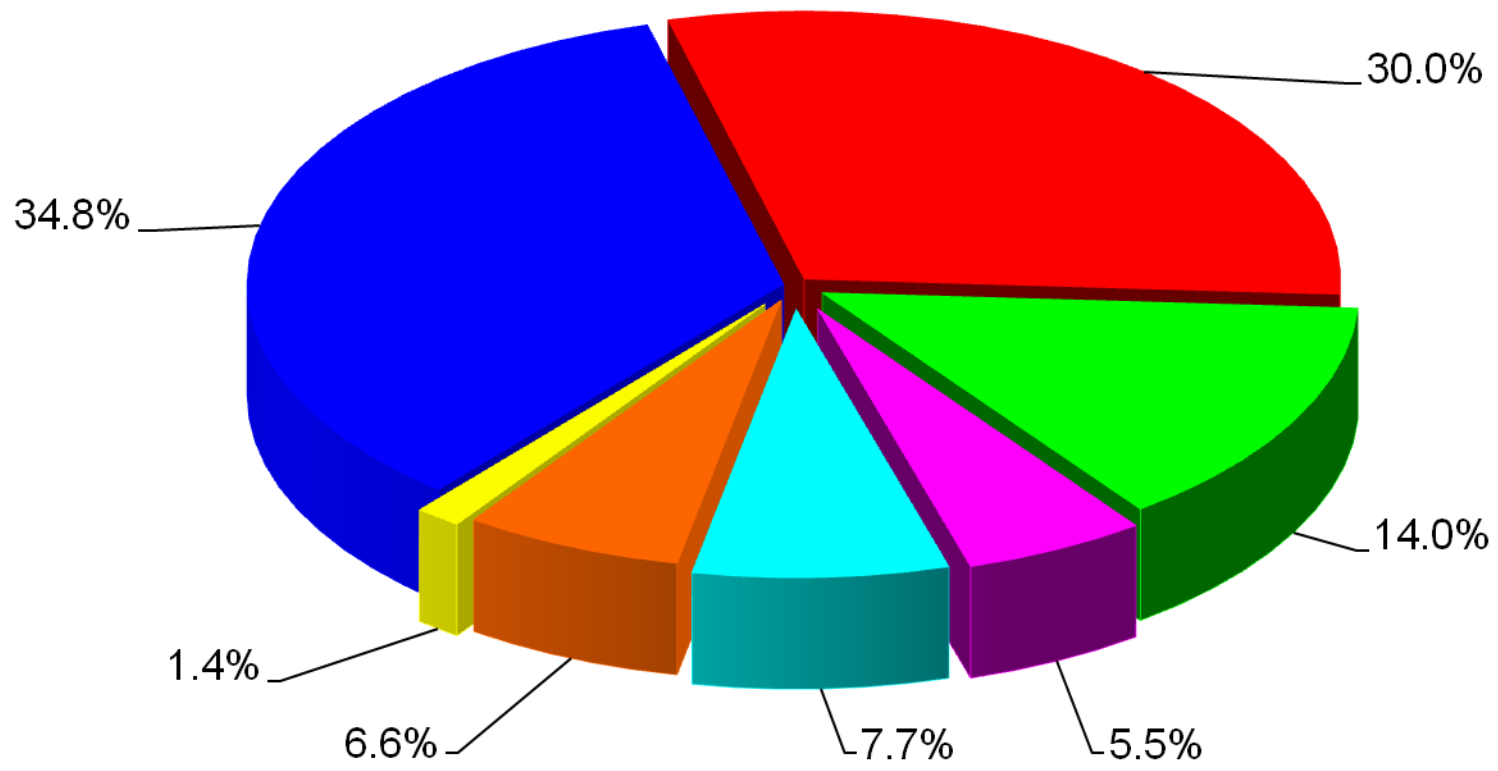
## Adhesive Market Segments

**Tab. 4 Market segments consumption and share in 2017**

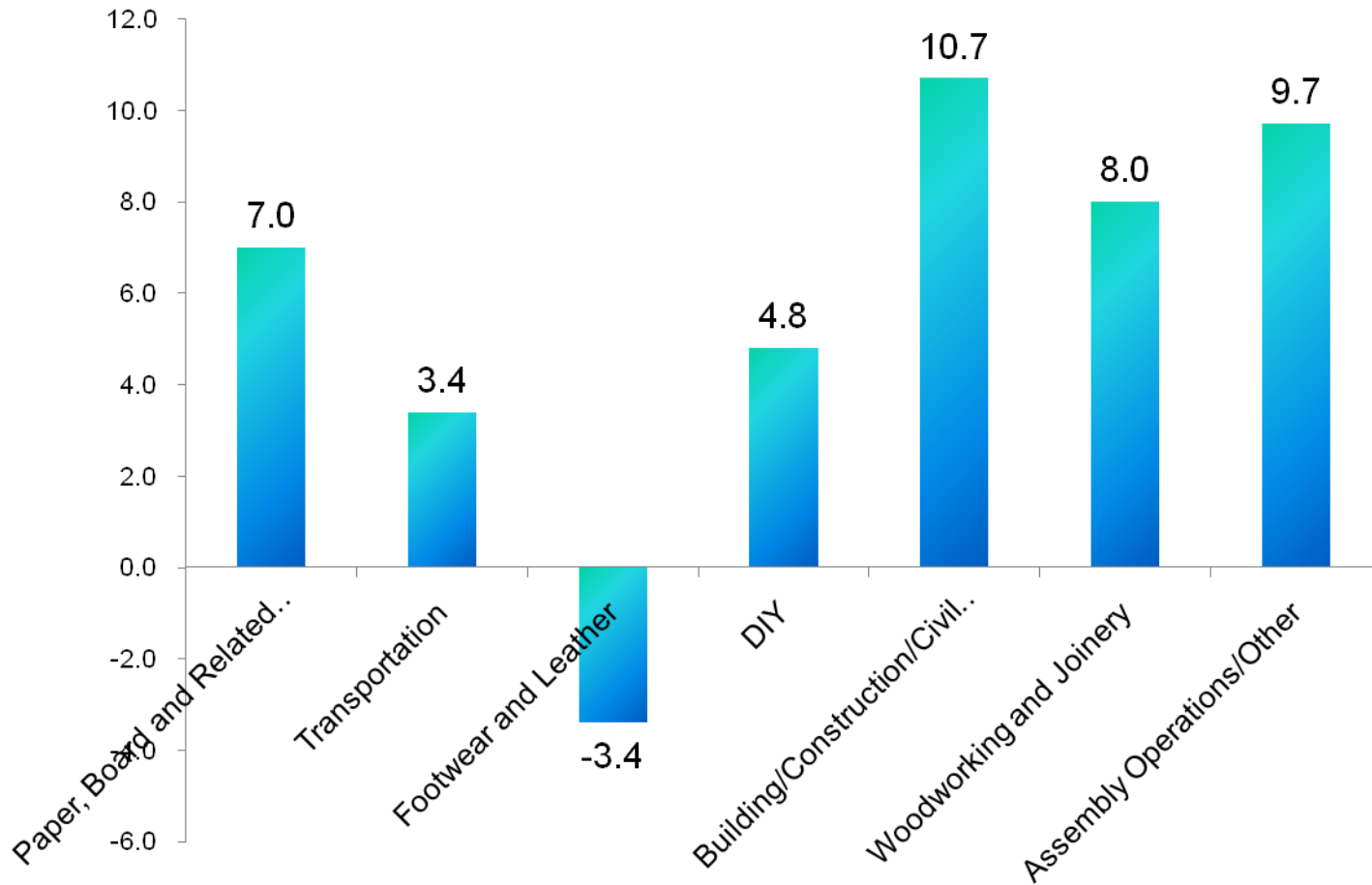
No.	Market Segment	Consumption (1,000 tons)	Market Share (%)	G.R. (%)
1	Paper, Board and Related Products	2,745.0	34.8	7.0
2	Transportation	610.0	7.7	3.4
3	Footwear and Leather	430.0	5.5	-3.4
4	Consumer/Do-It-Yourself (Retail)	110.0	1.4	4.8
5	Building/Construction/Civil Engineering/Craftsmen	2,370.0	30.0	10.7
6	Woodworking and Joinery	1,102.0	14.0	8.0
7	Assembly Operations/Other	520.0	6.6	9.7
<b>Total</b>		<b>7,887.0</b>	<b>100</b>	<b>–</b>

# Chinese Adhesive Market Share in 2017

- Paper, Board and Related Products
- Building / Construction
- Woodworking and Joinery
- Footwear / Leather
- Transportation
- Assembly Operations / Other
- DIY



# Growth Rate for Each Market Segment in 2017



## Overview of Tape Industry

**Tab. 5** Tape volume, sales value and growth rate during 2013-2017

Type Year	Sales Volume (billion sq.m.)	Sales Value (billion RMB)	Growth Rate (%)	
			Sales Volume	Sales Value
<b>2013</b>	17.03	35.48	8.3	7.6
<b>2014</b>	18.58	38.04	9.1	7.2
<b>2015</b>	19.89	37.19	7.1	-2.2
<b>2016</b>	21.86	39.02	9.9	4.9
<b>2017</b>	<b>23.40</b>	<b>40.34</b>	<b>7.0</b>	<b>3.4</b>

**Tab. 6 Classification of tape product in mainland China in 2017**

Tape Product	Sales Volume (billion sq.m.)	Sales Value (billion RMB)	Growth Rate (%)	
			Volume	Value
BOPP Packaging Tape	12.80	8.40	6.7	1.1
PVC Electrical Tape	0.89	3.10	-9.2	-9.6
Label & Graphics	3.80	8.74	11.8	9.3
Protective Tape	2.10	2.80	6.6	6.1
Double-Sided Tape	1.60	5.80	-0.6	-3.3
Crepe Paper Masking Tape	1.20	2.00	27.7	14.3
Aluminum Foil Tape	0.36	2.50	-5.3	-7.4
Specialty Tape & Others	0.65	7.00	12.1	7.7
<b>Total</b>	<b>23.40</b>	<b>40.34</b>	<b>7.0</b>	<b>3.4</b>

## Adhesive Tape Import and Export

**Tab. 7 Adhesive tape import and export during 2013-2017**

Year	Import				Export			
	Amount		Value		Amount		Value	
	1,000 Tons	G.R. (%)	Billion USD	G.R. (%)	1,000 Tons	G.R. (%)	Billion USD	G.R. (%)
2013	157.2	5.3	3.401	9.2	760.9	2.8	3.227	8.1
2014	159.4	1.4	3.294	-3.2	823.1	8.2	3.619	12.2
2015	147.5	-7.5	3.071	-6.8	852.0	3.5	3.641	0.6
2016	146.2	-0.9	2.872	-6.5	930.5	9.2	3.487	-4.2
<b>2017</b>	<b>157.6</b>	<b>7.8</b>	<b>3.022</b>	<b>5.2</b>	<b>1015.1</b>	<b>9.1</b>	<b>3.746</b>	<b>7.4</b>

## Adhesive Tape Import and Export *(Cont'd)*

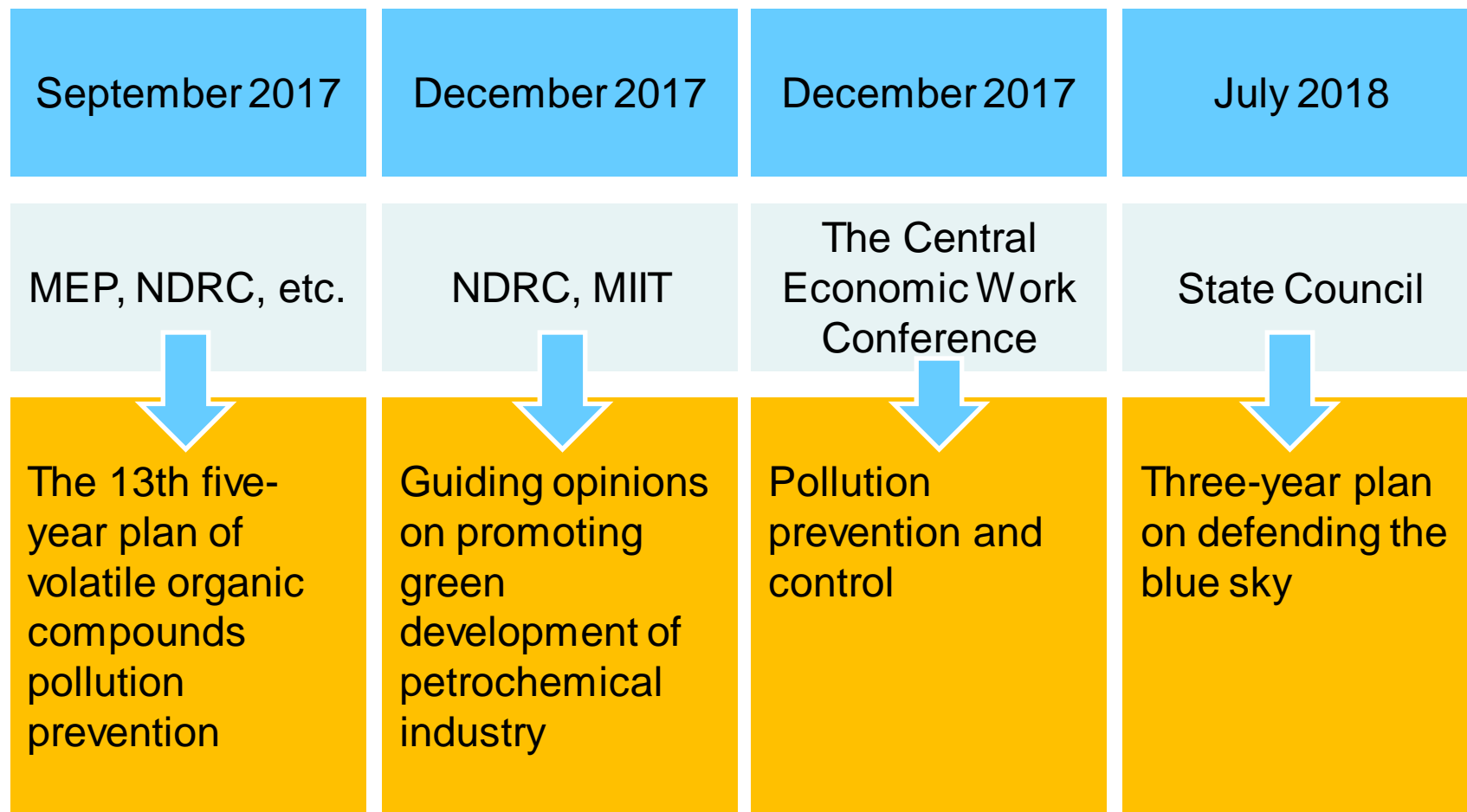
**Top 10 Import Country/Region in 2017**

Japan	39,140 M.T.
Korea	38,069 M.T.
USA	20,991 M.T.
Taiwan Region	19,776 M.T.
Germany	9,819 M.T.
Italy	4,921 M.T.
Singapore	4,660 M.T.
France	3,262 M.T.
UK	2,023 M.T.
Canada	1,985 M.T.

**Top 10 Export Country/Region in 2017**

USA	82,111 M.T.
India	63,390 M.T.
Vietnam	52,812 M.T.
Japan	38,423 M.T.
Philippines	32,567 M.T.
Russia	31,220 M.T.
Mexico	30,874 M.T.
Indonesia	26,762 M.T.
Pakistan	22,790 M.T.
Iran	22,558 M.T.

## 2. Environmental Policy & Standard Development





## Local Environmental Protection Actions

### **Beijing, Tianjin and Hebei area, starting from Sept. 1, 2017**

Beijing, Tianjin and Hebei unified the implementation of environmental standards for building coatings, limiting the use of volatile organic compounds (VOCs) in paints and adhesives.

### **Shanghai Clean Air Action Plan (2018-2022), issued on July 3, 2018**

From 2018, the production of organic solvent coatings, inks and adhesives with high VOCs content will be prohibited.

### **Guangdong Province Action Plan to Defend the Blue Sky (2018-2020) (Draft for comments)**

In the Pearl River Delta area, it is forbidden to construct new chemical industrial parks and new projects such as the production and use of solvent-based coatings, inks and adhesives with high VOCs content.

### **Zhejiang Province Action Plan to Defend the Blue Sky for Three Years (Draft for comments)**

It is forbidden to construct, produce and use solvent-based coatings, inks and adhesives with high VOC content.

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## Chemical Industry Park Was Revoked and Rectified

Shandong

Hubei

Jiangsu

Tianjin

Guangdong

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- ◆ Chemical enterprises will face increasingly severe transformation and upgrading test.
- ◆ The admission rate of chemical enterprises will continue to increase.
- ◆ The industrial characteristics of chemical industry park will be more prominent.

## Adhesive and Tape Standards Implemented in 2018

<b>GB/T 14074-2017</b>	Testing methods for wood adhesives and their resins
<b>GB/T 14683-2017</b>	Silicone and modified silicone sealants for building
<b>GB/T 14732-2017</b>	Wood adhesives: urea-formaldehyde, phenol-formaldehyde and melamine-formaldehyde resins
<b>GB/T 34557-2017</b>	Latex and redispersible polymer powder for mortar and concrete
<b>GB/T 34712-2017</b>	Determination for the flagging of adhesive tape
<b>GB/T 34716-2017</b>	Determination of the solubility of pressure-sensitive adhesives
<b>GB/T 35489-2017</b>	Guide to the selection of ageing conditions for adhesives

## Adhesive and Tape Standards Implemented in 2018 *(Cont'd)*

<b>GB/T 35494.1-2017</b>	Test methods for isotropic electrically conductive adhesives — Part 1: General test methods
<b>GB/T 35495-2017</b>	Determination of changes in cohesion for elastic sealants after dynamic artificial weathering
<b>GB/T 36060-2018</b>	Process control and testing methods on the water-based adhesives using in hardcover book binding production
<b>HG/T 5247-2017</b>	One-component heat-curing epoxy structural adhesive
<b>HG/T 5248-2017</b>	Epoxy structural adhesives for blades of wind turbine generator system
<b>JC/T 881-2017</b>	Building sealants for joint of concrete construction

### 3. Prospect and Outlook

The first half  
of 2018

The whole industry is running smoothly and steadily.



Quality and efficiency have been improved continuously.



The profits and losses continue to exist.

## The Existing Problems



- Backward overcapacity
- Environmental requirements
- Global oil price shocks
- Limited production or shutdown of enterprises
- Relocation of chemical enterprises
- China-US trade friction

## Impact of China-US Trade Friction on the Industry

Year	Import from US				Export to US			
	Adhesive		Tape		Adhesive		Tape	
	Amount (Tons)	Ranking #	Amount (Tons)	Ranking #	Amount (Tons)	Ranking #	Amount (Tons)	Ranking #
2014	21868	4	18470	4	22433	5	65546	1
2015	20592	4	18377	4	24148	4	71256	1
2016	20677	5	17731	4	24352	3	78312	1
2017	22292	5	20991	3	59600	1	82111	1

## Impact of China-US Trade Friction on the Industry *(Cont'd)*

(As of August 23, 2018)

### **Adhesive & tape products levied by China Tariff Action**

Adhesives based on other rubbers or plastics (35069190)

### **Related raw materials levied by China Tariff Action**

Microcrystalline wax (27129010), non-ionic organic surfactants (34021300), reaction initiator, reaction promoter, catalyst (38159000), ethylene-alpha olefin copolymer (39014090), acrylate copolymer (39069090), epoxy resin (39073000), polysiloxane (39100000), polyamide (39089000), etc.

### **Products from industrial sectors levied by US Tariff Action**

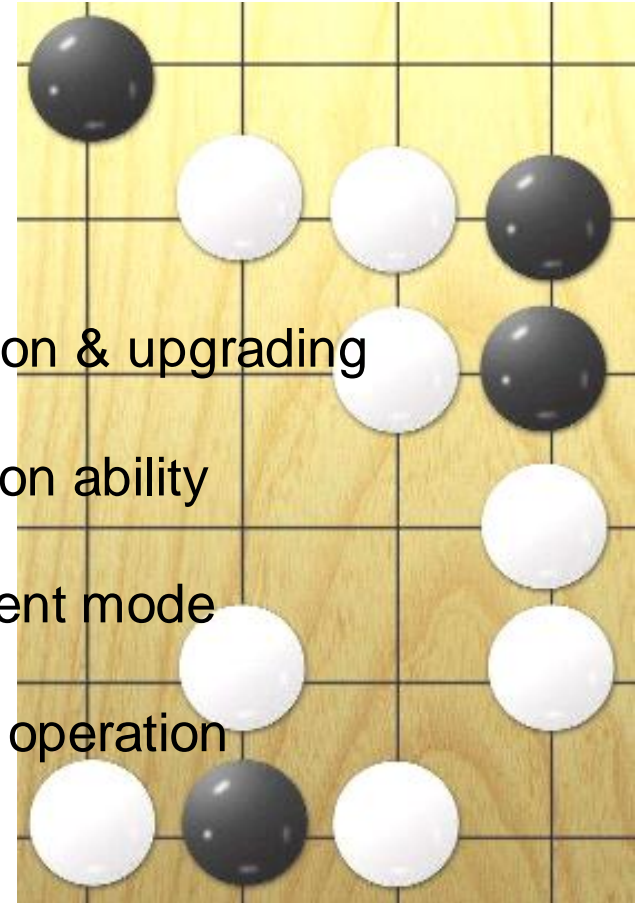
Parts for filtering or purifying machinery or apparatus for liquids or gases (84219900), wind-powered electric generating sets (85023100), light-emitting diodes (LED's) (85414020), etc.



## Main Countermeasures

### Accelerating:

- ✓ structural adjustment and transformation & upgrading
- ✓ the promotion of independent innovation ability
- ✓ the transformation of green development mode
- ✓ the quality and efficiency of economic operation



## Our Drivers Going Forward

- ◆ Water-borne, hot melt, solvent-free, UV curing, high solid content products
- ◆ Strategic emerging markets
- ◆ Belt and Road Initiative (BRI)



## Conclusions



Maintain considerable confidence in the industry's sustained growth.



China-US trade friction brings more opportunities rather than crises.



Innovation is the first driving force for development.



**Thank you**

## **China Adhesives and Tape Industry Association (CATIA)**

Address: Room 2107, Tower B, Tianyuangang Center, No. 2 Dongsanhuan North Road, Chaoyang District, Beijing 100027, China

Tel: +86-10-8766 7165

Fax: +86-10-8766 3015

E-mail: [yang@cnaia.org](mailto:yang@cnaia.org)

[http: // www.cnaia.org](http://www.cnaia.org)