



台灣合成樹脂
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THE ADHESIVES MARKET AND TRENDS IN TAIWAN

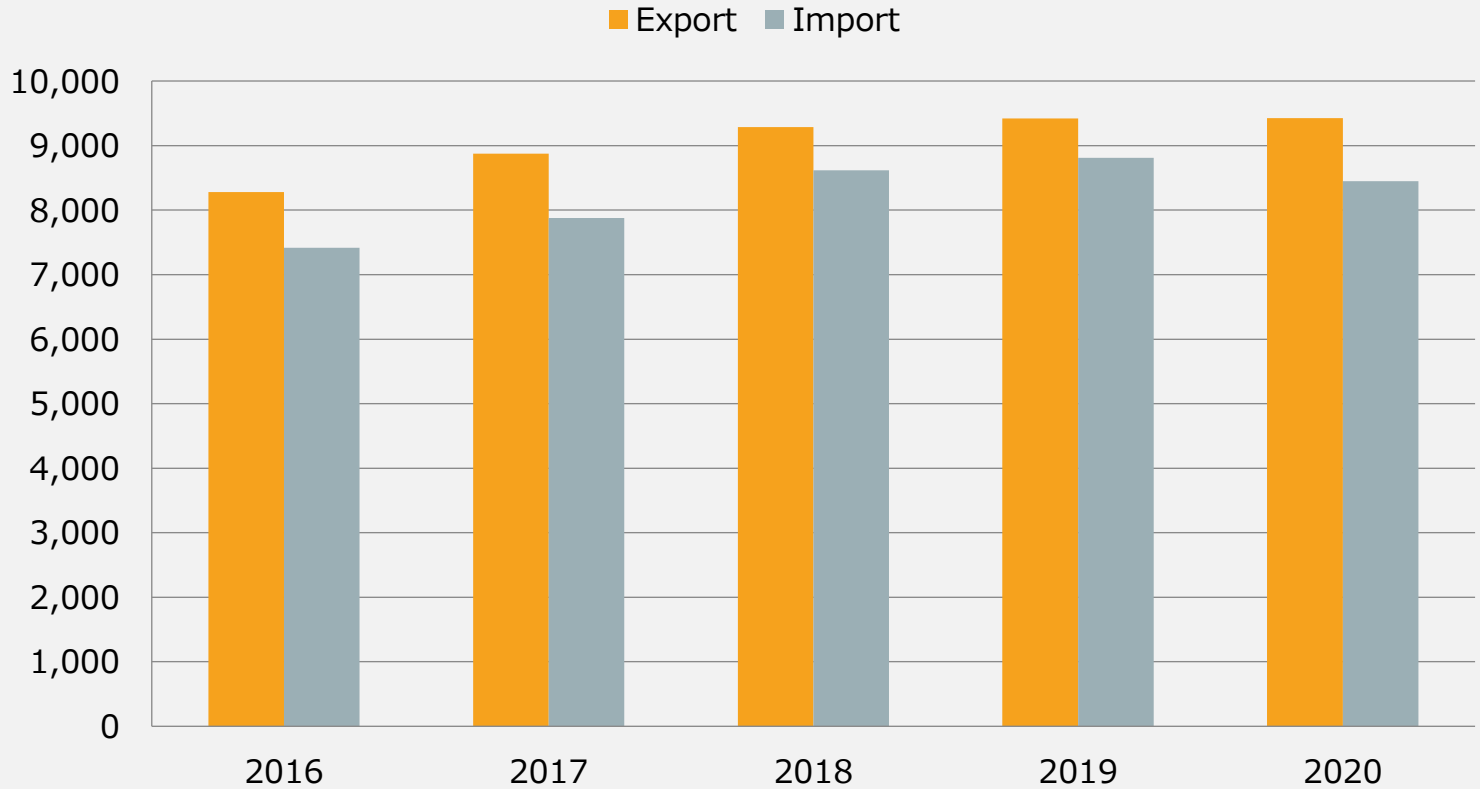
Taiwan Synthetic Resins & Adhesives
Industrial Association

Yu-Chih Lin Chairman

October, 2021

2016-2020 Overview of Export And Import of Taiwan

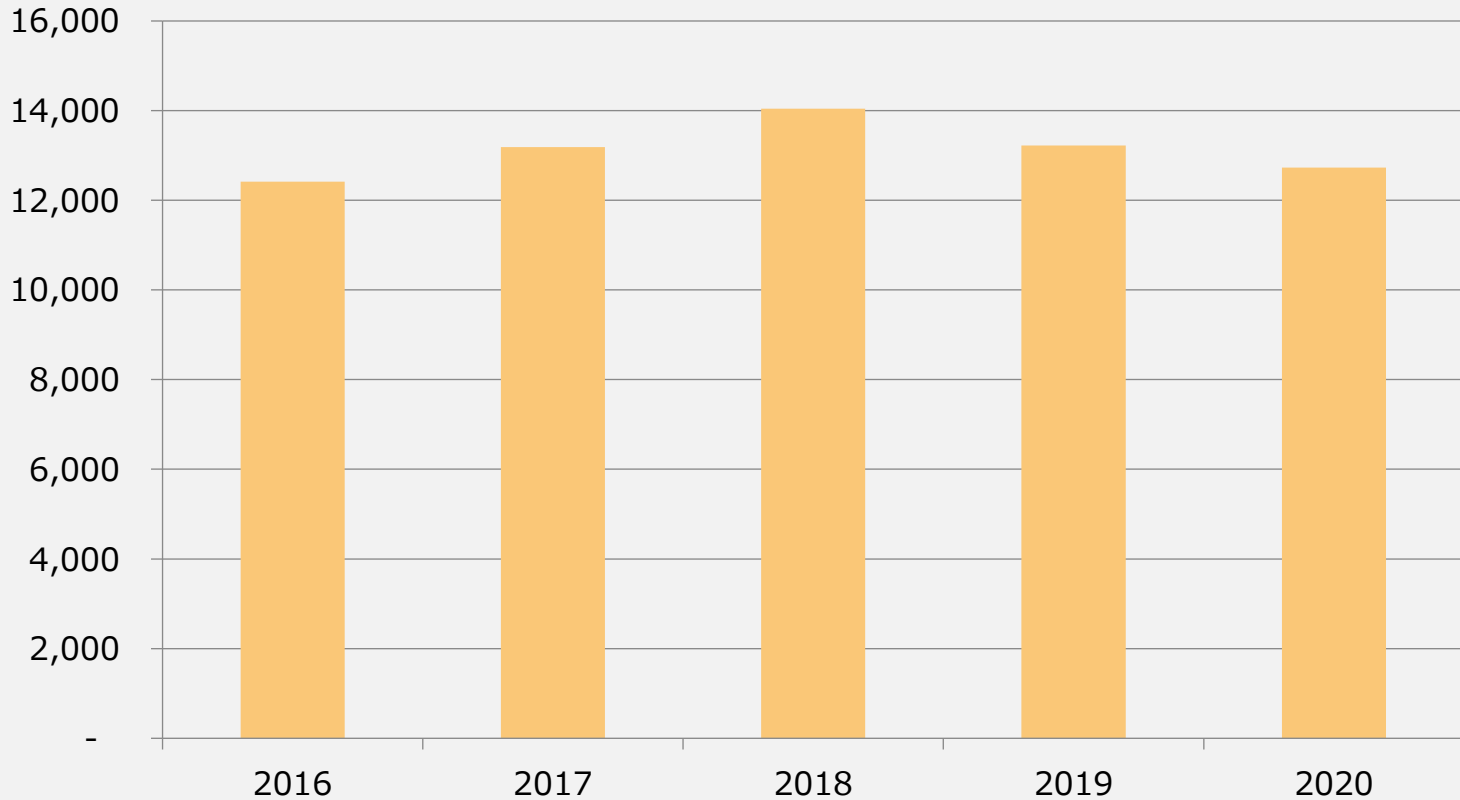
Unit: Billion TWD



Resource: Department of Statistics, MOEA(2021/10)

2016-2020 Production Value of Manufacture Industry in Taiwan

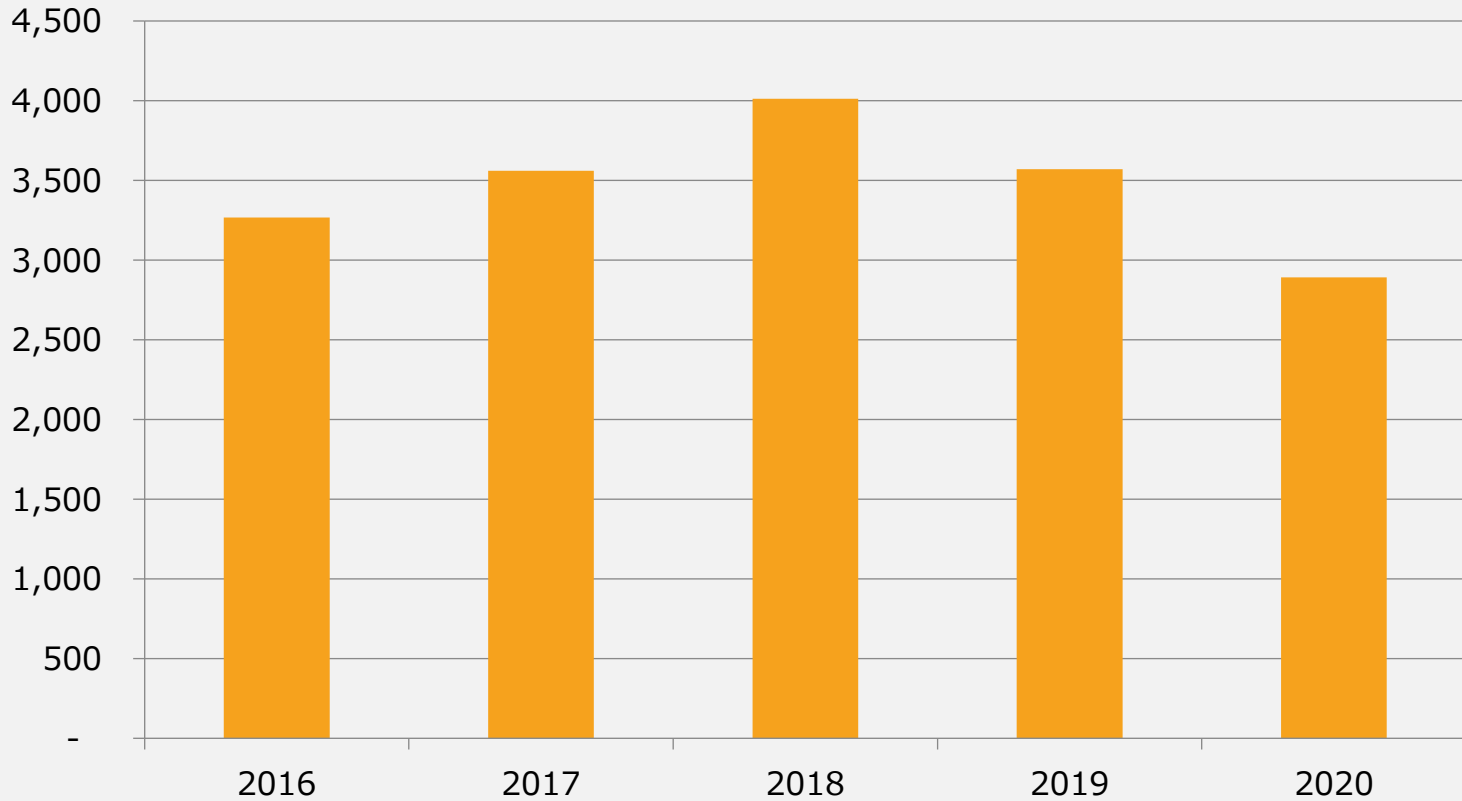
Unit: Billion TWD



Resource: Department of Statistics, MOEA(2021/10)

2016-2020 Production Value of Chemical Industry in Taiwan

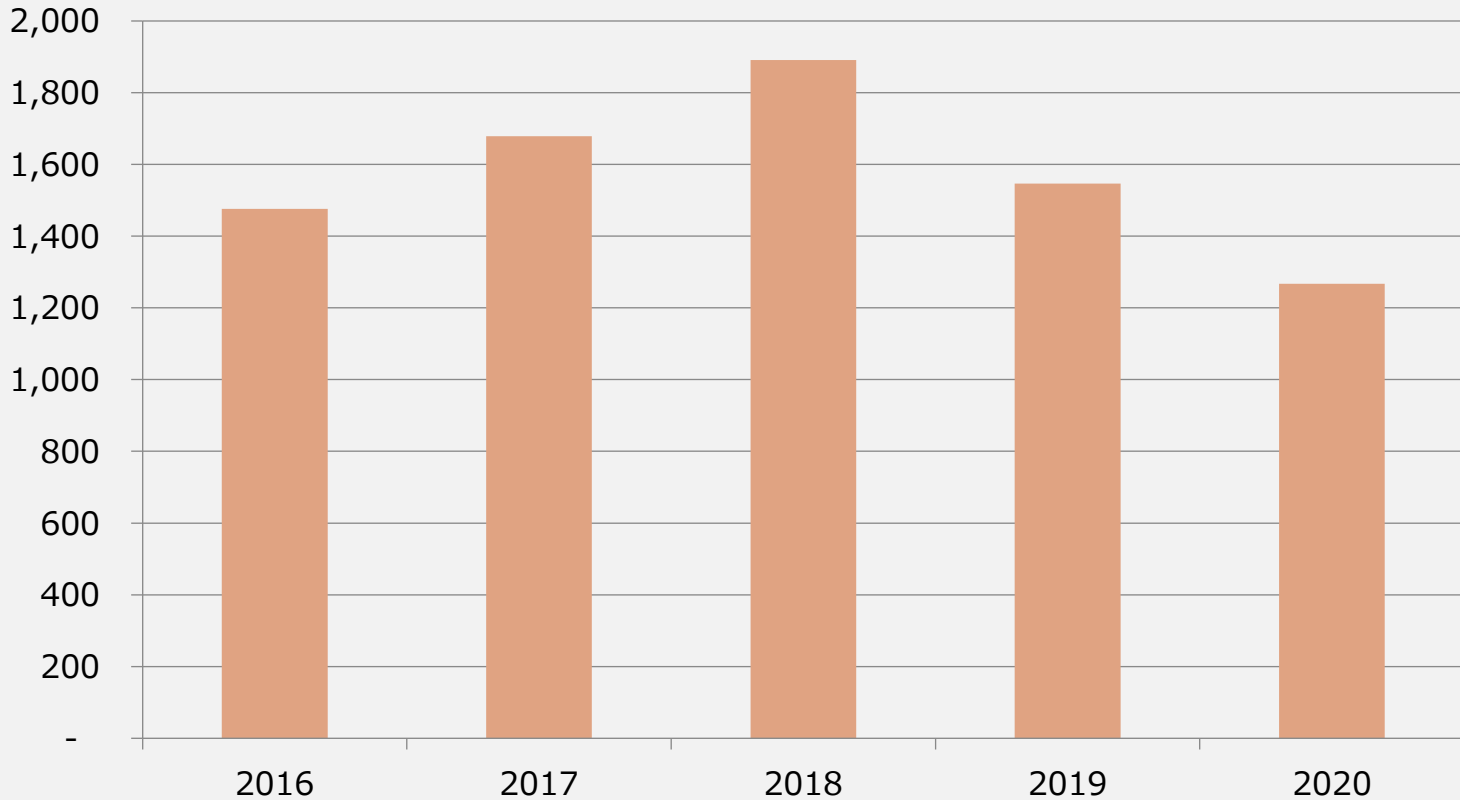
Unit: Billion TWD



Resource: Department of Statistics, MOEA(2021/10)

2016-2020 Production Value of Petrochemical Industry in Taiwan

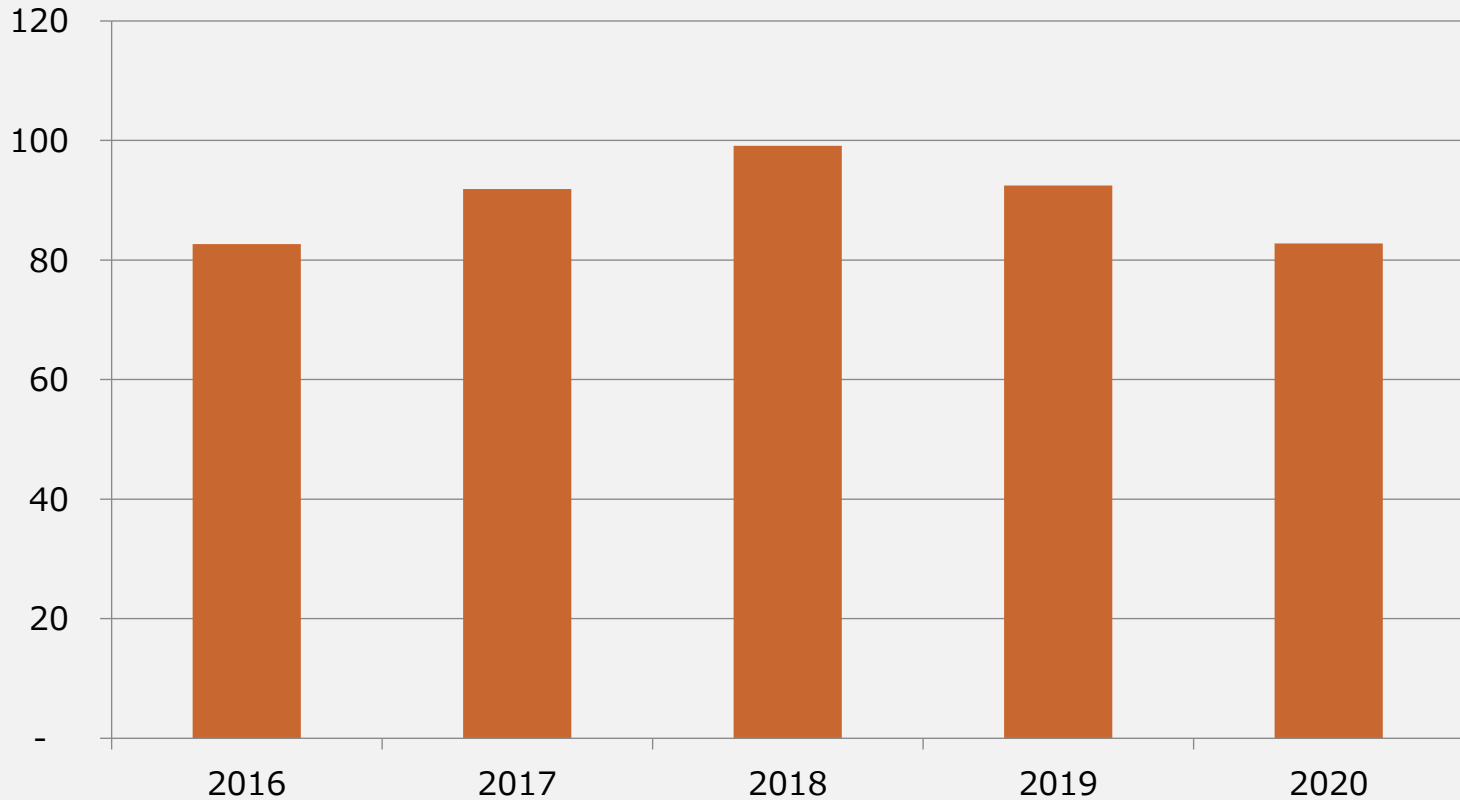
Unit: Billion TWD



Resource: Department of Statistics, MOEA(2021/10)

2016-2020 Production Value of Synthetic Resin Industry in Taiwan

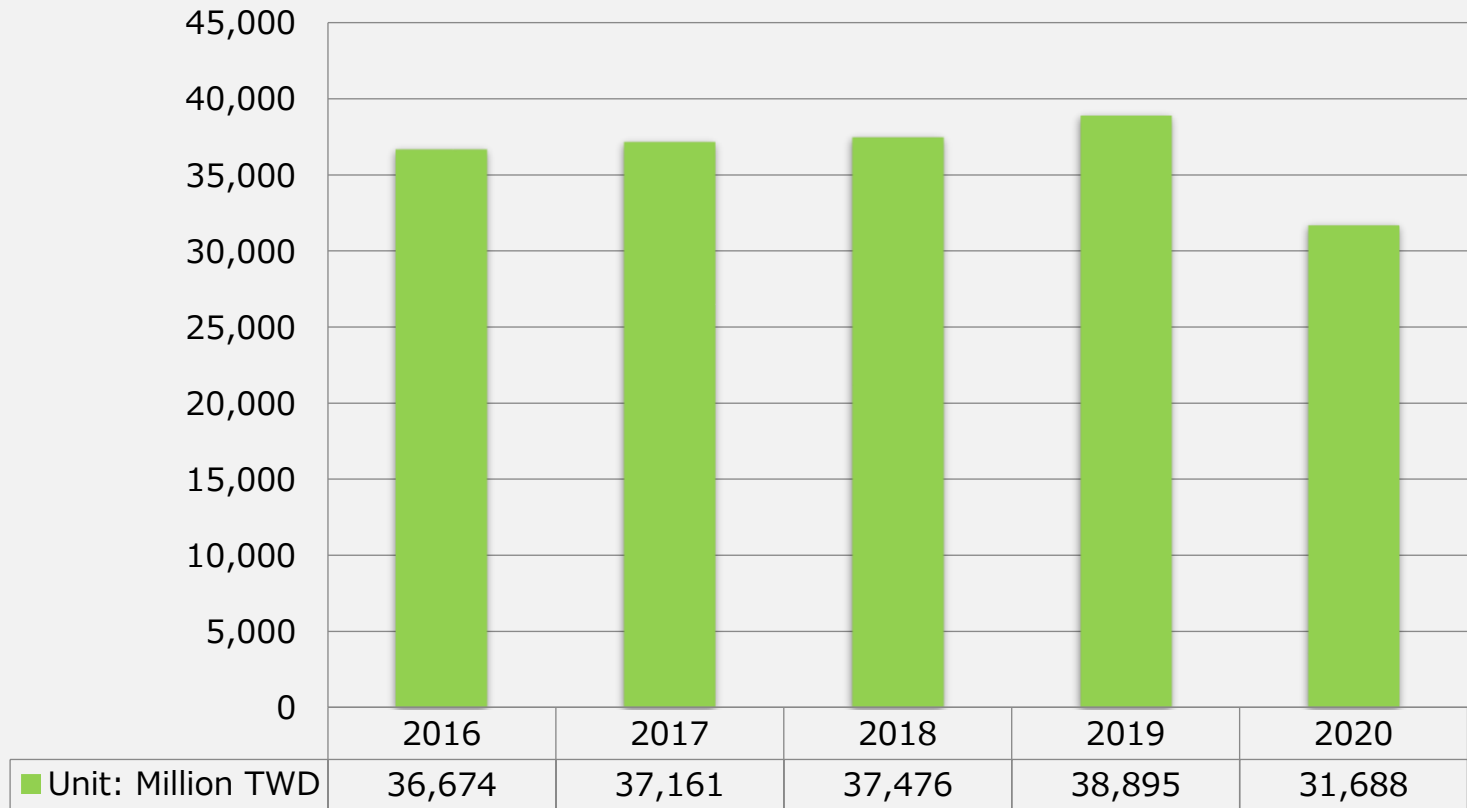
Unit: Billion TWD



Resource: Department of Statistics, MOEA(2021/10)

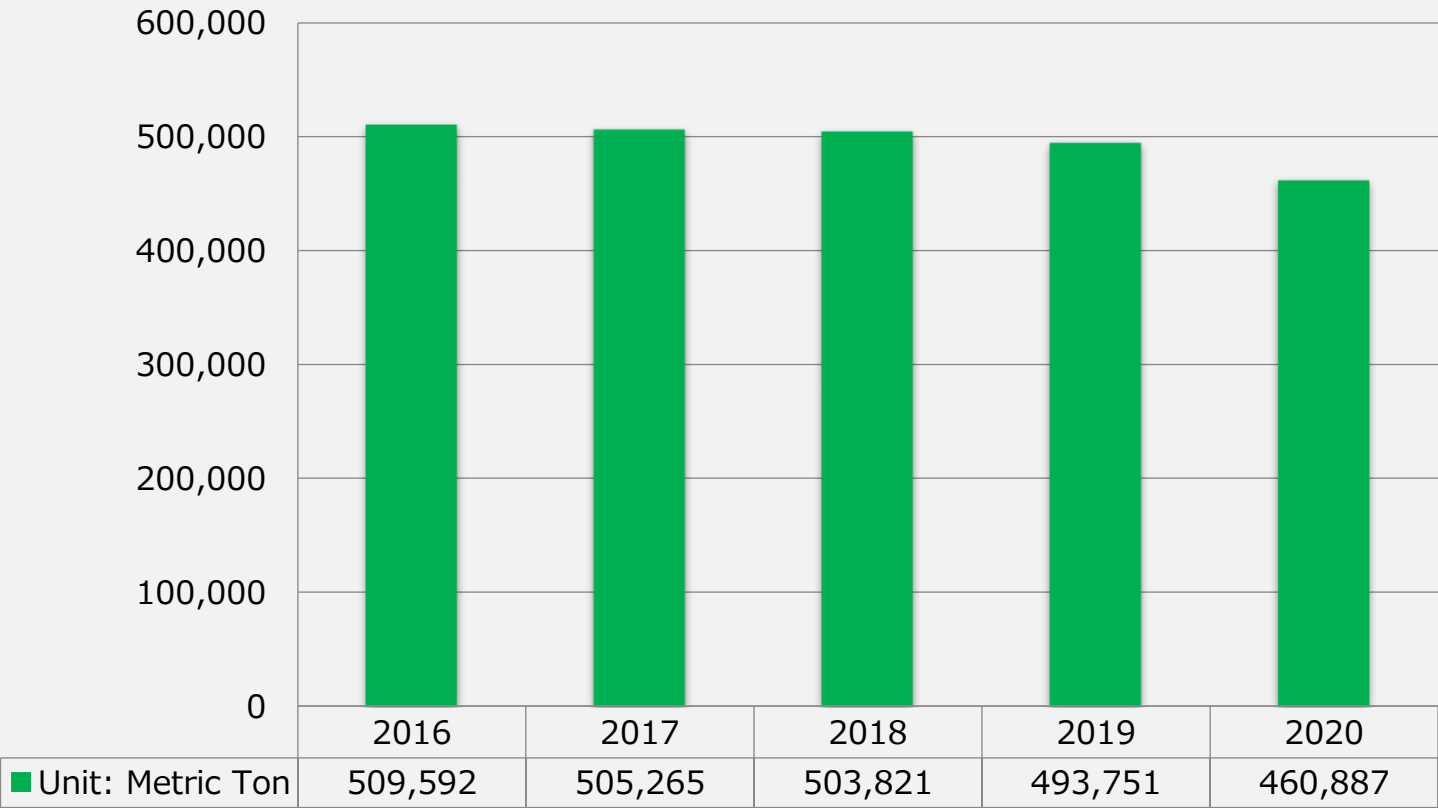
2016-2020 Sales Value of Adhesive Industry in Taiwan

- CAGR during 2016-2020 is -3.59%



2016-2020 Sales Volume of Adhesive Industry in Taiwan

○ CAGR during 2016-2020 is -2.48%



2016-2020 Sales Volume by Adhesive Type

Unit: Metric Ton

| Type | 2016 | 2017 | 2018 | 2019* | 2020* |
|--------------------|----------------|----------------|----------------|----------------|----------------|
| Formaldehyde resin | 47,869 | 46,386 | 46,416 | - | - |
| Solvent-based | 36,692 | 37,675 | 37,980 | 39,873 | 51,801 |
| Reactive | 108,357 | 113,115 | 113,499 | 150,434 | 122,071 |
| Hot melt | 46,886 | 44,128 | 42,921 | 42,063 | 20,577 |
| Water-based | 197,280 | 191,961 | 190,763 | 190,588 | 196,271 |
| PSA | 67,448 | 67,133 | 67,412 | 66,060 | 65,487 |
| Sealant | 5,060 | 4,870 | 4,830 | 4,733 | 3,680 |
| Total | 509,592 | 505,268 | 503,821 | 493,751 | 459,887 |

*In 2019 and 2020, formaldehyde resin has been merged into other adhesive types

2020 Sales Volume by Adhesive Items (1/3)

| Type | Item | Volume (Metric Ton) |
|---------------|--------------------------|------------------------|
| Solvent based | Chloroprene rubber | 8,889 |
| | Polyurethane | 28,857 |
| | Acrylic | 7,958 |
| | Others | 4,953 |
| | Other synthetic rubber | 1,144 |
| | Subtotal | 51,801 |
| Reactive | Epoxy | 113,564 |
| | Cyanoacrylate | 294 |
| | Polyurethane | 2,038 |
| | Formaldehyde condensates | 5,106 |
| | Others | 1,069 |
| | Subtotal | 122,071 |

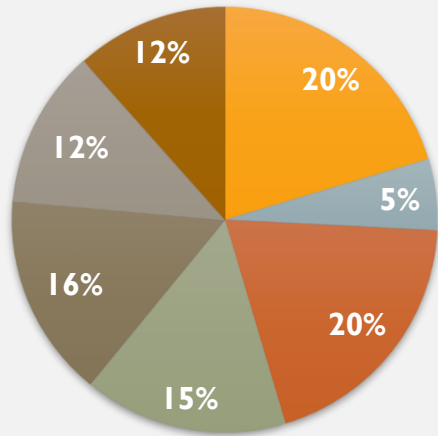
2020 Sales Volume by Adhesive Items (2/3)

| Type | Item | Volume (Metric Ton) |
|-------------|------------------------|------------------------|
| Hot melt | EVA | 14,493 |
| | PA | 1,350 |
| | Synthetic rubber | 4,467 |
| | Polyurethanes | 240 |
| | Others | 27 |
| | Subtotal | 20,577 |
| Water-based | Vinyl acetate | 28,961 |
| | EVA emulsion | 140,918 |
| | Acrylic emulsion | 6,172 |
| | Synthetic rubber latex | 171 |
| | PUD | 18,776 |
| | Others | 1,273 |
| | Subtotal | 196,271 |

2020 Sales Volume by Adhesive Items (3/3)

| Type | Item | Volume (Metric Ton) |
|--------------|-----------------|------------------------|
| PSA | Acrylic | 45,841 |
| | Rubber | 19,646 |
| | Subtotal | 65,487 |
| Sealant | Polysulfide | 53 |
| | Others | 3,627 |
| | Subtotal | 3,680 |
| Total | | 459,887 |

2020 Sales Volume by Adhesive Application



- Paper, Board and Related Products
- Transportation
- Footwear and Leather
- Consumer/Do-It-Yourself (Retail)
- Building/Construction/Civil Engineering/Craftsmen
- Woodworking and Joinery
- Assembly Operations/Other

| No | Market Segment | Consumption (Metric Ton) |
|--------------------------|---|---------------------------|
| 1 | Paper, Board and Related Products | 61,114 |
| 2 | Transportation | 16,177 |
| 3 | Footwear and Leather | 58,717 |
| 4 | Consumer/DIY(Retail) | 46,434 |
| 5 | Building/Construction/Civil Engineering/Craftsmen | 46,445 |
| 6 | Woodworking and Joinery | 35,949 |
| 7 | Assembly Operations/Other | 34,741 |
| Domestic Subtotal | | 299,577 |
| Export Subtotal | | 160,310 |
| Total | | 459,887 |

Summary of Adhesive Market

- ✓ The sales volume of the adhesive industry keeps the same level during 2016-2019. The volume dropped around 6.6% in 2020 due to the impact of the Covid-19 pandemic.
- ✓ The water-based and reactive adhesives occupy nearly 70% market share of total adhesive sales volume in Taiwan 2020. It shows that environmentally friendly and high-performance adhesives are the mainstream in Taiwan's adhesive industry..
- ✓ The main applications of adhesives are majorly used in Paper, Board, and Related Products, secondly are in Footwear and Leather.

Developing Trends of Taiwan's Adhesive Industry

Efficiency
Improvement



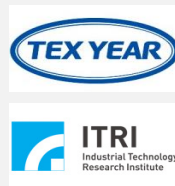
For Example, Nanpao resins planned to introduce AI in production processes.

High
Performance



For Example, Cartell Chemical(MXBON) and Arkema(BOSTIK) formed a new joint venture Crackless Monomer Company(CMC) for high value-added engineering adhesives.

Sustainability



For Example, Tex Year and ITRI collaborated on the Bio-Degradable Adhesive.