

ASIA IS A BUSINESS IMPERATIVE... NOW MORE THAN EVER

# ASIAN SPECIALTY CHEMICALS NEWSLETTER

Issue 17, February 2000

A bimonthly newsletter of developments in the chemicals sector

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## INTRODUCTION

Prospects for growth in the specialty chemicals industry for 2000 seem solid as industry players continue to consolidate and restructure. Global M&A transactions in the industry totaled more than US\$40bn in 1999.

We hope that you find *Asian Specialty Chemicals Newsletter* informative. BDA is a corporate finance advisory firm which helps clients to identify and execute acquisitions and JVs in Asia. If you think that BDA's services may be useful to you, please contact us in New York at (212) 265-5300 or in Singapore at (65) 533-8500.

Euan Rellie  
Managing Director

## CHINA/HK

**Akzo Nobel** of the Netherlands plans to build a US\$21m monochloroacetic acid (MCA) plant in the Taixing Economic Development Area in Jiangsu Province. Construction will begin in June 2000. The plant will be operated as a wholly-owned, foreign enterprise with a capacity of 25,000tpa. MCA is a feedstock for pharmaceuticals, agrochemicals, carboxymethylcellulose (CMC) and surfactants. Demand for MCA in China is expected to increase significantly in 2000. (January 1, 2000)

**Acrylic Fiber**, a subsidiary of **Anqing Petrochemical** of China, has begun commercial production of acrylic fibers at its new 15,000tpa plant. The company has increased efficiency and improved process technology at its main Anqing plant, resulting in a capacity increase of 5,000tpa. Total investment in both projects was ¥109.0m (US\$13m). (January 12, 2000)

**BASF AG** of Germany, **Huntsman Polyurethanes** of the US and **Nippon Polyurethane Industry** of Japan have completed a feasibility study on the construction of a 160,000tpa crude MDI factory in the Shanghai Industrial Park in Caojing, China. In another development project, BASF and an undisclosed Chinese partner plan to invest in a 130,000tpa toluene di-isocyanate (TDI) facility. (January 1, 2000)

**Fushun Petrochemical** and the **Dalian Institute of Chemistry and Physics** have registered a patent for a jointly developed solid catalyst technology that is used in the manufacture of linear alkylbenzene

(LAB). An alternative to commonly used hydrofluoric acid, the catalyst is noncorrosive, resulting in cost savings for producers. The product eliminates the extra investment costs associated with the use acid separators and regenerators. (December 25, 1999)

**Nippon Gohsei Film** of Japan plans to begin production in Guangdong of its liquid crystal display (LCD) polarized plates in October 2000 to serve the mainland Chinese market. The plant will manufacture one million square meters per annum of the product, and the company expects annual sales of ¥1.7bn (US\$16m). (December 29, 1999)

**Norsk Hydro ASA** of Norway has begun operations at its JV polyvinyl chloride (PVC) plant in Suzhou, Jiangsu Province. The JV, **Suzhou Huasu Plastics**, invested US\$64m for the construction of the new plant, which will supply the JV's downstream calendaring business, as well as local markets. Norsk Hydro is negotiating with its JV partners to expand its PVC capacity and to build a vinyl chloride monomer (VCM) unit. (December 30, 1999)

**Shanghai Rohm & Haas Chemical Co**, a JV between **Rohm & Haas** of the US and **Shanghai Tianyuan Group Resin Factory** of China, has begun production of ion exchange resin in Shanghai Qingpu Industrial Park. The JV, China's largest ion exchange resin manufacturer, invested RMB150m (US\$18m) in the project. Instead of the conventional Chinese method of monochloromethylether, the plant will use a western technology, controlled chlorosulfonic acid chloromethylation. Ion exchange resins are used in the following industries: thermal power and nuclear power generation, food, pharmaceutical, biotechnology, electronic, chemical catalyst and adsorbent. (January 21, 2000)

of 219% for Q3 1999, compared to the same period last year. (January 22, 2000)

**Ciba Specialty Chemicals (India)** has acquired **IDI Ltd's** entire equity stake of 49% in **Pigments Specialties India Ltd**. After the transaction, Pigment Specialties became a wholly-owned subsidiary of Ciba Specialty. Although no immediate synergy benefits have been cited by the company, Ciba's position should be strengthened over the medium to long-term. (January 24, 2000)

**Indian Rayon**, a subsidiary of **Aditya Birla Group**, plans to expand its carbon black production in Chennai from 95,000tpa to 145,000tpa in 2000. The company is the second largest producer of carbon black in India, after **Phillips Carbon Black**, which generates 110,000tpa. Carbon black is used principally in the production of automobile tires and related rubber products. Demand for the product in India is expected to increase as the automobile industry sustains its growth. (December 30, 1999)

**MCC PTA India Corp**, a subsidiary of **Mitsubishi Chemical Corp** of Japan, will begin trial production at its purified terephthalic acid (PTA) unit in January 2000 and commercial production the following month. The plant has a production capacity of 350,000tpa. (January 24, 2000)

**Nalco Chemicals India Ltd (NCIL)**, a specialty and water treatment chemicals company, has made its first acquisition in India since beginning operations in the country. The acquired company, **Aqua Chemicals & Systems (Mfg) Ltd (ACS)** of Chennai, produces and markets specialty chemicals and equipment for water treatment. Shortly after the acquisition, Nalco announced plans to acquire **Aquapharma's** 30% stake in Bangalore-based **Aquazar India**, a subsidiary of **Aquazar** of France. Aquazar, a subsidiary of **Suez Lyonnaise**, owns 70% of Aquazar India. Suez Lyonnaise also owns Nalco Chemicals Co of the US. (December 27, 1999)

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## INDIA

**Ciba Specialty Chemicals (India)** plans to add a research center to its facilities in Chennai in 2000. The company also announced a net profit increase

**Sudarshan Chemical Industries** of India aims to double the capacity of its organic pigments business over the next five years with an investment of Rs400m (US\$9m). Plant capacity will increase to 10,000tpa

and will supply specialized pigments to the cosmetics industry. The company also plans to begin specialty chemicals production as well as to broaden its range of pesticides. (December 29, 1999)

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## INDONESIA

**PT Eterindo Wahanatama (EW)** of Indonesia, a specialty chemicals manufacturer, plans to begin operations in its new 70,000tpa phthalic anhydride (PA) plant. The company already has two other PA plants in the region with a total production capacity of 70,000tpa. Half of the plant's output will be exported throughout Southeast Asia. A listed group controlled by the Sridjaja family, EW is also active in the production of dioctyl phthalate (DOP), acrylic and polyester resins, solvents, unsaturated polyester and synthetic latex. (January 21, 2000)

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## JAPAN

**Asahi Chemical Industry (ACI)** of Japan has begun marketing a newly developed, nonflammable, non-halogen acrylonitrile butadiene styrene (ABS) to be used in the manufacture of office and household appliances. ACI's sales of ABS had been declining since 1997, as demand shifted to non-halogen based ABS due to the environmental concerns associated with halogen products. Asahi's new technology is phosphorus-based. Demand for ABS is expected to increase to 30,000tpa in the next two years. (January 26, 2000)

**Kanebo Ltd** of Japan, a cosmetics manufacturer, sold its chemicals operations to a wholly-owned

subsidiary of auto accessories manufacturer, **Soft 99 Corp.** The sale was part of Kanebo's reorganization program. The company's chemical division generated revenues of ¥5.92bn (US\$5m) in 1999, accounting for about 2.4% of total turnover. 200 employees, who work at the division in Ibaraki Prefecture in northeast Japan, will be transferred to Soft 99, as well as products, intellectual property and the plant. (December 15, 1999)

**Toyo Kasei Kogyo (TKK)** of Japan plans to produce agrochemicals and pharmaceutical intermediates, under contract for other companies, at a new facility in Fukui. The new plant will use TKK's proprietary processes when it begins production in March. The company has existing plants in Fukui, Hyogo and Osaka. (December 1999)

**Mitsui Chemicals** of Japan has developed a catalyst for the manufacture of polyethylene (PE) and specialty plastics. It has a reaction time roughly 13 times faster than conventional titanium-based catalysts and can synthesize long molecules of similar size, resulting in stronger PE. The innovation will help to meet the increasing demand from the electronics and medical equipment industries for durable PE. The chemistry undermines a common assumption about PE catalysts: a reduced reaction time yields a less strong product. (January 17, 2000)

**Nippon Steel Chemical** of Japan, a subsidiary of **Nippon Steel Corp.**, plans to consider strategic alliances for certain products to combat increasing competition from domestic and foreign suppliers in the region. The company is restructuring to increase efficiency levels, including a plan to cut staff levels by 50%. (December 28, 1999)

**NOF Corp** of Japan, a coatings and specialty chemicals manufacturer, plans to focus more on the production of higher value-added chemicals for 2000. The company generated a YOY increase in net profits of 42.6%, about ¥723m (US\$7m). (January 10, 2000)

**Osaka Gas Co (OSG)** of Japan will introduce its new process technology for the production of high-purity polysiloxane through an affiliated company. Used in the manufacture of photoresist and other

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electronics chemicals, the product has high conductivity, heat resistance and reaction to light. There are also potential applications for the product in gas turbines and electrolyte layers in fuel cells. Sales are expected to reach ¥6bn (US\$43m) by 2005. (January 13, 2000)

**Osaka Gas Co (OGC)** of Japan will begin testing proprietary equipment that uses a catalyst and oxygen in the treatment of industrial and waste water. The technology removes impurities like ammonia and other carbon-based compounds. OGC expects to complete testing by Q4 2000 and to begin selling the product by 2001. (January 15, 2000)

**Sakai Chemical Industry** has acquired **Tohkem Products Corp's** titanium dioxide (TiO<sub>2</sub>) business. Both companies are affiliates of **Mitsubishi Materials Corp** of Japan. Sakai's core business is TiO<sub>2</sub>, while Tohkem manufactures hydrofluoric acid, fluorides and fluoro surfactants. As a result of the acquisition, Tohkem's 30,000tpa plant in Akita will close, and Sakai's 43,000tpa Osaka facility will increase production levels to 60,000tpa. (January 19, 2000)

**Shinko Pantec** of Japan has developed a new process technology that uses a specialty solvent to clean transformers that contain polychlorinated biphenyls (PCBs). Providing the solvent undergoes a successful test phase, the company will start treating transformers in Q2 2000. Shinko has licensed some of its technologies from foreign suppliers, like the *Powertech* process of Canada, which removes PCBs from contaminated water. (January 27, 2000)

**Sumitomo Chemical** of Japan reported having the highest rate of profit contribution from specialty chemicals in Japan. The company's revenues are mainly generated through its agricultural and pharmaceutical chemicals business. (January 10, 2000)

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## KOREA

**LG International Corp** of Korea, a subsidiary of LG Group, has set up an Internet company with **SK**

**Corp** of Korea to create a chemicals trading portal, Chemround. The first version of the web portal was launched in February 2000, offering various products including specialty chemicals, olefins, aromatics and plastics. LG International estimates that B2B chemicals e-commerce will be valued at US\$110bn by 2003. (January 18, 2000)

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## MALAYSIA

**BASF Malaysia** plans to raise the production levels of its plasticizers, from 16,000tpa to 26,000tpa by 2002. The project includes investment in new hardware for its Pasir Gudang plant in Johor. Output from the facility will supply the domestic market as well as export demand from Singapore, Thailand and Vietnam. (December 30, 1999)

**Indian Oil (IOC)** will acquire a 10% equity stake in **Aromatics Malaysia's** facility in Kertih, Malaysia. The acquisition is part of IOC's long-term plan to invest in strategic non-core businesses throughout Asia. By Q2 2000, the plant will produce 420,000tpa of paraxylene and 150,000tpa of benzene. Aromatics Malaysia is a subsidiary of **Petronas**. (December 30, 1999)

**Titan Petrochemicals** of the US plans to begin production at its aromatics plant in Pasir Gudang by the end of January 2000. The plant will produce 110,000tpa of benzene, 60,000tpa of toluene and 23,000tpa of mixed xylenes. (January 24, 1999)

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## PHILIPPINES

**Sekisui Jushi** and **Ube-Nitto Kasei** of Japan have formed a 60:40 JV in Taiwan for the production of industrial grade polypropylene (PP) bands. The JV, **Summit Strapping**, has a production plant in Laguna currently generating 3,000tpa of PP bands, which are mainly exported to Japan. Summit Strapping plans to

increase production levels and export the bands throughout Southeast Asia. Sekisui is an industrial and consumer plastic and synthetic rubber producer, while Ube-Nitto specializes in a range of PP-based products. (December 20, 1999)

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## SINGAPORE

**Chevron** of the US will expand its 135,000tpa Oronite lubricant additives plant in Singapore by 2001. The plant began operations in 1998 and evolved into commercial production in January 1999. The company has 12 process trains on Jurong Island, manufacturing a slate of lubricant additives. (December 29, 1999)

**Singapore's specialty chemicals** sector output increased by 6.8% in 1999. Analysts attribute a significant portion of the change to an increased demand for electronic chemicals in the country. As a result, several large electronic chemicals plants have begun production. Jurong Island has become host to many specialty chemicals companies, with 50 firms on Jurong Island employing more than 6,000 workers. It is expected that investment in the chemicals industry on Jurong Island will double over the next decade, reaching US\$23.5bn. (January 25, 1999)

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## TAIWAN

**Dahin Group** and **Afino Specialty Chemicals** of Taiwan have built a 30,000tpa JV plant for the manufacture of 4,4-diphenylmethane diisocyanate (MDI), scheduled for commercial production in H1 2000. The JV intends to add a 100,000tpa phthalic anhydride plant to the same complex. (December 20, 1999)

**Formosa Chemicals & Fiber (FCFC)** of Taiwan and **Indemitsu** of Japan plan to form a 50:50 JV polycarbonate plant in Mailiao. The former will contribute the chemical feedstock through its affiliate

**Nan Ya Plastics**, and the latter will provide the process technology. The companies plan to invest US\$300m into the 200,000tpa plant, which will be complete by 2003. The polycarbonate will be used in the production of compact discs and other consumer products. (December 27, 1999)

**Oriental Union Chemical Corp (OUCC)** of Taiwan has agreed to build a 40,000tpa ethylene carbonate (EC) plant with **Chimei-Asahi Corp (CAC)**, the JV between **Chi Mei Group** and **Asahi Chemical Industry (ACI)**. In May 2001, production will begin at the NT\$800m (US\$ 26m) Kaohsiung plant. Output from the plant will supply CAC's 100,000tpa polycarbonate (PC) plant in Jen Te. ACI will contribute the process technology, licensed from **Toagosei Co** of Japan. (January 20, 2000)

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## THAILAND

**Charoen Pokphand (CP) Group** of Thailand has confirmed that it will not sell its 35% stake in **Vinythai**, a Thai PVC producer as originally announced. A possible buyer was thought to be **Titan** of Malaysia, through its PVC project in Johor, Malaysia. According to sources within Titan, the company has no interest in acquiring an equity stake in Vinythai. (January 24, 2000)

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## VIETNAM

**Organo** of Japan and an unnamed Japanese company agreed to form a 51:49 JV in Vietnam for the manufacture of water treatment specialty chemicals. Output generated from the Haiphong-based US\$1m facility will be exported to Japan, absolving the companies from the requirement of Vietnamese participation in the transaction. In the long run, the firms could expand the facility to satisfy growing domestic demand. (January 8, 2000)

## FOCUS:

### Specialty silicas in Asia

In 1998 more specialty silicas were consumed in Asia than in any other region of the world. Demand for the chemicals approached US\$600m, accounting for 34% of global consumption. Despite pre-crisis growth forecasts of 5%-10%, analysts estimate specialty silicas output to grow at a rate of 3%-4% through 2000 in the region.

Much of the growth in the silicas market stems from an increased demand for precipitated silica in the rubber industry. Rubber consumes nearly one-third of specialty silicas production and is projected to grow 7% over the next five years. Motor vehicle tire manufacturers have begun replacing carbon black with precipitated silica, spurring new demand for the product. Use of precipitated silica in automobile tires has increased automobile fuel efficiency by 10%.

Specialty silicas are divided into four types: precipitated, fumed, colloidal and silica gels. Precipitated silicas increase the strength and durability of rubber products and account for 70% of all silica production by volume. Fumed silica is a versatile material used mainly in reinforcement and rheology control in various applications. Colloidal silica has the smallest production volume of all silica types and is used in investment casting, catalysts and wafer polishing through CMP slurries that remove variations from chip surfaces. Silica gel is produced from heating soda ash with sand to yield various types of sodium silicates. The gel is a fine sodium silicate with a large surface area which are used as package desiccants, the market for which has grown strongly in Asia. Overall, specialty silicas improve product performance and enhance manufacturing processes in a variety of industrial and consumer applications.

There are many players active in specialty silicas production in Asia. The following paragraphs outline the activities of some local players and joint ventures in the market:

**Cabot Sanmar Ltd** [India], a 50:50 JV between **Cabot Corp** [US] and **Chemplast Sanmar Ltd** [India],

produces fumed silica in Mettur. **Chemplast Sanmar** specializes in the production of chlorosilanes, the raw material used in the manufacture of fumed silica.

**Fuji-Silysia Chemical Ltd** [Japan] has produced specialty silicas since 1965. Their products serve the coatings, inks, plastics and pharmaceutical industries. A recently developed technology of micronized silicas includes a group of flattening agents called *SYLYSLA*. The company has a sales office in the US.

**Insilico Ltd** [India], a JV between **Degussa AG** of Germany and **Bhartia Group** [India], has bought a 6,000tpa capacity plant previously owned by **Anadeya Silica**, a subsidiary of **Metazinc** [India], to produce precipitated silica and aluminum silicates. The JV plans to increase the capacity of the plant to 10,000tpa. **Insilico** has 65% market share in India in precipitated silicas and silicates.

**Idemitsu Engineering** [Japan] has announced that it is selling new technology for a silica gel absorption system to recover benzene. The absorbent is safe and the recovery rate is 99.9%. The system will aid chemical, paint, ink and pharmaceutical producers in limiting their benzene emissions.

**JSR Corp** [Japan], formerly **Japan Synthetic Rubber**, plans to begin commercial production of fumed silica oxide slurries in its 100,000tpa Yokkaichi plant. The company forecasts its slurry sales to increase ¥4bn (US\$37.8m) per year by 2003. **JSR** also specializes in the production of elastomers, plastics, fine chemicals and emulsions.

**Korea Silica Co, Ltd** [Korea] is active in the production of silicas. The company is a member of the **Keumkang Group** and generated revenue of Won20.8bn (US\$17.7m).

**Oriental Chemical Industries (OCI)** [Korea], a bulk specialty chemicals producer, plans to expand into the manufacture of silica gel and other products including chemical reagents and pharmaceutical raw materials. The company's core businesses are soda ash, hydrogen peroxide and toluene di-isocyanate (TDI).

**Q-Pac Industries Pte, Ltd** [Singapore] is active in the production of silica gel.

**Qingdao Haiyang Chemical Group Co** [China] is active in the production of silica gel. The company generated revenues of RMB98m (US\$11.8m) in 1998.

**Qingdao Meigao Chemical Co Ltd** [China] is the largest privately held silica gel company in the country. Its products include dessicants, adsorbents, dehumidifiers and sorbent dryers.

**Qingdao Rhone-Poulenc Silica Co** [China], a subsidiary of **Rhone-Poulenc (China) Co Ltd**, is active in the production of precipitated silica and silica gel.

**Shin-Etsu Chemical Industry** [Japan] has jointly developed with **Mihama**, an industrial gas trading company, an organic silane-based dehydrating agent for refrigerants. The companies have obtained an exclusive license for the technology for use in Japan before it is commercialized from **IPG** of the US.

**Shin-Etsu Chemical Co** [Japan] and its subsidiary **Shin-Etsu Micro Si** [US] produce SIPR positive thick film photoresist in Japan and the US. Shin-Etsu Chemical Co is also active in electronics chemicals in **Japan**.

**United Silica (Siam) Ltd (USSL)**, a 70:30 JV between **Degussa-Hüls** of Germany and its local Thai distributor, **Oriental Siam Co**, has acquired a silicas plant in Mab Ta Phut. Located close to Rayong, the 12,000tpa facility will manufacture precipitated silicas and aluminum silicates, which are primarily used in the rubber tire, colorants, paper and life sciences industries. The transaction increased Degussa-Hüls Asian market share for precipitated silicas and silicates from 16% to 20%, adding to existing operations in Taiwan and India.

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## ABOUT BDA

Business Development Asia is a corporate finance advisory firm which assists multinational companies to expand their businesses in Asia. BDA specializes in the chemical industry and helps clients to find local business partners. BDA has senior advisors in Bangkok, Jakarta, Kuala Lumpur, Manila, Seoul and Shanghai. For further information on BDA's services or on any of the articles in this newsletter, please contact Euan Rellie or Charles Maynard, through our New York office, or Andrew Huntley in Singapore.

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