## II-1.3 Production situation of PVC and PVC compound in China in 2008

#### PVC

According to National Bureau of Statistics of China, China's PVC output is only tonnes in Oct. 2008, down 19.4% over the last month and 32.88% over Oct. 2007. And the total PVC output in Jan. ~ Oct. 2008 is tonnes with growth rate of only 1.06% over the same period in 2007. The growth rate of accumulated PVC output has reduced continuously from April 2008.

|                |           |           |             |               |               | - /         |
|----------------|-----------|-----------|-------------|---------------|---------------|-------------|
| Province/city  | Oct. 2008 | Oct. 2007 | Growth rate | Jan~Oct. 2008 | Jan~Oct. 2007 | Growth rate |
| Tianjin        |           |           |             |               |               |             |
| Shandong       |           |           |             |               |               |             |
| Henan          |           |           |             |               |               |             |
| Zhejiang       |           |           |             |               |               |             |
| Jiangsu        |           |           |             |               |               |             |
| Shanxi         |           |           |             |               |               |             |
| Inner Mongolia |           |           |             |               | 365,582       |             |
| Hebei          |           |           |             |               | 324,099       |             |
| Shanghai       |           |           |             |               | 262,560       |             |
| Guangdong      |           |           |             |               |               |             |
| Hubei          |           |           |             |               |               |             |
| Liaoning       |           |           |             |               |               |             |
| Hunan          |           |           |             |               |               |             |
| Anhui          |           |           |             |               |               |             |
| Jilin          |           |           |             |               |               |             |
| Fujian         |           |           |             |               |               |             |
| Heilongjiang   |           |           |             |               |               |             |
| Jiangxi        |           |           |             |               |               |             |
| Beijing        |           |           |             |               |               |             |
| Others         |           |           |             |               |               |             |
| Total          |           |           |             |               |               | 1.069       |

Table II-1.3-1 Production situation of PVC in China by province in 2007-2008 (tonne)

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# II-3 Major PVC compound players in China

There are active PVC manufacturers in 2007 with capacity of **active product**/a. The detailed information is shown in the following table. Table II-3-2 Overview of PVC manufacturers in China-2

| No.      | Abbreviation | Pathway    | Raw material              |      | Capacity (t/a) |         | Output (t) |         |
|----------|--------------|------------|---------------------------|------|----------------|---------|------------|---------|
| NO.      | Abbreviation | Falliway   | Naw material              | 2008 | 2007           | 2006    | 2007       | 2006    |
| IX-1.1   |              | Suspension | Calcium carbide, VCM, EDC |      |                |         |            |         |
| IX-1.2   |              | Suspension | Ethylene                  |      |                |         |            |         |
| IX-1.3   |              | Suspension | VCM                       |      |                |         |            |         |
|          |              |            |                           |      |                |         |            |         |
| IX-1.100 |              | Suspension | Calcium carbide           |      |                |         |            |         |
| IX-1.101 |              | Suspension | Calcium carbide           |      |                |         |            |         |
| IX-1.102 |              | Suspension | Calcium carbide           |      |                |         |            |         |
| IX-3.1   |              | Suspension | Calcium carbide           |      |                |         |            |         |
| IX-3.2   |              | Suspension | Calcium carbide           |      |                |         |            |         |
|          |              |            |                           |      |                |         |            |         |
| IX-3.8   |              | Suspension | Calcium carbide           |      |                |         |            |         |
| IX-3.9   |              | Suspension | Ethylene dichloride, VCM  |      |                |         |            |         |
| IX-3.10  |              | Suspension | Calcium carbide           |      |                |         |            |         |
| IX-4.1   |              | Suspension | Ethylene                  |      | 160,000        | 160,000 | 86,372     | 145,408 |
| IX-4.2   |              | Suspension | VCM                       |      |                |         |            |         |
| IX-4.3   |              | Suspension | Calcium carbide           |      |                |         |            |         |
|          |              | Total      |                           |      |                |         |            |         |





There are thousands of PVC compound manufacturers in China, most of which only have small-scale production. Most of these manufacturers produce PVC compound for cable and electrical wire. Toy industry is the second largest consumption field of PVC compound in China.

# II-3.1 Industry concentration

#### Capacity

China's PVC industry has low industry concentration ratio. The PVC capacity of top 5 global PVC producers capture about 28.48% of the world' total, but the top 5 in China has total capacity of **about t**/a, only capturing **about** % of China's total in 2007.

| Capacity (1,000t/a) | Number of manufacturer |      |      | Capacity (1,000t/a) |      |      | Share   |         |         |
|---------------------|------------------------|------|------|---------------------|------|------|---------|---------|---------|
|                     | 2008                   | 2007 | 2006 | 2008                | 2007 | 2006 | 2008    | 2007    | 2006    |
| Capacity≥500        |                        |      |      |                     |      |      |         |         |         |
| 400≪Capacity<500    |                        |      |      |                     |      |      |         |         |         |
| 300≪Capacity<400    |                        |      |      |                     |      |      |         |         |         |
| 200≪Capacity<300    |                        |      |      |                     |      |      |         |         |         |
| 100≪Capacity<200    |                        |      |      |                     |      |      |         |         |         |
| Capacity<100        |                        |      |      |                     |      |      |         |         |         |
| Total               |                        |      |      |                     |      |      | 100.00% | 100.00% | 100.00% |

Table II-3.1-1 Distribution of PVC capacity and share in China, 2006-2008

# II-4 New projects of PVC and PVC compound under construction or projects to be constructed

The PVC manufacturers listed in the following table are only the new enters. There are also some existed PVC manufacturers plan to enlarge their capacity but only when the PVC market is good.



Table II-4-3 New PVC projects after 2009 (Unit: 1,000t/a)

#### II-6.1 Forecast on the PVC production in the next 5~10 years

#### - Development trends

Table II-6.1-1 Trends influencing the PVC development in China



Table II-6.1-2 Historical growth of PVC production and consumption, 2003~2007

|                    | 2003 | 2004 | 2005 | 2006 | 2007 |  |
|--------------------|------|------|------|------|------|--|
| Output growth      |      |      |      |      |      |  |
| Consumption growth |      |      |      |      |      |  |

Figure II-6.1-1 Forecast on PVC production in China, 2008~2018

## III-2.1 Overview of PVC consumption in China

|                            | Con             |                 |       |       |  |
|----------------------------|-----------------|-----------------|-------|-------|--|
| Item                       | PVC resin       | PVC<br>compound | Total | Share |  |
|                            |                 |                 |       |       |  |
|                            | Total           |                 |       |       |  |
|                            | Pipe            |                 |       |       |  |
| Rigid PVC products         | Window profiles |                 |       |       |  |
|                            | Plate & sheet   |                 |       |       |  |
|                            | Others          |                 |       |       |  |
|                            | Total           |                 |       |       |  |
|                            | Film            |                 |       |       |  |
| Soft PVC products          | Leather         |                 |       |       |  |
|                            | Shoe            |                 |       |       |  |
|                            | Cable           |                 |       |       |  |
|                            | Others          |                 |       |       |  |
| Total consumption, (not co |                 |                 |       |       |  |
| and export of PVC product  | s)              |                 |       |       |  |

| Table III-2.1-1 PVC consumption in China in 2007, break down I | by different end -use segment |
|--|-------------------------------|

# III-2.4 Forecast on PVC and PVC compound demand in China

# ✓ Forecast on PVC market size in China in 2008~2018

| Table III-2.4-1 Tren | ds influencing the | development of PVC |
|----------------------|--------------------|--------------------|
|----------------------|--------------------|--------------------|



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|                 | 2007 | 2008 | 2013 | 2018 | CAGR 08~13 | CAGR 13~18 |
|-----------------|------|------|------|------|------------|------------|
| High growth     |      |      |      |      |            |            |
| Expected growth |      |      |      |      |            |            |
| Low growth      |      |      |      |      |            |            |

Figure III-2.4-1 Future forecast on PVC consumption in China in 2008~2018