

When less is more – how do trends in key raw materials enable thinner, more discreet diapers?

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Davenport International

Strategy & Marketing in Chemicals & Hygiene

The global acrylic acid & SAP experts

- *feasibility studies*
- *competitive evaluation*
- *business & marketing strategy*
- *technology evaluation & sourcing*



What will we discuss today?

- Trends in hygiene markets
- Features of absorbent products
- Focus on China & Asia
- Implications for raw materials

Brief Diaper History

40's – Pauliström – Sweden – creped cellulose core (cotton shortage)/ gauze top sheet

50's Robinson (UK) Paddi Pants

Chicopee (US) Chux 1-piece diaper

60's/70's (US) Pampers/ Luvs/ Kimbies

80's (Japan) Moony/ MamyPoko

1980's birth of 'THIN' diapers

Unicharm/ Kao leading in Japan

P&G follow quickly with Pampers

SAP Enables Thinner Diapers

1980's - SAP high capacity

**1990's - 'core shell' enables AUL
improved skin dryness low wetback**

**2005+ - high permeability SAP enables
use of entire core**

Diaper Innovation

FIT, FORM & FUNCTION

Thinner Diapers

Better performance

- **Comfort, discretion, absorption & leak resistant**

Reduced environmental profile

- **Reduced landfill and raw material**

Lower cost to ship & store

- **Smaller packs & reduced shelf space**

Globally Consumers want:

- Improved skin dryness
- No diaper rash
- Good fit
- No leakage (especially at night)
- High capacity
- Good aesthetics (fashion!)
- Pant like appearance
- Discretion

Short Survey in China

- **Personal recommendation from other mothers is important**
- **Imported brands are trusted most**
MamyPoko, Merries, Pampers, Huggies
- **Boy/ Girl diapers**
- **Thin**
- **Breathable**
- **No diaper rash**
- **No leakage**



This advert illustrates:

- **Fit**
- **Mobility**
- **Dryness**
- **Style!**

But not discretion, though we can see that the diaper is thin



Diaper Innovation

- **SAP still replacing fluff**
- **Cloth like back sheet**
- **ADL layer development**

New diapers 80-100% SAP core

Three possible structures:

A) Pulp free – Polymer Gel & Adhesive

B) Pulp free – no adhesive

C) Preformed (airlaid) core



Major International Brands are Investing in China & the whole Asia region



Investments in China

City	Company	Brands
Guangzhou & Tianjin	P&G	Pampers
Nanjing	Kimberly-Clark	Huggies
Hefei (Anhui)	Kao	Merries
Shanghai & Tianjin	Unicharm	MamyPoko, Moony
Nantong	Diao	Goo
Shanghai & Changzhou	Pigeon	Pigeon
Yangzhou	Ontex	

Other Investments

Country	Company	Activity
Vietnam	Unicharm	Diana
Vietnam	P&G	BinhDuong
Indonesia	Unicharm	Surabaya & Jakarta
Indonesia	P&G	Karawang
India	K-C	Pune
India	P&G	Hyderabad

Overview Of Danson

- ▶ One of the first PRC-based companies to undertake large-scale production of Superabsorbent Polymer in single location
- ▶ Manufacturing facilities located in Yixing Economic Development Zone in Jiangsu Province, PRC
- ▶ A large scale Integrated plant using Most advanced technology
- ▶ R&D team with over 50 persons
- ▶ Modern laboratory for both Application and R&D purpose.
- ▶ An ISO certified company (ISO9001 and ISO14001)
- ▶ Investment capital: USD 300MM

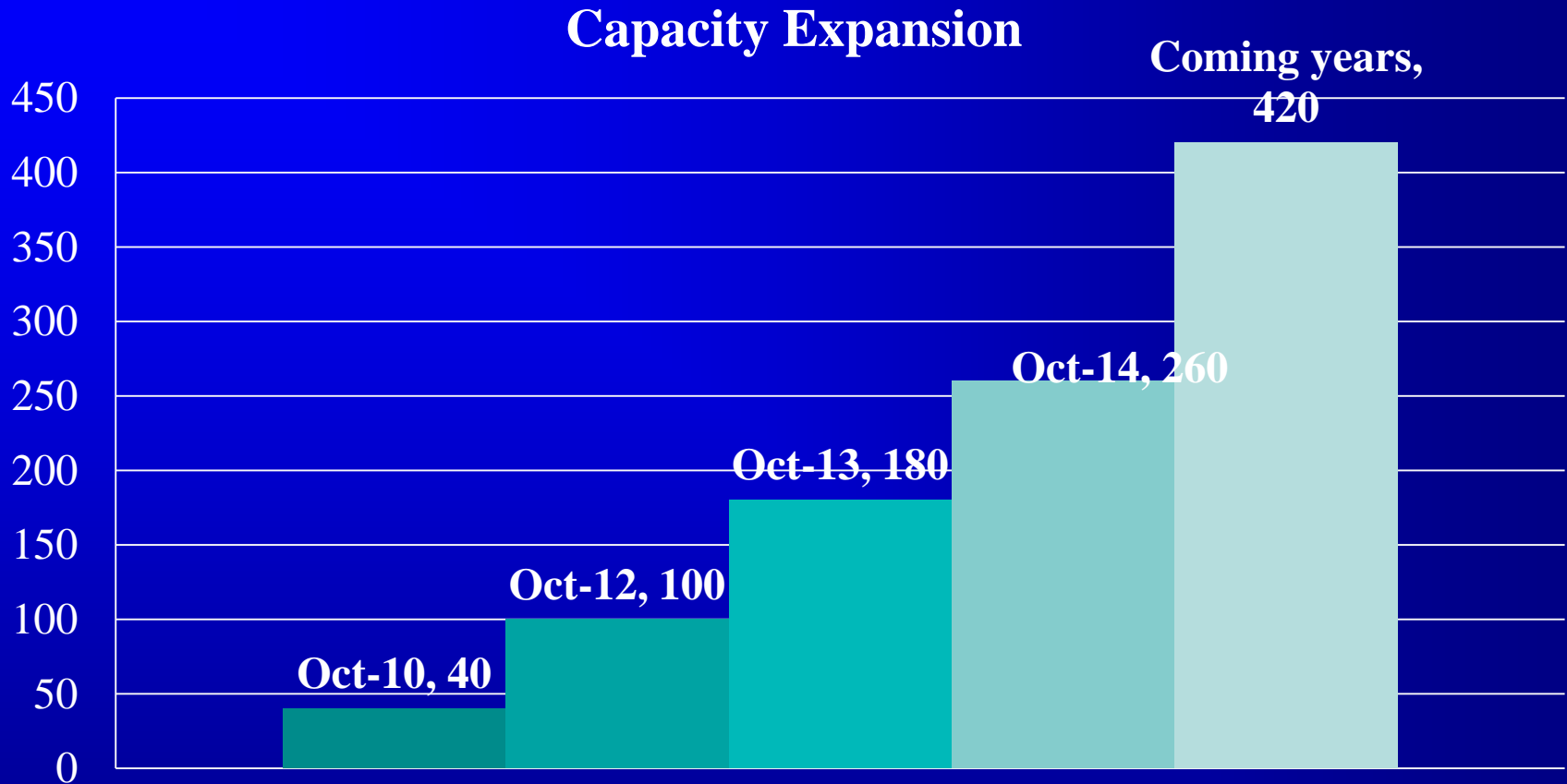


CHINA





A global leader in SAP manufacturing



► **Rapid capacity expansion takes advantage of favorable market conditions - current production capacity of 180,000 Kta. is half of proven capacity in China in 2013**

SVCH. \$I

Sunvic Chemical Holdings Pte
Ltd

Jurong Chemical YanCheng
AA 205 KMT
GAA 80KMT

Jurong Chemical TaiXing
GAA 360KMT



Multiple Growth Initiatives

Production capacity increase

Superabsorbent Polymer production capacities expected to increase up to 420Kmt -Timely with Global continued growth in demand for SAPs, 6% roughly

Establish new App lab in R&D center

To develop intensive partnership with downstream end users

Upstream-new Acrylic acid expansion

To provide us an alternative source of feedstock and reduce our reliance on external sources reap significant savings in raw material costs

Downstream-Hygiene and Industrial App.

To Increase downstream industry coverage to include diaper and nonwoven producers, major consumers of SAP by entry into long-terms supply contracts

Increase overseas market share

To raise brand awareness in overseas markets and reduce our reliance on any single market and economy



New hygiene products need:

- **Highly permeable SAP such as Danson 2289x5 to reduce or eliminate fluff pulp**
- **Sophisticated acquisition/ distribution layers (ADL) (Weyerhaeuser, PGI, other)**
- **High performance hot melt in certain constructions (Bostik, HB Fuller, other)**

Conclusions:

- **Thinner more discreet products require improved performance from all raw materials**
- **Emerging markets are demanding the latest innovations and top tier hygiene disposables**
- **Hot melt, Nonwoven & SAP producers are meeting the challenge of the markets**

THANK YOU

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