



Market Trend and Technology Development of Adhesives in Taiwan

**TAIWAN SYNTHETIC RESINS &
ADHESIVES INDUSTRIAL ASSOCIATION**
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26 SEPTEMBER 2013



Outline

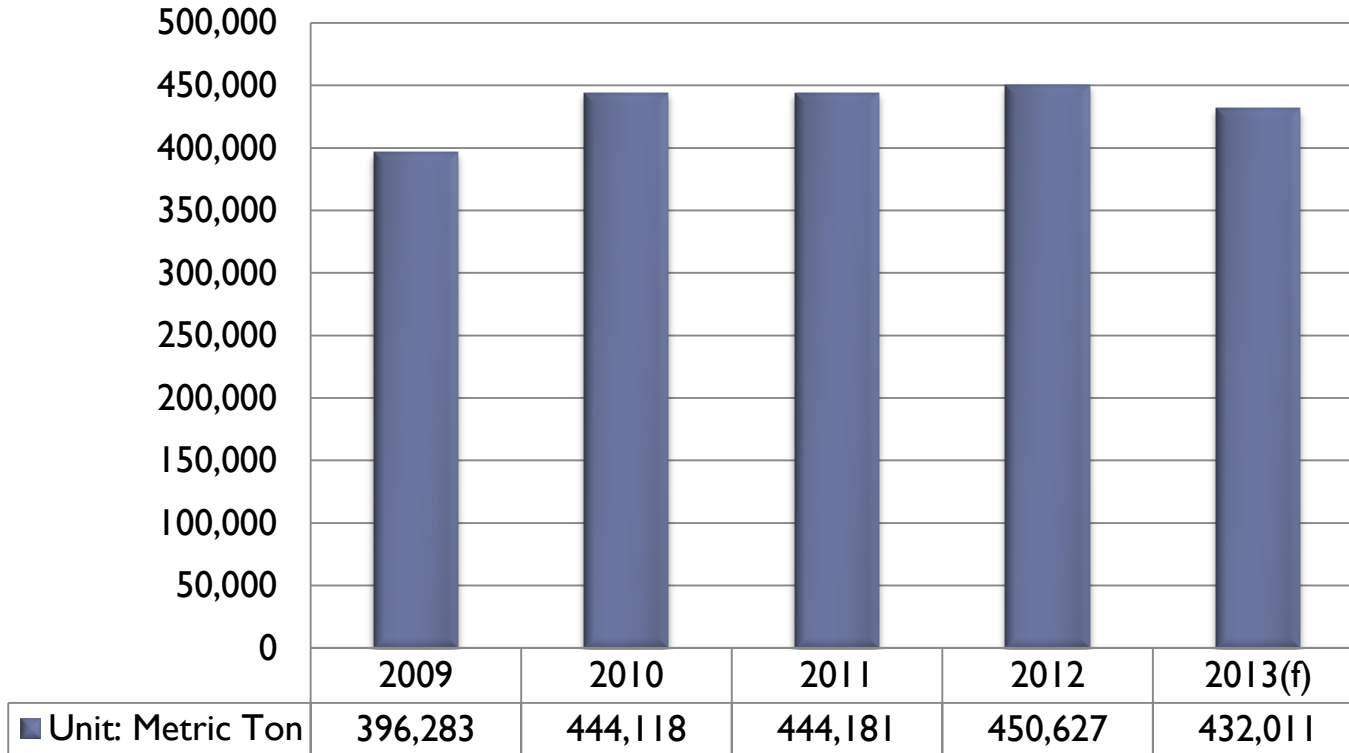
- ▶ Adhesive Market Analysis in Taiwan
- ▶ Outlook of Synthetic resin and Adhesive industry in Taiwan

Adhesive Market Analysis in Taiwan



2009-2013(e) Sales Volume of Adhesive in Taiwan

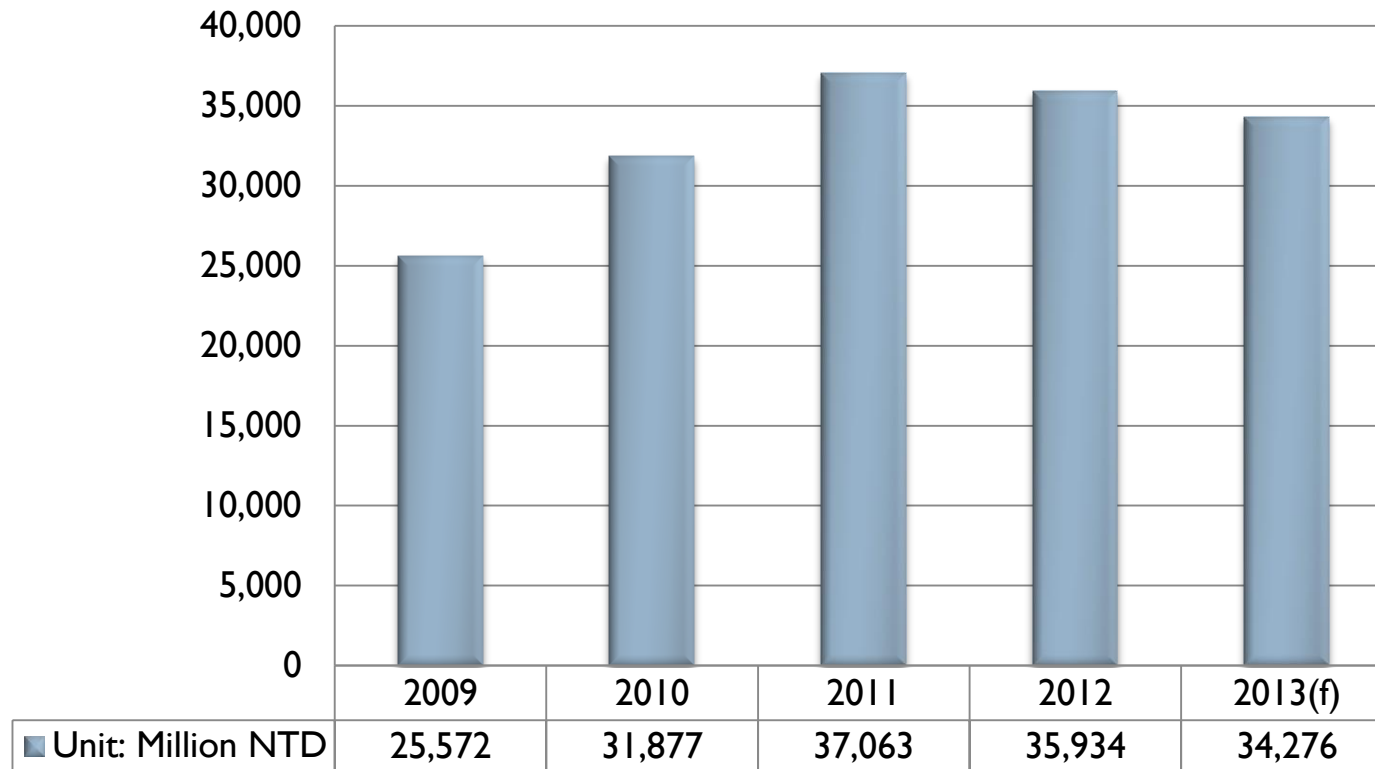
Unit: Metric Ton



▶ CAGR during 2009-2012(e) is 2.18%

2009-2013(e) Sales of Adhesive in Taiwan

Unit: Million NTD

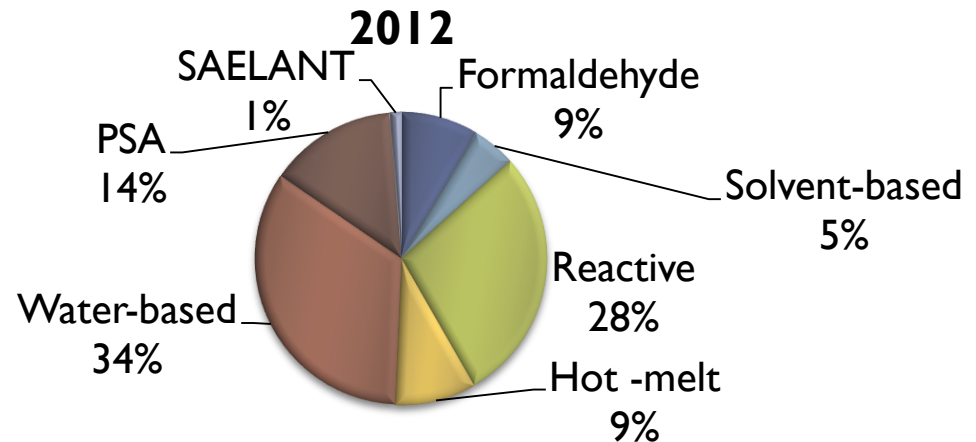
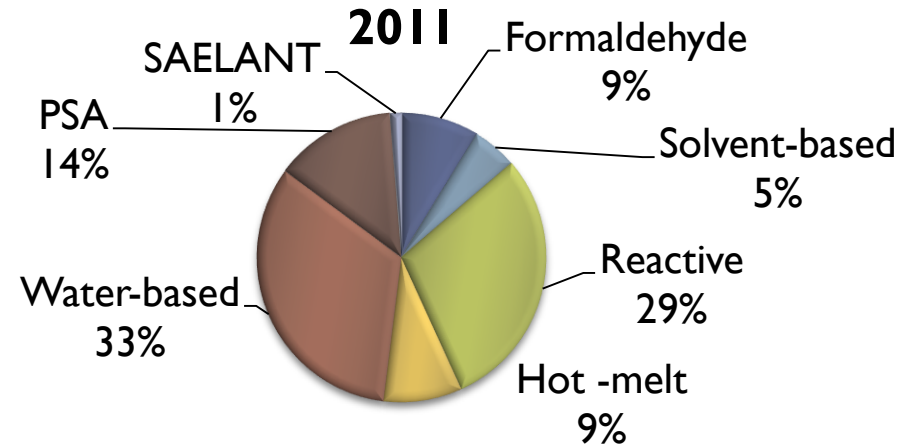


▶ CAGR during 2009-2012(e) is 7.60%

2011 and 2012 Sales Volume by Adhesive Types

Unit: Metric ton

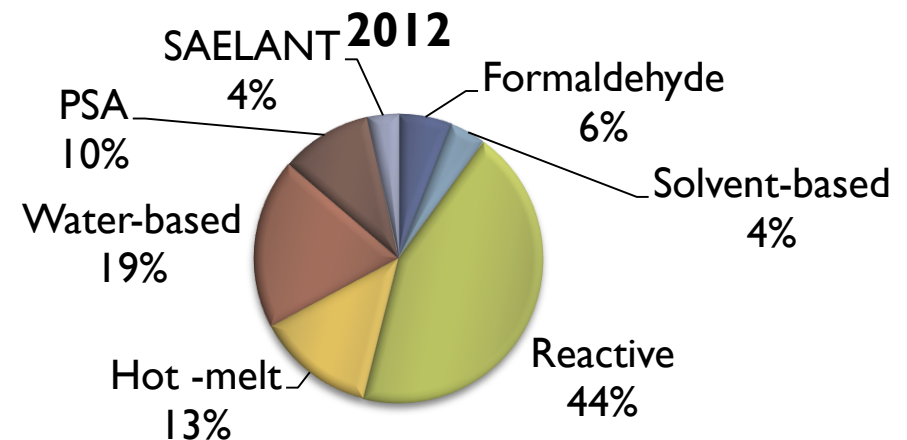
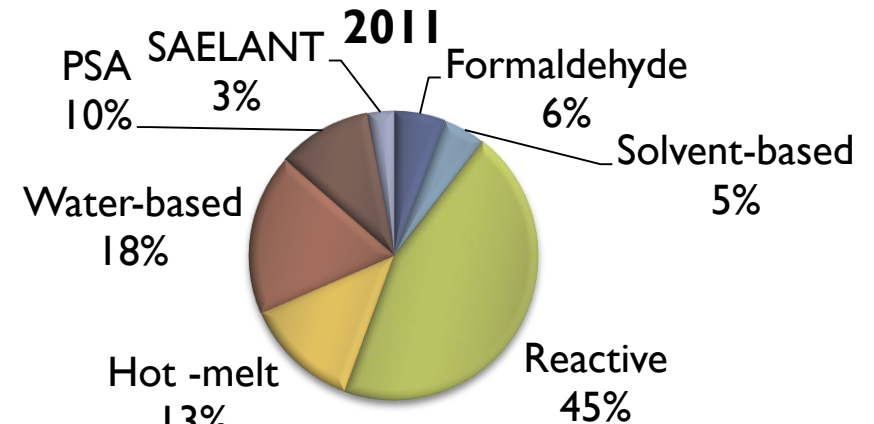
Adhesive type	2011	2012
Formaldehyde	38,732	38,738
Solvent-based	22,325	21,730
Reactive	130,764	127,414
Hot -melt	39,080	40,530
Water-based	147,470	152,615
PSA	60,210	63,800
SAELANT	5,600	5,800
Total	444,181	450,627



2011 and 2012 Sales by Adhesive Types

Unit: Million NTD

Adhesive type	2011	2012
Formaldehyde	2,149	2,153
Solvent-based	1,750	1,444
Reactive	16,699	15,779
Hot -melt	4,787	4,774
Water-based	6,679	6,843
PSA	3,884	3,707
SAELANT	1,114	1,234
Total	37,063	35,934



- ▶ The average price of adhesives fell from 83 NTD/kg to 80 NTD/kg in 2012

Statistics of Adhesives import & Export in Taiwan

2011 (Unit: Metric Ton. Million NTD)						
Item	Import			Export		
	Amount	Value	Price	Amount	Value	Price
Hot-Melt	2,397	491	205	26,451	3,257	123
EVA	4,520	168	37	53,400	1,618	30
Other Adhesives	73,424	12,240	167	110,692	13,383	121
Total	80,341	12,899	161	190,543	18,258	96
2012 (Unit: Metric Ton. Million NTD)						
Item	Import			Export		
	Amount	Value	Price	Amount	Value	Price
Hot-Melt	2,402	464	193	27,990	3,304	118
EVA	5,543	176	32	57,467	1,810	32
Other Adhesives	25,793	11,271	437	106,828	12,006	112
Total	33,738	11,912	212	192,285	17,120	89

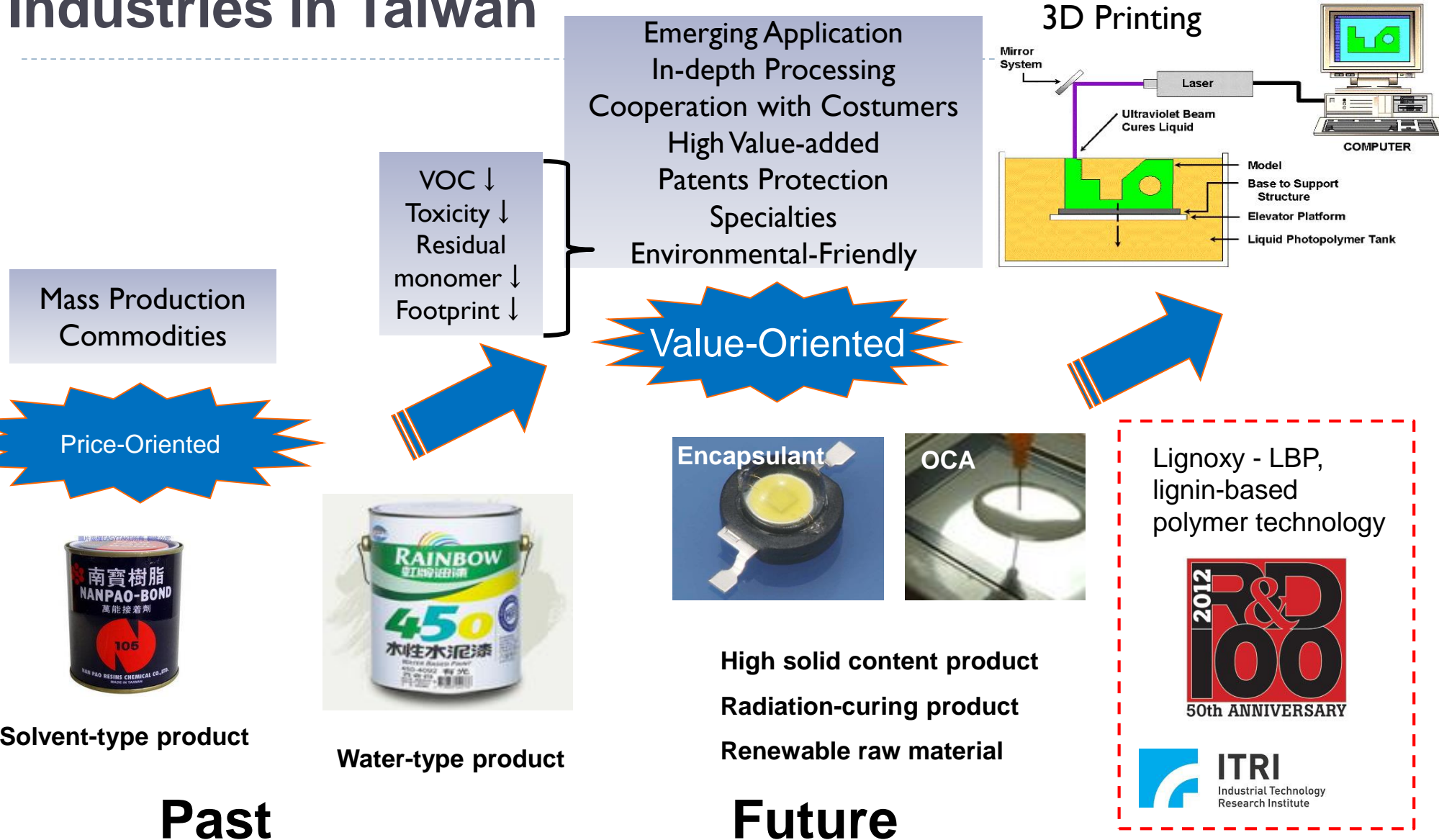


Summary of Adhesive Market

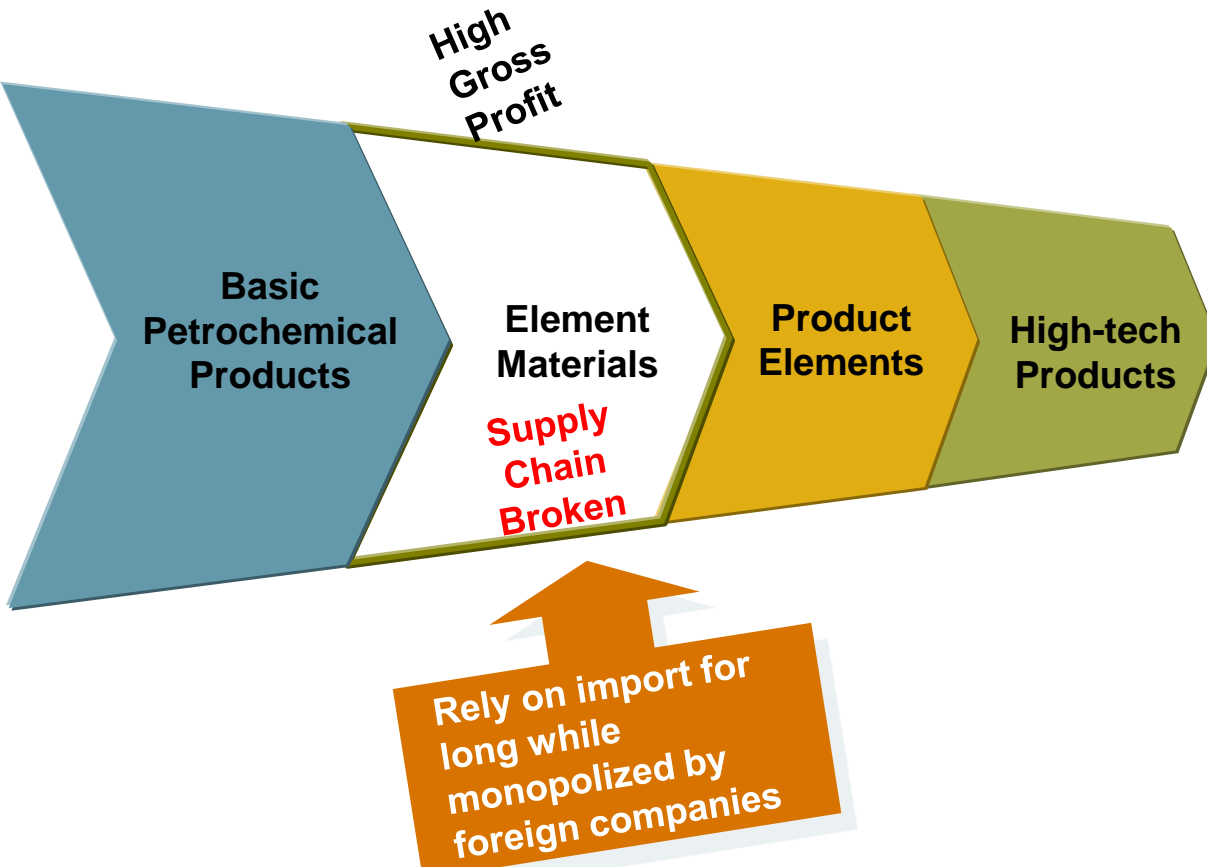
- ▶ Sales volume of adhesive in Taiwan is quite stable and the price is sensitive to oil price
- ▶ Water-based adhesive meet more customer's requirement and its sales volume rose in 2012

Outlook of Synthetic resin and Adhesive industry in Taiwan

Market and Technology Trend of Adhesive Industries in Taiwan



High Value-Added Raw Materials from Petrochemicals and adhesive



Six Emerging Industries

醫藥器材產業 科技化醫療器材研發設計案 高階醫療器材設計案 精密醫療器材設計案	生物科技產業 生物製藥研發設計案 基因轉殖醫學研究設計案 生物材料研發設計案 農業生物科技研發設計案	精緻農業 高級有機農業設計案 肉品衛生安全檢驗設計案 生物有機農業研發設計案 精緻農業研發設計案
觀光旅遊產業 高階觀光景點建設中規設計案 觀光設計案	文化創意產業 文創產品開發設計案 品牌設計/展示內容策略設計案 影視流行音樂中心/電影/廣播計畫 影視文化創意策略開發設計案	綠色能源產業 能源開發策略設計案 能源管理策略設計案 能源研發策略設計案

Not sufficiently used Material, ex. C5

New Material: ex. Bio-based Material

Replacement/Local Material

- ▶ “High Value Petrochemical Industry Promotion Office (PIPO)” under MOEA was established in 12.31 2011.
- ▶ <http://www.pipo.org.tw/eng/>

Outlook of Policies and Market of Adhesive Industries in Taiwan



- Products of high value-added petrochemical raw material, such as C5, C9 or bio-based chemicals, is developing
- FTA and import-substitute are supporting policies of domestic adhesive policies
- Development of high-tech and environmental issues have huge impact on adhesive innovation
- R&D and technology cooperation to create product differentiation and increase product value-added
- Radiation-curing resins, water-based resin and other functional products have great potential in the near future



THANK YOU VERY MUCH!

有難うございました

謝謝

감사합니다 !





Appendix



Sales Status - 1

Unit: Mtone; Thousand Dollars

	Type	2011 (Volume)	2011 (Value)	2012 (Volume)	2012 (Value)
Formalde-hyde	Urea-formaldehyde	16,440	756,240	16,147	702,395
	Melamine-formaldehyde	7,250	427,750	7,514	448,577
	Phenol-formaldehyde	15,042	965,248	15,077	1,002,050
	Total	38,732	2,149,238	38,738	2,153,022
Solvent based	Vinyl acetate	700	38,640	800	46,000
	Chloroprene rubber	18,395	1,434,810	17,430	1,230,906
	Other resins	1,800	130,140	2,000	14,834
	Synthesized rubber	1,430	146,146	1,500	152,250
	Total	22,325	1,749,736	21,730	1,443,990
Reactive	Epoxy	66,625	7,462,000	65,158	6,841,590
	Cyanoacrylate	4,050	1,458,000	3,956	1,486,347
	Polyurethane	60,089	7,779,142	58,300	7,450,740
	Total	130,764	16,699,142	127,414	15,778,677



Sales Status -2

Unit: Mtone; Thousand Dollars NT

	Type	2011 (Volume)	2011 (Value)	2012 (Volume)	2012 (Value)
Hot melt	EVA	21,120	2,301,235	21,800	2,397,782
	Rubber	13,560	1,866,985	14,320	1,749,904
	Others	4,400	619,080	4,410	626,220
	Total	39,080	4,787,300	40,530	4,773,906
Water-based	Vinyl acetate	32,500	958,750	35,100	993,330
	EVA emulsion	77,180	2,701,300	77,735	2,767,366
	Acryl emulsion	32,640	2,121,600	34,260	2,130,980
	Polyurethane	5,150	897,645	5,520	951,262
	Total	147,470	6,679,295	152,615	6,842,938
PSA	Acryl	37,760	2,192,830	40,200	2,090,400
	Rubber	22,450	1,690,964	23,600	1,616,600
	Total	60,210	3,883,794	63,800	3,707,000
SEALANT		5,600	1,114,400	5,800	1,234,240
TOTAL		444,181	37,062,905	450,627	35,933,773