Market Report

World Pigment Market

Latest update: September, 2010
Publish date: December, 2007
Publisher: Acmite Market Intelligence
Language: English
Pages: ca. 560 pages
Price: from 1190 Euro

Abstract

Global demand on pigments was estimated at roughly US$20.5 billion in 2009, around 1.5-2% up from the previous year. It is predicted to increase in a stable growth rate in the coming years. The world sales will increase to US$ 24.5 billion in 2015, and reach US$ 27.5 billion in 2018.

Pigment producers, particularly those for high performance pigments are facing market restructuring and price adjustment as market leaders are looking for measures to keep margin and to strengthen market position.

Acmite Market Intelligence has finished the latest update on the world pigment market report. It is ready for order.

The study examines the current market structure and application areas, provides extensive market data of 2009, and market forecast through 2012 to 2018. It also outlines the competition landscape, evaluates market chances and risks and anticipates future trends based on a series of influence factors.

- Ca. 230 pages analyzing the market
- Ca. 60 figure tables
- Ca. 280 leading manufacturers profiled

With a multi-dimensional and in-depth view of world surfactant market, this report is ideal help for you with decisions about international market penetration, business expansion or project feasibility analysis.
# Table of Contents

## Volume I

1. Definition ................................................................. 1
   1.1 Colorants ........................................................... 1
   1.2 Pigment ............................................................... 1
   1.3 Dyestuff ............................................................... 2
   1.4 Pigment and dye ................................................... 2
   1.5 Pigments and fillers ............................................... 3

2. Segmentation ............................................................... 5
   2.1 Inorganic pigments ............................................... 5
   2.2 Organic pigments .................................................. 6
   2.3 Specialty pigments ................................................ 7
   2.4 Pigment characteristics .......................................... 8

3. Macro-environment ..................................................... 11
   3.1 Trends in the world economy and the chemical industry .... 11
   3.2 The chemical industry ............................................ 15
   3.3 Industry concentration ........................................... 18
   3.4 Laws and legislations concerning chemical industry ......... 20

4. Pigment market ........................................................... 23
   4.1 Market data .......................................................... 23
      4.1.1 World pigment market overview ........................ 23
      4.1.2 World pigment production ............................... 27
      4.1.4 World pigment market by type .......................... 49
   4.2 Market trends and chances ....................................... 53
   4.3 Market drivers and opportunities ............................... 59
   4.4 Market restraints and challenges .............................. 64
   4.5 Innovations and technologies .................................. 68
   4.6 Competition situation of pigment market .................... 74
4.7 Measures of pigment producers to meet industry challenges.......................... 78

5. Product........................................................................................................... 85
  5.1 General properties of pigments ................................................................. 85
  5.2 Inorganics vs. organics................................................................................ 86
  5.3 Inorganic pigments .................................................................................... 88
  5.3.1 Important properties of inorganic pigments .......................................... 88
  5.3.2 White pigments ..................................................................................... 92
    5.3.2.1 Titanium dioxide (TiO2) pigments .................................................... 94
      5.3.2.1.1 Titanium dioxide (TiO2) overview ............................................. 94
      5.3.2.1.2 World production of TiO2 pigment by process ......................... 97
      5.3.2.1.3 World TiO2 production capacity by region ......................... 98
      5.3.2.1.4 World TiO2 pigment consumption by region .................... 100
    5.3.2.2 Zinc sulfide pigments ..................................................................... 108
    5.3.2.3 Zinc oxide (ZnO, Zinc White) .......................................................... 110
  5.3.3 Black pigment ....................................................................................... 111
    5.3.3.1 Carbon black pigment market ........................................................ 111
    5.3.3.2 Black pigment market by application .............................................. 113
    5.3.3.3 Other black pigments ..................................................................... 116
  5.3.4 Inorganic color pigments ....................................................................... 117
    5.3.4.1 Classification of inorganic color pigments ...................................... 117
    5.3.4.2 World market of color pigment ....................................................... 119
    5.3.4.3 World market of inorganic color pigments ..................................... 125
    5.3.4.4 Iron oxide pigments ....................................................................... 130
      5.3.4.4.1 World iron oxide pigment production by type ...................... 132
      5.3.4.4.2 World Iron Oxide pigment production by region .................. 134
      5.3.4.4.3 World iron oxide pigment market by region ....................... 136
      5.3.4.4.4 World Iron oxide pigment market by application .................. 138
    5.3.4.5 Chromium oxide pigment ............................................................... 140
5.3.4.5.1 Products, properties and uses ................................................................. 140
5.3.4.5.2 World market and application of chromium oxide pigment ........... 142
5.3.4.6 Complex inorganic pigments / mixed metal oxide pigments (MMO) 144
  5.3.4.6.1 Products, properties and uses .............................................................. 144
  5.3.4.6.2 World market and application of MMO pigments ......................... 146
5.3.4.7 Chromate pigments .................................................................................... 148
  5.3.4.7.1 Products, properties and uses .............................................................. 148
  5.3.4.7.2 World market and applications of chromate pigments .................. 149
5.3.4.8 Other inorganic color pigments ................................................................. 151

5.4 Organic pigments ............................................................................................. 152
  5.4.1 Azo pigments ............................................................................................... 155
    5.4.1.1 Products, properties and uses .............................................................. 155
    5.4.1.2 World market and application of azo pigments ............................. 156
    5.4.1.3 Monoazo yellow and orange pigments .......................................... 159
    5.4.1.4 Disazo pigments ................................................................................. 160
    5.4.1.5 β-Naphthol pigments ....................................................................... 163
    5.4.1.6 Naphthol AS pigments ..................................................................... 164
    5.4.1.7 Benzimidazolone pigments ................................................................. 165
    5.4.1.8 Disazo condensation pigments ............................................................ 167
  5.4.2 Polycyclic pigments (Nonazo pigments) .................................................... 169
    5.4.2.1 World market and application of polycyclic pigments ................. 169
    5.4.2.2 Phthalocyanine pigments ................................................................. 173
    5.4.2.3 Quinacridone pigments ................................................................... 175
    5.4.2.4 Perylene and perinone pigments ....................................................... 176
    5.4.2.5 Other polycyclic pigments ................................................................. 178
  5.4.3 Other organic pigments ............................................................................... 179

6. Applications .......................................................................................................... 181
  6.1 Application overview ....................................................................................... 181
  6.2 Pigment demand by application field ............................................................ 183
    6.2.1 World pigment market by application ................................................. 183
6.2.2 Pigment market by application in the Western Europe ..................... 186
6.2.3 Pigment market by application in North America .......................... 188
6.2.4 Pigment market by application in Japan ..................................... 190
6.3 Paints & coatings ........................................................................... 194
6.3.1 Definition and application: .......................................................... 194
6.3.2 Market size and forecast ............................................................... 197
6.3.3 Market trends, chances and risks .................................................. 202
6.4 Printing inks .................................................................................. 205
6.4.1 Definition and applications .......................................................... 205
6.4.2 Market size and forecast ............................................................... 208
6.4.3 Market trends, chances and risks .................................................. 215
6.5 Plastics and rubber ....................................................................... 217
6.5.1 Definition and applications .......................................................... 217
6.5.2 Market size and forecast ............................................................... 220
6.5.3 Market trends, chances and risks .................................................. 225
6.6 Other application fields ................................................................. 227
6.6.1 Paper and paperboard ................................................................. 227
6.6.2 Textiles and leather ................................................................. 228
6.6.3 Cosmetics and toiletries ............................................................. 230

Volume II

Company profiles (ca. 280) .......................................................... 1-331
SAMPLE READING

65% in the top 35 countries, internet advertisement is more important than any other ways of advertisement, e.g. magazine, newspaper. A large part of promotion budget flows to internet, resulting in lower growth for printing advertisement which is traditionally a high profit business for pigment users.

Negative effects of REACH

Although REACH is designed to bring benefits to society and industry and create new innovations and products, it has also negative effects for chemical industry.

a. Crowding out of R&D-capacity

Especially smaller companies have a limited number of employees for product development. It is thought that these employees will work on filling in REACH files instead of developing new products.

b. Less substances available for research

There are two reasons why REACH will result in a decrease of a number of substances that can be used for R&D. First of all there are substances that have negative effects on health and the environment; these will not be authorised or only be allowed for certain uses. Secondly some chemical companies will decide to take some low volume substances from the market, because of administrative and test costs. This rationalisation of the portfolio results in less substances in the toolbox of chemists, who want to use them to make new products. (EU2004 REACH: The Impact of REACH on Society and Business)

c. Extra costs loaded on pigment producers

The costs include pre-registration costs, costs of testing, costs of chemical safety assessment, registration costs.

Other main concern of the colorants industry regarding REACH is that REACH is too bureaucratic and complex; and would have a disproportionate cost impact on the pigment sector.

… ....

(Vol I, Page 66)
### Iron Oxide pigment production by region in thousand tones

<table>
<thead>
<tr>
<th>Region</th>
<th>2009</th>
<th>2010</th>
<th>2012</th>
<th>AAGR</th>
<th>2015</th>
<th>2018</th>
<th>AAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>W. Europe</td>
<td>290</td>
<td>293</td>
<td>298</td>
<td>1.2%</td>
<td>323</td>
<td>349</td>
<td>2.5%</td>
</tr>
<tr>
<td>N. America</td>
<td>145</td>
<td>146</td>
<td>148</td>
<td>1.0%</td>
<td>159</td>
<td>171</td>
<td>2.3%</td>
</tr>
<tr>
<td>Japan</td>
<td>85</td>
<td>85</td>
<td>86</td>
<td>1.0%</td>
<td>92</td>
<td>99</td>
<td>2.1%</td>
</tr>
<tr>
<td>Asia Pacific*</td>
<td>580</td>
<td>596</td>
<td>630</td>
<td>3.1%</td>
<td>723</td>
<td>829</td>
<td>4.5%</td>
</tr>
<tr>
<td>ROW</td>
<td>109</td>
<td>110</td>
<td>114</td>
<td>1.8%</td>
<td>127</td>
<td>141</td>
<td>3.5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1207</strong></td>
<td><strong>1230</strong></td>
<td><strong>1276</strong></td>
<td><strong>2.0%</strong></td>
<td><strong>1425</strong></td>
<td><strong>1589</strong></td>
<td><strong>3.6%</strong></td>
</tr>
</tbody>
</table>

### World iron oxide pigment production by region in volume 2009

- **W. Europe**: 24%
- **N. America**: 12%
- **Asia Pacific***: 48%
- **Japan**: 7%
- **ROW**: 9%

### World iron oxide pigment production by region in thousand tonnes

![World iron oxide pigment production by region in thousand tonnes chart]

(Vol I, Page 134)
6.4 Printing inks

6.4.1 Definition and applications

Printing ink is a semisolid colored or pigmented quick drying ink made especially for use in printing. Inks are generally made from following materials, available in many variations.

- a colorant, namely a pigment or dye;
- a carrying vehicle, usually petroleum or vegetable oils, solvents, or water;
- resin binders;
- additives such as wetting agents, waxes
- driers

Pigments account for about 10% of printing ink shipments by weight, but they account for a more significant share of the cost. Carbon black is the single largest type of pigment used in printing ink, accounting for about 70% of printing pigment volume, while the more expensive organics, including azos and phthalocyanines, dominate in value. Specialty pigments are used in part for creating specific effects, representing a small but fast-growing market.

Printing inks are mainly applied in publishing printing, commercial printing and packaging printing. Packaging customers are the most demanding. There are always requirements for unique color and tone so as to achieve visual impact and product differentiation. Although printing ink as whole grows by a rate almost lower than GDP growth, there is fast increasing demand in niche application fields such as security printing, anticounterfeiting printing, and etc.

The printing process is an industry-intern influence factors for the ink makers. There are five general classes of printing processes:

- relief printing, which includes letterpress and flexography
- ... ...

(Vol I, Page 205)
Sanyo Color Works Ltd. (Japan)
3rd Floor, No 13 Chuo Bldg,
10-2 4-Chome, Honcho, Nihonbashi, Chuoku
Tokyo 103-0023
Japan
Phone: +81 3 3663 3401
Fax: +81 3 3661 3016
http://www.sanyocolor.jp

Year of Foundation: 1931
Number of Employees: more than 300
Revenue: JPY 8,600 million (2009)

Company profile

Sanyo Color Works Ltd. is the first organic pigment manufacturer in Japan. The company supplies pigments and colorants for ink, paint, textile, plastic field, and also provides the digital device field with special functional pigment and NANO-meter sized dispersion technology.

Sanyo Color Works Ltd. manufactures the following pigments:

- Organic pigments in paste or powder form:
  - Azo pigment: Red, Yellow, Orange
  - Phthalocyanine pigment: Blue, Green
  - Dioxazine pigment: Violet
  - Phthalocyanine dye: Blue

- Non Water-based processing pigments (Processed organic / inorganic pigments dispersed in rubber, PMMA resin etc.):
  - For rubber: PIGMOTEX COLOR
  - For PVC: SOPROTONER COLOR

... ... (Vol.II, Page 260)
Please return this form

Via Fax: +49-2102-8761 471 or
Via Email: market@acmite.com or
Via Post: Acmite Market Intelligence / Dechenstr 17, 40878 Ratingen, Germany

If you have any question please email to: market@acmite.com

<table>
<thead>
<tr>
<th>Code</th>
<th>Product</th>
<th>Page</th>
<th>Price Hardcopy</th>
<th>Price Hardcopy+CD</th>
</tr>
</thead>
<tbody>
<tr>
<td>C4621</td>
<td>World Pigment Market, Volume I</td>
<td>Ca. 230</td>
<td>☐ EUR 1190</td>
<td>☐ EUR 1390</td>
</tr>
<tr>
<td>C4622</td>
<td>World Pigment Market, Volume II</td>
<td>Ca. 330</td>
<td>☐ EUR 590</td>
<td>☐ EUR 690</td>
</tr>
<tr>
<td>C4620</td>
<td>World Pigment Market, Total(Volume I + II)</td>
<td>Ca. 560</td>
<td>☐ EUR 1590</td>
<td>☐ EUR 1790</td>
</tr>
<tr>
<td><strong>Sum</strong></td>
<td></td>
<td></td>
<td>☐ EUR</td>
<td>☐ EUR</td>
</tr>
</tbody>
</table>

Company: ___________________________  Contact Person:  Mr ☐ Ms ☐ Dr ☐
Address: ___________________________  Name: ___________________________
               ___________________________  Position/Dept.: ___________________________
Zip Code: ___________________________  Phone: ___________________________
Country: ___________________________  Fax: ___________________________
Homepage: ___________________________  Email: ___________________________

Date: ___________________________  Signature: ___________________________