PSTC 2007 North American Pressure Sensitive Adhesive Tape Import/Export Market Analysis
PSTC is pleased to offer its members valuable data from the PSTC 2007 North American Pressure Sensitive Adhesive Tape Import/Export Market Analysis.

Study Background
In August 2007, The Martec Group was commissioned by the Pressure Sensitive Tape Council Marketing Industrial Intelligence Committee to conduct an import/export analysis of the North American pressure sensitive adhesive (PSA) tape market. The import/export analysis involved using secondary and primary research methodologies including numerous secondary market studies and government statistics. More than 70 interviews with North American tape producers, raw material suppliers, distributors and equipment OEMs were conducted to ensure complete market coverage.

Key Findings
The study shows that the future growth of imports for PSA tapes (4.1%), accounting for more than 20% of North American consumption, will outpace that of production (3%). This growth will be driven in part by importers targeting higher value specialty tapes as well as foreign producers continuing to pursue new outlets for pressure sensitive tapes. Also,

- 2006 imports of PSA tapes in North America reached ~1.8 billion square meters and $1.4 B
  - Imports are forecasted to grow ~4.1% (vs. overall market growth of 3%)
  - Exports are forecasted to grow ~3.7%
- 2006 exports for PSA tapes in North America are ~600 million square meters and $1.1 B
- Imports are expected to grow in excess of the overall demand in the next five years
  - Importers are targeting higher value specialty tapes – this category will experience the highest growth for imports
  - Importers believe they will achieve higher growth vs. domestic suppliers
- Foreign producers are continuing to pursue new outlets for PSA tape products
  - Key retailers, distributors, North American PSA tape producers – access to market is biggest barrier for importers
  - Increasing usage of own brand vs. private label
  - Continuing to upgrade and expand capabilities
- PSA tape customers continue to be presented with more product options – price, product, distribution
- Consumption is projected to grow 3.3% from 2006 to 2011.
  - Industrial consumption is forecasted to grow 2.2%
  - Specialty consumption is forecasted to grow 8.0%
  - Healthcare consumption is forecasted to grow 11.9%
  - Retail consumption is forecasted to grow 2.7%
- Total imports are projected to grow 4.1% from 2006 to 2011.
  - Industrial imports are forecasted to grow 3.0%
  - Specialty imports are forecasted to grow 11.8%
  - Healthcare imports are forecasted to grow 13.2%
  - Retail imports are forecasted to grow 4.9%
- Key product highlights driving import growth:
  - Packaging and masking tape will continue to be a volume focus for importers
  - Growth for specialty and healthcare imports will also outpace consumption growth as importers begin focusing efforts on higher-value segments and product lines

Using this Study
This research provides PSTC members with key data and raises a number of strategic questions your company should consider regarding the impact of imports and exports on North American PSA tape production. Review the slides that follow and discover how you can use the information to improve your company’s plans going forward.

About The Martec Group
Martec is a technical market research and consulting firm with more than 20 years of experience in the specialty chemical sector. The Martec Group’s global reach and unique approach to market research provide tactical decision support to help clients achieve their strategic business goals. Since 1984, our customized services have accelerated and enhanced client success through in-depth sector expertise, rapid execution and methodologies that are designed to align with our clients’ objectives. Martec previously conducted a North American production analysis of the pressure sensitive tape market in 2006.
2007 NA PS Tape Import/Export Market Analysis

Presented by:
The Martec Group
Bill Lucken and Kate Spindler

Agenda

- Introduction
- Key Takeaways
- Import/Export Analysis
- Future Trends Analysis
The PSTC Industrial Intelligence Committee selected Import/Export as a high priority issue for further evaluation:

- Objectives for this effort included:
  - Import/Export analysis 2007-2012 (Country/region of origin in units & dollars)
    - Following the 2005 market study using market segmentation
      Industrial, Specialty, Healthcare, Retail
  - Supply chain analysis
  - Future trends analysis (drivers & barriers)
  - Key takeaways/questions for PSTC member’s consideration

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Project Timeline

- Mid-August, 2007: Project Kick-off
- September/October: Fieldwork Primary and Secondary Research
- October 26, 2007: Executive Summary Presentation PSTC Annual Meeting
- December, 2007: PSTC Membership Webinar
- January, 2008: Final Report Distributed via CD and hard copy to all members
Martec utilized a ground-up approach in developing this import/export analysis:

Project Methodology
- Select proprietary reports
- Syndicated studies
- Commerce data
- Published articles

~70 Primary interviews with NA tape producers, distributors, raw material suppliers, equipment OEMs

Secondary data
- Data review
- Trends/drivers
- Opportunities/threats

Import/Export Analysis
- View of North American opportunity
- Growth forecasts
- Strategies

Report to PSTC

Agenda
- Introduction
- Key Takeaways
- Import/Export Analysis
- Future Trends Analysis
Key takeaways to the import/export analysis.....

- 2006 Imports of PS tape in North America reached ~1.8 billion square meters and $1.4 B
  - Imports are forecasted to grow ~4.1% (vs. overall market growth of 3%)
  - Exports are forecasted to grow ~3.7%

- 2006 Exports PS tape in North America are ~600 million square meters and $1.1 B

- Imports are expected to grow in excess of the overall demand in the next five years
  - Importers are targeting higher value Specialty tapes...this category will experience the highest growth for imports
  - Importers believe they will achieve higher growth vs. domestic suppliers

- Foreign producers are continuing to pursue new outlets for PS tape products
  - Key retailers, distributors, NA tape producers – access to market is biggest barrier for Importers
  - Increasing usage of own brand vs. private label
  - Continuing to upgrade and expand capabilities

- Tape end customers continue to be presented with more product options.....price product, distribution

Pressure Sensitive Tape Segmentation based upon segmentation established in the 2005 North American Market Analysis

<table>
<thead>
<tr>
<th>Segmentation</th>
<th>Function</th>
<th>Representative examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foams</td>
<td>Nonwovens, cotton, coated cloth</td>
<td>Thermo-sealant, bond, moisture barrier, etc.</td>
</tr>
<tr>
<td>Packaging</td>
<td>Masking, cloth, cloth</td>
<td>Release liners, adhesives, etc.</td>
</tr>
<tr>
<td>PVC Electrical</td>
<td>General purpose electrical tape, harness wrap</td>
<td>Polycarbonate, Polyethylene, Polypropylene, etc.</td>
</tr>
<tr>
<td>Double Coated</td>
<td>General purpose electrical tape, harness wrap</td>
<td>Aluminum, Copper, Foil, etc.</td>
</tr>
<tr>
<td>Transfer Adhesives</td>
<td>General purpose electrical tape, harness wrap</td>
<td>Release liners, adhesives, etc.</td>
</tr>
<tr>
<td>Electronic</td>
<td>General purpose electrical tape, harness wrap</td>
<td>Silver, Copper, Aluminum, Foil, etc.</td>
</tr>
<tr>
<td>Protective Films</td>
<td>General purpose electrical tape, harness wrap</td>
<td>Nylon, Polyethylene, Polyester, Polypropylene, etc.</td>
</tr>
<tr>
<td>Other Film Tapes</td>
<td>General purpose electrical tape, harness wrap</td>
<td>BOPP, Polyester, Polyethylene, etc.</td>
</tr>
<tr>
<td>Rolls</td>
<td>General purpose electrical tape, harness wrap</td>
<td>Polyethylene, Polypropylene, Polyethylene, etc.</td>
</tr>
</tbody>
</table>

NOTE: This is a representative matrix, not an all-encompassing list.
Questions for PSTC membership to consider based upon import/export issues:

- Based on our research analysis, there are a number of strategic questions that PSTC members should consider regarding the impact of imports and exports on North American production:
  - How am I exploring the import threat from offshore suppliers?
  - How will I react to market changes as more end-market manufacturers begin locating their facilities in lower cost regions?
  - Will I consider alliances, joint ventures or direct investment?
  - How am I able to defend my brand locally as imports threaten?
  - How can I continue to differentiate my tape (or raw material) from imports?
  - How can I protect my valuable supply chain relationships in local US markets as importers threaten to penetrate the market?
  - Which products/segments are more likely to be sustainable vs. those which are vulnerable to imports?

Questions for PSTC membership to consider based upon import/export issues:

- Based on our research analysis, there are a number of strategic questions that PSTC members should consider regarding the impact on imports and exports on North American production:
  - Can I leverage the weakening U.S. dollar to expand my exports business?
  - How can I better market the performance differences of my product versus a lower cost alternative?
  - Can I work with other members to create export opportunities in new or emerging regions?
    - Eastern Europe
    - China
    - SE Asia
    - Latin America
There are multiple import scenarios which Martec evaluated in developing this analysis:

Each scenario below represents both a threat and an opportunity for PSTC members
Margin and top line revenue pressures

- **NA Tape Producer imports tape from its own facilities**
  - Sourcing decision
  - Historical operational strategy
  - This is not the classic threat to NA tape producers

- **NA Tape Producer imports tape from a tape producer overseas**
  - May provide just specifications for tape production or the actual “recipe”
  - NA producer may take jumbo rolls and slit or convert
  - Economic drivers
  - Product portfolio extension

- **Foreign Producer sells tape in NA**
  - Go to market via NA tape producer or other distribution network (big box retailer, distributor)
  - May be private label brand or own brand
  - Foreign producer needs market access and some customer relationships
As a starting point, Martec evaluated multiple secondary data inputs prior to the primary research effort:

- There are a number of data sources, both privately and publicly available, which discuss import and export volumes/values for the NA PS tape market:
  - US Department of Commerce
  - Skeist
  - Freedonia
  - GIA
  - SBI
  - Others

- Typical ranges were 15-25% import volume and 5-20% export volume

- These data sources are very inconsistent and often do not define PS tape accurately:
  - Import/Export is not the primary objective of many of these studies
  - Volume and value confusion
  - Unclear definitions in the analysis
  - PS tape gets bundled with other like products

Commerce Data suggest an average annual increase of ~8% over the past 5 years for imports and exports:

U.S. International Trade Statistics
Coated and Laminated Paper

<table>
<thead>
<tr>
<th>Year</th>
<th>Imports</th>
<th>Exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>$1,000</td>
<td>$1,500</td>
</tr>
<tr>
<td>2003</td>
<td>$1,500</td>
<td>$2,000</td>
</tr>
<tr>
<td>2004</td>
<td>$2,000</td>
<td>$2,500</td>
</tr>
<tr>
<td>2005</td>
<td>$2,500</td>
<td>$3,000</td>
</tr>
<tr>
<td>2006</td>
<td>$3,000</td>
<td>$3,500</td>
</tr>
</tbody>
</table>

Year-over-Year Growth
Imports: AAG 7.7%
Exports: AAG 8.1%

Source: U.S. Census Bureau; 2002 – 2006
Exports – F.A.S. Value Basis; Imports – Customs Value Basis
The 2005/2006 NA Tape Study (NA Production) combined with the import/export analysis will deliver a true NA PS tape consumption size:

- The 2005 original market study was based only on NA production.

![Chart showing 2006 NA PS Tape Market Size and NA Import Data](chart1.png)

NA Tape Consumption
8,200 M m²
$9,485 M

NA Import Data
1,765 M m²
$1,410 M

NA Export Data
605 M m²
$1,070 M

Updated 2006 NA PS tape Volume and Value slides in the Appendix

Industrial tape imports make up 20 percent of the North American consumption of PS tapes:

- 2006 Consumption - Volume
  - Specialty: 825 M m² (10%)
  - Healthcare: 310 M m² (4%)
  - Retail: 1,045 M m² (13%)

- 2006 Consumption - Volume Split by Domestic v. Import
  - Domestic Production: 6,435 M m² (78.5%)
  - Industrial: 1,315 M m² (16.0%)
  - Retail: 275 M m² (3.4%)
  - Healthcare: 35 M m² (0.4%)
In 2011, imports will be have grown slightly faster than the North American market representing 26 percent of consumption:

**2011 Consumption - Volume**

- Specialty: 1,315 M m² (13%)
- Healthcare: 550 M m² (6%)
- Retail: 1,195 M m² (12%)
- Industrial: 6,725 M m² (69%)

**2011 Consumption - Volume Split by Domestic v. Import**

- Domestic Production: 7,995 M m² (77.6%)
- Industrial: 1,530 M m² (15.6%)
- Specialty: 245 M m² (3.6%)
- Healthcare: 65 M m² (0.7%)

Total Market = 9,785 M m²

25 percent of all tapes (volume) consumed in NA are imported based upon the following splits:

**2006 Imports - Volume**

- Specialty: 140 M m² (8%)
- Healthcare: 35 M m² (2%)
- Retail: 275 M m² (16%)
- Industrial: 1,315 M m² (74%)

**2006 Imports - Value**

- Healthcare: $375 M (16%)
- Retail: $275 M (27%)
- Specialty: $650 M (38%)
- Industrial: $330 M (19%)

Total Market = 1,765 M m²
21% of consumption volume

Total Market = $1,630 M
17% of consumption value
Over the next five years, Specialty Tape imports will have the largest share increase:

<table>
<thead>
<tr>
<th>Sector</th>
<th>2006 Imports - Volume</th>
<th>2011 Imports - Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthcare</td>
<td>35 M m²</td>
<td>65 M m²</td>
</tr>
<tr>
<td>Industrial</td>
<td>1,315 M m²</td>
<td>1,330 M m²</td>
</tr>
<tr>
<td>Specialty</td>
<td>140 M m²</td>
<td>245 M m²</td>
</tr>
<tr>
<td>Retail</td>
<td>275 M m²</td>
<td>35 M m²</td>
</tr>
</tbody>
</table>

Total Market = 1,765 M m²

5-year AAG 4.1%

Approximately 10 percent of all tapes produced in NA are exported:

<table>
<thead>
<tr>
<th>Sector</th>
<th>2006 Exports - Volume</th>
<th>2006 Exports - Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthcare</td>
<td>40 M m²</td>
<td>$440 M</td>
</tr>
<tr>
<td>Industrial</td>
<td>410 M m²</td>
<td>$100 M</td>
</tr>
<tr>
<td>Specialty</td>
<td>105 M m²</td>
<td>$480 M</td>
</tr>
<tr>
<td>Retail</td>
<td>50 M m²</td>
<td>$50 M</td>
</tr>
</tbody>
</table>

Total Market = ~605 M m²

9% of production volume

Total Market = $1,070 M
12% of production value
The vast majority of industrial tape imports are packaging tapes:

### 2006 Imports

- **Packaging**: 950 M m² (73%)
- **Cloth**: 90 M m² (7%)
- **Masking**: 190 M m² (14%)
- **Electrical**: 85 M m² (6%)

**Total Market**: ~1,315 M m²

### 2006 Production

- **Packaging**: 3,855 M m² (76%)
- **Cloth**: 470 M m² (9%)
- **Masking**: 575 M m² (11%)
- **Electrical**: 215 M m² (4%)

**Total Market**: ~5,115 M m²

Packaging tapes within retail, based upon channel dynamics, have demonstrated strong import growth:

### 2006 Imports

- **Packaging**: 200 M m² (73%)
- **Cloth**: 15 M m² (1%)
- **Masking**: 55 M m² (20%)
- **Other**: 3 M m² (1%)

**Total Market**: ~275 M m²

### 2006 Production

- **Packaging**: 500 M m² (63%)
- **Cloth**: 75 M m² (9%)
- **Other**: 15 M m² (2%)
- **Masking**: 150 M m² (19%)

**Total Market**: ~820 M m²
Healthcare tapes are the smallest import segment based on volume:

### 2006 Imports
- **Sanitary**: 21 M m²
- **Medical**: 11 M m²
- **Other**: 3 M m²

### 2006 Production
- **Sanitary**: 141 M m²
- **Medical**: 38 M m²
- **Medical Device**: 38 M m²
- **Other**: 3 M m²

Total Market = ~35 M m²

*Other includes small amounts of tapes from transdermal, medical device, other.

Double coated tapes (~60% volume) are the largest import segment within Specialty:

### 2006 Imports
- **Double Coated**: 82 M m²
- **Foil**: 16 M m²
- **Other Films**: 23 M m²
- **Protective Films**: 4 M m²
- **Electronic**: 3 M m²

### 2006 Production
- **Double Coated**: 82 M m²
- **Foil**: 16 M m²
- **Protective Films**: 23 M m²
- **Electronic**: 55 M m²
- **Other**: 2 M m²

Total Market = ~140 M m²
### Imports and Exports – Future Outlook Scorecard

<table>
<thead>
<tr>
<th>Segment</th>
<th>2006-2011 Segment CAGR</th>
<th>2006-2011 Import CAGR</th>
<th>2006 Imported Volume (M m²) % of total</th>
<th>2011 Imported Volume (M m²) % of total</th>
<th>2006 Exported Volume (M m²) % of total</th>
<th>2011 Exported Volume (M m²) % of total</th>
<th>2006-2011 Import CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial</td>
<td>~2%</td>
<td>~3-4%</td>
<td>~1,315</td>
<td>74%</td>
<td>~1,530</td>
<td>70%</td>
<td>~9%</td>
</tr>
<tr>
<td>Specialty</td>
<td>~9%</td>
<td>12%+</td>
<td>~1,530</td>
<td>70%</td>
<td>~1,100</td>
<td>68%</td>
<td>~140</td>
</tr>
<tr>
<td>Healthcare</td>
<td>~12%</td>
<td>12-14%</td>
<td>~410</td>
<td>62%</td>
<td>~450</td>
<td>62%</td>
<td>~7%</td>
</tr>
<tr>
<td>Retail</td>
<td>~2%</td>
<td>4-6%</td>
<td>~350</td>
<td>13%</td>
<td>~450</td>
<td>13%</td>
<td>~5%</td>
</tr>
</tbody>
</table>

### North American PSA Tapes – Regional Breakouts

#### Regional Analysis

**2006 Imports - Volume**
- Europe: 21%
- China: 46%
- Taiwan: 13%
- Japan: 8%
- Korea: 8%

**2006 Exports - Volume**
- Europe: 40%
- China: 20%
- Taiwan: 15%
- Korea: 10%
- Japan: 10%

\[\text{Total Market} = 1,765 \text{ M m²} \quad 21\% \text{ of consumption volume}\]

\[\text{Total Market} = ~605 \text{ M m²} \quad 9\% \text{ of production volume}\]

= Future growth trajectory
Raw material inputs tend to be locally sourced for PS tape, thus a smaller amount of import/export behavior:

<table>
<thead>
<tr>
<th>Substrates</th>
<th>Release Coatings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Import estimate: ~10-20%</td>
<td>Import estimate: ~&lt;5%</td>
</tr>
<tr>
<td>Imports: films – highest segment</td>
<td>Limited imports for this category</td>
</tr>
<tr>
<td>Paper – mostly domestic</td>
<td>Limited exports - release liners</td>
</tr>
<tr>
<td>Limited exports</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Adhesives</th>
<th>Cores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Import estimate: ~5-15%</td>
<td>Import estimate: ~&lt;5%</td>
</tr>
<tr>
<td>Imports: base materials for adhesives</td>
<td>Limited imports</td>
</tr>
<tr>
<td>Other key imports: liners</td>
<td>Limited exports</td>
</tr>
<tr>
<td>High-end adhesives – export opportunity</td>
<td></td>
</tr>
<tr>
<td>Some exports used for international captive consumption while manufacturing capacity is built</td>
<td></td>
</tr>
</tbody>
</table>

There is not a strong consensus on the import/export of raw materials.

- "Paper is unique to each region so there is not a lot of shifting because people use different papers in different parts of the world”

- "Key import categories are the base materials for adhesives or films”

- "The largest portion of imported raw materials will be in films and cloths. The films industry which includes packaging and everything – 30% of that is imported”

- "15-20% of the substrate value of the raw materials is imported, but almost nothing on adhesives and coatings”
There is not a strong consensus on the import/export of raw materials.

- "Raw material components tend to be produced locally to support the local customer base – there isn’t a good reason to import or export"

- "Alpha Beta is definitely coating films and adhesives that are being imported here"

- "The films used in manufacturing are probably 50/50 overseas and domestic – PP and PE"

- "Natural rubber is the highest import category – probably 15%"

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**Agenda**

- Introduction
- Key Takeaways
- Import/Export Analysis
- Future Trends Analysis
Tape Industry Import Trends

Asia Manufacturing Growth

- Tape End Customers are shifting operations to Asia and therefore, where possible, choose to source components (including tape) from Asia as well
  - For example, transfer tape for mobile phone production....mobile phones are made in Asia so logically a tape supplier that can supply locally has an advantage
  - Drives tape business and relationships from US to Asia
- "Why should a tape producer make tape in the US and then ship it to their customers in Asia....they can make it more cheaply in Asia anyway even before the shipping costs, be closer to their customers and reap higher profits.”
  - Raw Material Supplier

Price pressure from NA tape end users

- "World is flat"
- Tape, specifically large volume commodity SKUs, can be made more economically in Asia
- As more and more tape customers become familiar with a variety of tape producers and alternative channels, access to more competitive price points is inevitable
- "We used to have nice margins on our business but our customers are being flooded with ‘competitive product’....they don’t want to take away their business but they have a bottom line to worry about too.”
  - NA Tape Producer

Tape Industry Import Trends

Importer increased market presence

- Foreign suppliers continuing to target opportunities in US including:
  - Low cost/ commodity price play primarily into packaging and now retail segments
- Looking for access into US via relationships with NA tape producers, distributors, direct sales to key retailers/ big boxes, equipment OEMs, etc.
  - "We can make the same products as anyone else in the US, but for lower cost ....we just don’t have the market access yet.”
  - Chinese Tape Producer
- "We pay the same for materials and equipment and we can figure out how to mimic most tape SKUs....we have a huge advantage on labor and energy inputs.”
  - Indian Tape Producer

Higher value tapes under attack?

- Importers are beginning to target higher value/ Specialty Tapes
- "Low hanging fruit" of the packaging commodity tapes has been saturated by importers who now look at higher value segments as more attractive
- "There is no way these Asian producers can sell Specialty ....even if they could meet my customer’s specs, they could never deliver on lead times or service requirements.”
  - NA Tape Producer
Tape Industry Import Trends

- A number of foreign tape producers, in further efforts to drive down price points, are increasingly attempting to substitute in local raw materials including captive adhesives and other locally sourced substrates
  - "Some of these producers are claiming that by using their own adhesive, they are offering a higher value tape.....actually the opposite is true.”
    - Global Adhesive Supplier

- While quality continues to be a key value proposition of the NA tape industry, there are several points of debate on this topic
  - Some believe that Foreign (Asian) importers either have or will match product quality for every tape product
  - Others believe that Chinese/ Asian suppliers will never develop higher value tapes due to the demanding technical specifications
  - "This same thing happens in every industry, the Chinese get in with low value/ commodity products, everyone discounts their capabilities and in 10 years they are making world class product.”
    - Industry Expert
  - "The only thing that will eventually separate an Asian tape producer from a US producer (other than the Asian supplier lower cost position) will be access to markets and customer relationships.....that is what we need protect because it is our business.”
    - NA Tape Producer

Tape Industry Import Trends: Comments from Asia Importers

- "We can make any product that US producers can....the challenge for us is getting it to market.”
  - Asian Tape Producer

- "We need information on the US market so we can decide how much to produce and what price to target. Once we begin to understand the market better, we will take even more share.”
  - Asia Tape Producer

- "Most end users or final customers of tape products just do not care where the tape is made or how it’s made. If you can meet or come close to the specs for most tape products, buyers will switch to save money. After all, in most of the end use industries, buyers are very familiar with purchasing products made in Asia. The bottom line is the key and cost pressure faces every company in the world.”
  - Asia Tape Producer

- "I believe our competitors in Europe and US underestimate how well we can make a tape product. We will eventually meet all of the specs and then the only remaining barrier will be access to markets. Once we prove our products, we will begin to find more and more distributor partners.”
  - Asia Tape Producer

- "On barrier is lead times for delivery.....once we get enough volume we can find distribution partners that can warehouse some of the SKUs we will make. This will allow us to penetrate lower volume specialty areas.”
  - Asia Tape Producer
Tape Industry Import Trends

**Distributor Inputs**

- “We are receiving more and more direct communication from importers looking for access into the US markets. We always need to balance quality, reliability, pricing, etc. But, we would be failing our customers and shareholders if we do not at least evaluate these additional supplier options. Ultimately, taking cost out of the system either on our end or our customer’s end will be required to increase profits or at least maintain our position in an increasingly competitive market.”
  - US Distributor

**Future Forecast from Importers**

- “Our imports into the US are expected to grow over 10% per year in the next 5 years. Our prices are lower, our products are competitive and customers don’t care about using a local brand anymore.”
  - Asia Tape Producer

- “We expect some of the US tape producers to partner with us – they have the distribution network and relationships….we can make the tape more cheaply in Asia.”
  - Asia Tape Producer

- “Importers into the US expect local producers to respond by lowering price or moving some operations to Asia. We still have an advantage in production so its only a matter of time before we gain more business in the US.”
  - Asia Tape Producer

Asian tape manufacturers are looking for ways to continue to grow export business:

1. Companies are investing in improving manufacturing equipment to boost capacity

2. Suppliers have also built additional local and offshore operations.

3. Continued focus on the “upscale” markets - specialty

Source: Global Sources, January 2007
Foreign producers are investing in improving manufacturing equipment to boost capacity.

- Alpha Beta Enterprise is concentrating on plant upgrades
  - The company will replace eight of its existing 12 coating lines for OPP tape with six new ones imported from Italy
  - It will still operate four of the older sets, which were purchased locally

- Altogether, Alpha Beta will have a total of 10 OPP tape coating lines
  - While fewer in number, these machines will boost output by 40 percent because of the higher speed and efficiency and the lower defect rate
  - The supplier is also adding another coating system to its three lines for masking tape
  - This step is expected to increase yield on these lines by 40 percent

- Metagalaxy Industries acquired a second coating line that is 30 percent more productive than the initial one

Source: Global Sources, January 2007

Asian suppliers have also built additional local and offshore factories.

- Sanli Adhesive Products (China) set up a new workshop in its factory in Nanhai, Guangdong province
  - The room is for making cotton paper, which is used in the latest releases of double-sided tape

- Zhejiang Xiandai Adhesive Tape purchased BOPP adhesive tape machines that can manufacture longer models with even surfaces

- Meanwhile, several Taiwan makers have relocated to the mainland because of the lower production costs there. Most suppliers are also replacing their old lines with more advanced technology to enhance efficiency

- Sharing the strategy, Chyun Yih Tape is building another offshore facility in Jiangsu province, mainland China, and plans to equip it with four coating lines
  - Currently has one local and three overseas plants
  - Total capacity is forecast to jump by 40 percent during the first half of 2007

- Achem Technology set up a second factory in Guangdong, in addition to its one local and four other plants in the mainland
  - Claim output reached 120 million square meters last year

Source: Global Sources, January 2007
Importers are shifting focus to include the specialty markets...

- In Taiwan, suppliers are also developing specialty tapes such as high-temperature tolerant masking, water-resistant cloth and cover tape. Consequently, exports of products for electronic and computer applications have increased since late 2006/early 2007.

- In China, the majority of companies are concentrating on higher value industrial applications.
  - Many suppliers rely solely on their own R&D in developing new releases.
  - Products carrying in-house brands now account for more than 65 percent of exports to Europe, the US, and East Asia.
  - Some makers are also planning to penetrate upscale markets in South Africa and India.

- Shanghai Yongtai Adhesive Products collaborates with Shanghai University of Science and Technology in new materials development to come up with application-specific tape.

- Shenzhen Zhengxing Adhesive-Product’s R&D is also veering toward high-performance products for the automotive industry.

Source: Global Sources, January 2007

Importers are shifting focus to include the specialty markets (continued).

- For most makers, 30 percent of their latest product intros are OEM designs.
  - Some suppliers cater exclusively to OEM clients.
  - Products are targeted mainly at North America and Europe.

- Metagalaxy is shifting focus from OPP tape to name plates and transfer and double-sided products.
  - The company’s water-resistant tape for heavy-duty sealing is made of cloth imported from South Korea.

- Chyun Yih Tape has also veered away from OPP models and is concentrating instead on cover, masking, polyester and double-sided types for electronic applications.
  - Its latest cover tape is made of heat-activated multilayer PET film, offering stability under extreme temperatures.

- Alpha Beta is developing masking tape for high-technology applications such as IC bonding.
  - This type has a temperature tolerance of 150 to 180°C, compared with standard models that resist only up to 120°C.

Source: Global Sources, January 2007
## Appendix

- Excel Data Tables

<table>
<thead>
<tr>
<th>Segment</th>
<th>2006 Imports</th>
<th>% of total</th>
<th>5-yr AAGR</th>
<th>2011 Imports</th>
<th>% of total</th>
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<tbody>
<tr>
<td>Industrial Tapes</td>
<td>1,315</td>
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<th>% of total</th>
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Dig deeper into study information by participating in two presentations of the PSTC 2007 North American Pressure Sensitive Adhesive Tape Import/Export Market Analysis study information:

**Webinar**
**Thursday, February 21, 2008**
12:00 p.m. CT

**2008 Spring Meeting**
**March 10-11, 2008**
**Washington, D.C.**

Registration information is forthcoming!

*Pressure Sensitive Tape Council*