



TOSOH

*Innovation in Technology and Business*



ANNUAL REPORT 2005

*Tosoh Corporation and Consolidated Subsidiaries  
Fiscal Year Ended March 31, 2005*

**TOSOH CORPORATION**

# TOSOH CORPORATE PROFILE

Tosoh Corporation celebrates its 70th anniversary in 2005, having started its evolutionary path in 1935 as a domestic producer of soda ash. The Japanese characters for Tosoh, in fact, are an abbreviation for oriental soda. Today, the Company is a multinational corporation that generates an array of products to suit modern lifestyles and that contribute to the development of cutting-edge products and technologies.

The Tosoh Group comprises more than 130 companies, some 50 of them located outside Japan. Collectively, those companies employ a multiethnic workforce of over 9,000 people and generate net sales of ¥588 billion (US\$5.5 billion).

Tosoh is a global supplier of inorganic chemicals, petrochemicals, and specialty materials. The Group's customers include the semiconductor, pharmaceutical, health care and food, and many other key industries that produce items used in daily life.

Through its innovations in technology and business, the Tosoh Group is leveraging its high degree of integration and taking advantage of the growth in global demand for its bulk materials, especially in Asia. The Tosoh Group also is utilizing its strengths in specialty products to develop promising global niche markets into substantial businesses.

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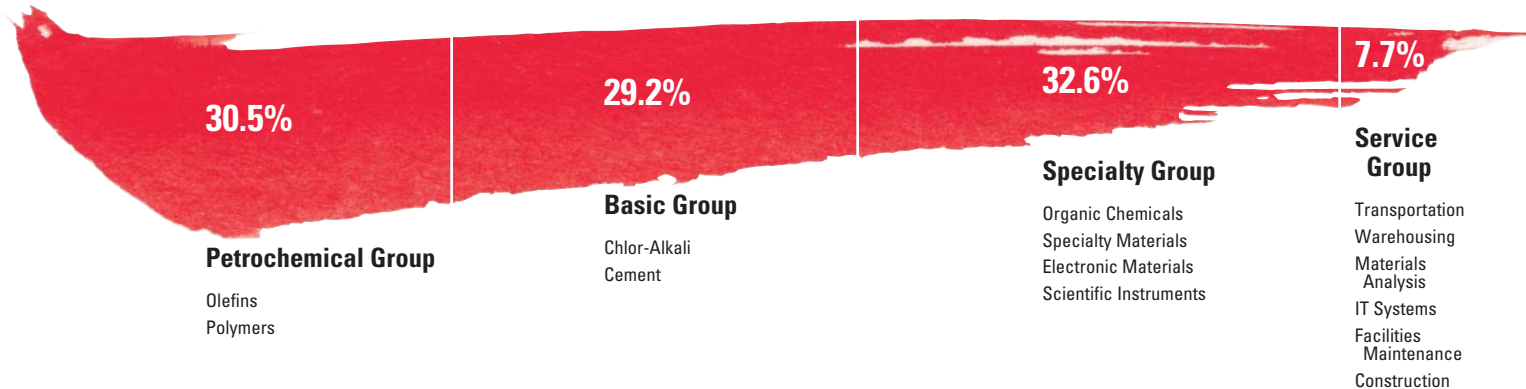
# FINANCIAL HIGHLIGHTS

Years ended March 31,	Millions of Yen						Thousands of U.S. Dollars <sup>1</sup>
	2005	2004	2003	2002	2001	2000	2005
<b>Summary of Operations:</b>							
Net sales	¥ 588,332	¥ 484,389	¥ 471,921	¥ 427,487	¥ 426,174	¥ 374,182	\$ 5,478,462
Operating income	56,898	30,055	28,048	15,631	27,565	27,330	529,826
Net income	29,533	7,297	4,809	459	9,392	6,019	275,007
Net income per share <sup>2</sup>	49.09	11.96	7.87	0.77	15.62	10.02	0.46
<b>Financial Position at Year-End:</b>							
Total assets	¥ 603,209	¥ 549,213	¥ 545,697	¥ 572,146	¥ 534,605	¥ 527,989	\$ 5,616,994
Short-term bank loans and long-term debt	284,572	289,097	298,886	332,120	325,774	333,180	2,649,893
Total shareholders' equity	127,993	99,238	92,795	90,557	91,195	91,886	1,191,852
<b>General:</b>							
Capital expenditures	¥ 45,379	¥ 21,305	¥ 12,127	¥ 16,820	¥ 18,700	¥ 27,600	\$ 422,563
Depreciation and amortization	22,822	23,968	25,255	25,392	24,772	24,854	212,515
Cash dividends per share <sup>2</sup>	6.00	5.00	5.00	5.00	5.00	5.00	0.06
Common stock prices <sup>2</sup>							
High	570	424	425	400	650	531	5.31
Low	341	238	211	195	265	210	3.18
Year-end close	530	415	242	387	305	501	4.94
Number of employees	9,148	9,196	9,167	9,404	8,097	7,914	

1. For reference purposes, U.S. dollar amounts are translated from yen at the rate of ¥107.39 = US\$1, the exchange rate in effect on March 31, 2005.

2. Per share figures and common stock prices are in yen and U.S. dollars.

## Sales Breakdown 2005



### Notes:

Tosoh Corporation's fiscal year runs from April 1 to March 31 of the following year. Throughout this report, reference to "fiscal year 2004" and "fiscal 2004" specifies the period from April 1, 2004, to March 31, 2005.

Also in this report, "Tosoh" and the "Company" refer to Tosoh Corporation and its consolidated companies in general. Definitions for the Company and the companies as used in the consolidated statements can be found on page 56.

### Disclaimer on Forward-Looking Statements

This annual report contains statements that address such key issues as Tosoh Corporation's expectations based on reasonable assumptions. Plans, estimates, beliefs, and other statements that are not historical facts are forward-looking statements. Such statements should be carefully considered, and it should be understood that many factors could cause forecasts and actual results to differ from these statements. These factors may include, but are not limited to, fluctuations in prices and currencies; increases or decreases in development and personnel costs; rises or falls in physical and environmental risks; changes in business climate; and the introduction of legislative, fiscal, and other regulatory measures.

In fiscal year 2004, ended March 31, 2005, the Tosoh Group began to more fully reap the benefits of its recent restructuring efforts and business development strategies. It gives me great pleasure to report that Tosoh posted record consolidated sales and profits for the second consecutive year, fittingly entering a new stage of development during its 70th anniversary.

## Operating Environment in Fiscal 2004

Although not without challenges, operating conditions were favorable in fiscal 2004. Asian markets continued to boom. Despite indications of a slowdown in China, which struggled to control its overheating economy, demand from Asia remained high, helping to boost bulk commodity prices.

Product price increases contributed significantly to Tosoh's success in fiscal 2004. Translating rising raw material costs—especially an increase in the average price of naphtha, our main feedstock, from ¥25,500 to ¥32,000 per kiloliter—into higher end-product prices was vital in fiscal 2004.



Madoka Tashiro, Chairman and CEO

Supported by especially strong demand from China and the United States, our Petrochemical Group's olefin sales rose. Polyethylene, chloroprene rubber, and polyvinyl chloride (PVC) paste also sold well, at home and abroad.

Basic Group sales also benefited from favorable conditions. Core products caustic soda, chlorine, and chlorine derivatives thrived and achieved higher prices domestically and significantly higher prices overseas. Cement sales likewise increased, helped by robust exports and a mild recovery in private-sector sales in Japan.

Our Specialty Group gained momentum throughout the year, increasing shipments to its many recovering markets. Ethylene amines were again in high demand, particularly in Asia. Higher domestic demand fueled more shipments and higher prices for bromine and brominated derivatives. The rebounding IT industry supported sales gains for zirconia in Japan and overseas. Electrolytic manganese dioxide (EMD) shipments advanced substantially, mostly to Asia, while robust semiconductor and liquid crystal display (LCD) markets globally drove up shipments of sputtering targets and of quartz materials and quartzware.

Fiscal 2004 also saw growth in Specialty Group shipments of high-silica zeolite for automobile exhaust systems and other applications. The group's Scientific Instruments Division, moreover, posted large shipment increases of our compact AIA-360 automated immunoassay analyzer and immunoassay tests. Exports of high-performance liquid chromatography (HPLC) packing materials, too, continued to rise.

Groupwide sales and major product price increases helped to combat rising raw material and freight costs and enabled Tosoh to register record sales and profits in fiscal 2004. Consolidated net sales increased ¥103.9 billion, to ¥588.3 billion. Operating income rose ¥26.8 billion, to ¥56.9 billion, and net income gained ¥22.2 billion, to ¥29.5 million.

### **Innovation in Technology and Business**

We have experienced ups and downs throughout our 70 years of history. But our viability remains our quality of people, our ability to learn from our mistakes, and our penchant for strategic decisions that keep us evolving in the right direction.

The past decade represents a sea change in our corporate development, from a diversified general chemical corporation to a company focused on its core businesses. Centering our operations on our strengths freed up management resources for expanding core businesses and for developing businesses of potential core value.

At the parent company, we also addressed costs, annually cutting fixed expenses by an average of ¥3 billion for each of the three years through fiscal 2003. In addition, we reduced interest-bearing debt 50%, to approximately ¥200 billion, as of fiscal 2004 year-end. Strengthening our operations while cutting our costs has facilitated the recovery of our operating profit levels and contributed directly to our bottom line.

The decade past, therefore, ranks among the greatest in Tosoh corporate history. It led us to an understanding that innovation was as necessary in business as in technology.

Sound business is more imperative today than at any other time in our existence. We face a dynamic restructuring of global markets driven by an ever-widening supply-demand gap. Therefore, we look to innovation to best position our core businesses in Asian markets and to optimize a competitive supply chain to ensure our sustainable growth. In that sense, innovation was foremost in our minds in fiscal 2004. Through innovation, we evolved further toward enhanced competitiveness in all our core businesses in Asia. We also strengthened our position in emerging global markets.



Takashi Tsuchiya, *President*

### **Basic Group—Expanding the Vinyl Isocyanate Chain**

Strengthening our chlor-alkali operations is an ongoing process. Restructuring and reengineering carried out from 1994 to 1996 was followed by a first wave of capacity increases in our traditional vinyl chain. Recently, we broadened our vinyl chain to a vinyl isocyanate chain and implemented a second wave of capacity expansions.

Tosoh Group company Nippon Polyurethane Industry Co., Ltd. (NPU), heads our expansion into isocyanates. NPU is a major producer of methylene diphenyl diisocyanate (MDI), an essential raw material in producing polyurethane. Our first step, therefore, is improving and integrating our MDI production. We constructed two new plants at our Nanyo Complex to supply two raw materials for MDI, aniline and carbon monoxide, to NPU, which is also located in the Nanyo Complex.

When both plants are onstream by mid-summer 2005, they will furnish us with a fully integrated MDI production system with an annual capacity of 200,000 metric tons. This innovation of integrating Nanyo Complex and NPU production ensures significant cost benefits for NPU and the Tosoh Group, boosting our competitiveness.

Integrating our isocyanate and vinyl chain operations, furthermore, will achieve new synergies and advantages that will contribute to our strategic position in growth markets and to our bottom line. Our vinyl chain operations, for example, supply chlorine for the production of isocyanates, while the hydrogen chloride by-product of isocyanate production can be used in manufacturing vinyl chloride monomer (VCM).

Booming demand in Asia, meanwhile, underscores our ramping up of production capacity for the core products of our vinyl chain: caustic soda, chlorine, VCM, and PVC. In June 2004, we completed the expansion of our electrolysis facilities, boosting our caustic soda capacity 130,000 metric tons, to 1.2 million metric tons a year. More electrolysis also increases our production of chlorine, which is essential for many downstream processes, including VCM production. So we have started constructing an additional VCM plant scheduled for completion by the end of 2005 with an initial annual capacity of 400,000 metric tons, expandable to 600,000 metric tons per year.

Our expectations are for VCM output of about 1.5 million metric tons in the fiscal year ahead, rising to 1.7 million metric tons in fiscal 2006. We plan to have another electric power plant in operation sometime in 2008 to handle further growth.

We hope that a total investment estimated at ¥50 billion in integrated chlor-alkali operations will make Tosoh one of the top Asian VCM manufacturers and position it for strong expansion in China's PVC market. A highlight is the construction by an all-Japanese joint venture, Tosoh (Guangzhou) Chemical Industries, Inc., of our first PVC plant in China. This 220,000-metric-ton-a-year plant is slated to come onstream by the end of 2006, and its VCM feedstock initially will come from Japan. When completed, the new PVC plant in China will boost our global PVC production to about 1.2 million metric tons annually.

### **Petrochemical Group—Evolving Strategies**

The rising number of natural gas crackers in the Middle East, the perennial influence of Middle Eastern political conditions on naphtha prices, and the rapid growth of the petrochemicals industry in China are the primary reasons for the ongoing restructuring of Japan's petrochemical industry.

Extreme fluctuations in prices for fractions caused by vacillating supply and demand has caused Tosoh to shift to a strategy of maximizing profitability from the naphtha cracker at its Yokkaichi Complex in view of its overall chemical operations. To this purpose, we have constructed a new plant to make tertiary butyl alcohol (t-BA) from the underutilized C4 fraction yielded in the cracking process. We also plan to expand our line of specialty products for a firmer base in the polyethylene business. By innovatively managing our chemical operations, we aim to maximize the contribution of our Petrochemical Group.

## Specialty Group—Taking Creative Steps

Our Specialty Group features high-margin products and materials, unlike the commodity products of our Petrochemical and Basic groups, that are strongly positioned in global niche markets because of proprietary technology. The goal is to further strengthen the Specialty Group's operations, ensuring they all become core operations. Meeting that goal, as elsewhere, entails innovation to stay abreast of rapidly changing technologies and markets in high-tech fields serving the semiconductor, IT, and medical industries.

Innovation has to date made us Asia's leading manufacturer of ethylene amines. We also boast the world's largest production capacity for high-purity zirconia powders and electrolytic manganese dioxide. In addition, we are a leading global producer of quartz products, sputtering targets, and specialized diagnostic systems.

Capital investments to foster innovation remain focused on emerging technologies and on expanding capacities to meet areas of growing demand. In January 2004, the Specialty Group's Scientific Instruments Division paved Tosoh's way into the nucleic acid testing business with its TRC (transcription reverse transcription concerted reaction) system. The division was already planning in early 2005 to double the production of its TRCRapid-160 and detection reagents to meet soaring demand.

Other Specialty Group businesses also are looking to stay in the forefront of technology. Sometimes this requires creative reorganization, such as the combination in fiscal 2003 of our quartz materials, fabricated quartzware, sputtering target, and industry services operations into a new Electronic Materials Division targeting the global semiconductor and flat-panel display markets. This division recently decided to build a sputtering target factory in Taiwan to serve the need there for larger sputtering targets for LCDs. The division expects to rapidly raise its market share in Taiwan.

Innovation has become a hallmark in our quest to reduce our dependency on ever-cyclical IT business. We are developing products for non-semiconductor-related markets and increasing our production of consumables.

In our perpetual search for synergies we built a facility at our Nanyo Complex to recover by-product salt from ethylene amine production for recycling in our chlor-alkali operations using a proprietary process.

With an eye to our further development in China, we recently established a trading company there. Tosoh (Shanghai) Co., Ltd., represents the Electronic Materials, Scientific Instruments, and Organic Chemicals divisions of our Specialty Group and is spearheading Tosoh's accelerated drive into China's markets. Tosoh (Shanghai) shares an office building in Shanghai with Tosoh Logistics Corporation, NPU, Lonseal Corporation, and Hodogaya Chemical Co., Ltd., offering potential for additional innovative synergies.



## Corporate Social Responsibility

Tosoh's efforts on behalf of the environment moved to a higher level in 1995. That is when we became one of the first members of the Japan Responsible Care® Council, the local chapter of the

chemical industry's voluntary environmental action movement. Guided by this organization and our internal environmental plan, we seek to meet and exceed industry and national standards for environmental protection, health, and safety while working with the communities in which we operate to raise awareness of those issues. We are also contributing to solving environmental issues through technical and business innovation in our growing eco-businesses.

Our view of corporate social responsibility has changed substantially over our long history. Corporate social responsibility is today a sophisticated, high-priority commitment at Tosoh that is essential to the long-term sustainability of our business and our environment. The continued expansion of our social responsibility systems to cover the entire Tosoh Group is critical to our development as a global company.

### **Outlook**

A truism of our increasingly global economy is that major shifts can occur overnight. We cannot afford, therefore, to be complacent during good times. Even when business conditions and performances are favorable, clouds are forever on the horizon.

For Tosoh, these clouds entail steadily rising feedstock prices, particularly for naphtha and salt and for the coal used to generate electric power in-house. Freight costs for these raw materials, too, are skyrocketing.

Thankfully, strong demand for our products has allowed us to pass many of these higher costs on to our customers through price increases. But we know from experience that this will not always be the case. The strong yen continues to make our products more expensive for our customers and thus remains an issue on the sales side of our business. Therefore, we must be prepared to combat possible cost increases and demand shifts that go beyond our ability to raise our product prices.

In the meantime, however, the outlook for our business is cautiously optimistic. Asian markets continue to grow at a high clip, and the U.S. market remains robust. Even in Japan, where the economy emitted a few hiccups in its recovery during fiscal 2004, business conditions for the chemical industry, especially for the higher-priced commodities, are favorable. Indeed, there is a hint of excitement in the air as Tosoh heads into its eighth decade in a stronger, more stable position than ever. We thus celebrate our 70th anniversary in the conviction that through innovation in technology and business there will be even more to celebrate in future.



May 2005  
Madoka Tashiro  
*Chairman and CEO*





*Shinka, a Japanese word combining the Japanese ideograms for forward movement and change, means evolution or progress in Japanese. For Tosoh, it symbolizes the firm's contribution to progress through continuous advances in the building blocks of industrial and consumer products.*

*Still largely unknown to the ordinary consumer, Tosoh is a familiar partner to first-tier consumers like manufacturing companies. They depend on Tosoh to maintain their edge in their markets. They recognize Tosoh's ceaseless and innovative efforts to help them make better products.*

*On the following pages, we explain Tosoh's business, products, and markets. We also illustrate various aspects of Tosoh's contribution to progress.*

# TOSOH AT A GLANCE

## General Applications

## Major Products and Services

### PETROCHEMICAL GROUP

Olefins	electronics products, cosmetics, rubber goods	ethylene; propylene; cumene; styrene monomer; aromatic hydrocarbons (benzene, toluene, xylene); C4 fraction
Polymers	food packaging, agriculture, engineering, fishing, distribution, and other industries	polyethylene grades (HDPE, LDPE, LLDPE, ULDPE); adhesive polymers; C9 hydrocarbon resins; ethylene vinyl acetate (EVA) copolymers; polyphenylene sulfide (PPS) resins; PVC paste; synthetic rubber; chlorosulphonated polyethylene

### BASIC GROUP

Chlor-Alkali	chemical processes, plastics, glass, pulp and paper	VCM; PVC resins; caustic soda; calcium hypochlorite; chlorine; inorganic chemicals; sodium bicarbonate
Cement	construction	ordinary portland cement; portland fly ash cement; portland blast-furnace slag cement

### SPECIALTY GROUP

Organic Chemicals	pharmaceuticals, agrochemicals, electronics, organometallic catalysts, fragrances and flavors, urethane polymers, specialty coatings	ethylene amines and derivatives, organic intermediates, flame retardants, bromine, solvents, aspartame, fluorinated and brominated compounds, polyurethane catalysts, dye-improving additives, hydrobromic acid, chelating agents
Specialty Materials	consumer, industrial, and high-technology products	electrolytic manganese dioxide (EMD), zeolites (adsorption agents, molecular sieves); zirconia products (powders, ceramics, grinding media); manganous manganic oxide
Electronic Materials	semiconductors, consumer electronics, high-technology products	silica glass materials, including natural, synthetic, fused, machined, and fabricated quartzware; thin film deposition materials; shielding
Scientific Instruments	scientific instruments, diagnostic devices, reagents, pharmaceutical and medical products	high-performance liquid chromatography (HPLC) systems and packing materials; ion chromatography systems; glyco-hemoglobin analyzers; enzyme immunoassay systems; reagent systems; nucleic acid testing systems
Eco-business	environmental products and technologies	water purification and treatment system engineering, land survey, reclamation, and technological consulting services

### SERVICE GROUP

logistics, R&D, and administrative and maintenance services	research and development, administration, security, transportation, warehousing and related, information, instrumentation, and plant engineering and maintenance services
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## Domestic Subsidiaries and Affiliates

## International Subsidiaries and Affiliates

Nippon Styrene Monomer Co., Ltd.

Ace Pack Co., Ltd.; Hokuetsu Kasei Co., Ltd.; Rensol Co., Ltd.; Sankyo Kasei Industry Corporation; Toyo Polymer Co., Ltd. (manufacture and sale of synthetic resins); Shinomura Chemical Industry Corporation; Toei Co., Ltd. (PVC films and sheets)

Lonseal Corporation (plastic products); Minami Kyushu Chemical Industry Co., Ltd. (fertilizers); Plas-Tech Corporation (PVC compounds); Rinkagaku Kogyo Co., Ltd. (phosphorous compounds); Taihei Chemicals Ltd. (PVC films and sheets, nitro-cellulose); Taiyo Vinyl Corporation (PVC resins); Tohoku Tosoh Chemical Co., Ltd. (chlorinated chemicals); Tokuyama Sekisui Co., Ltd. (PVC resins); Toho Acetylene Co., Ltd. (industrial gases)

General Chemical (Soda Ash) Partners (U.S.: soda products); Mabuhay Vinyl Corporation (Philippines: caustic soda, chlorine derivatives); Philippine Resins Industries, Inc. (Philippines: PVC resins); P.T. Standard Toyo Polymer (Indonesia: PVC resins); Tosoh Polyvin Corporation (Philippines: PVC compounds); Tosoh (Guangzhou) Chemical Industries, Inc. (China: PVC resins)

Tosoh Finechem Corporation (fine chemicals, custom synthesis); Tosoh F-Tech, Inc. (fluorochemicals); Tosoh Organic Chemical Co., Ltd. (organic intermediates); Hodogaya Chemical Co., Ltd. (fine chemicals, agrochemicals, dyes); Nippon Polyurethane Industry Co., Ltd. (urethane products)

Delamine B.V. (Netherlands: ethylene amines, fine chemicals); Holland Sweetener Company (Netherlands, U.S.: aspartame)

Tosoh Silica Corporation (rubber and plastic silica filler); Tosoh Ceramics Co., Ltd. (zirconia ceramic products); Tosoh Hyuga Corporation (EMD); Tosoh Zeolum, Inc. (zeolites)

Tosoh Hellas A.I.C. (Greece: EMD)

Tosoh Quartz Corporation (fabricated quartzware); Tosoh SGM Corporation (silica glass materials); Tosoh Speciality Materials Corporation (thin film deposition materials)

Tosoh Quartz (U.S., Taiwan: fabricated quartzware); Tosoh SET, Inc. (U.S.: physical vapor deposition [PVD] and chemical vapor deposition [CVD] shield refurbishment services); Tosoh SMD (U.S., Taiwan, S. Korea: thin film deposition materials); Tosoh SGM USA, Inc. (U.S.: silica glass)

Tosoh AIA, Inc. (diagnostic reagents); Tosoh Hi-Tec, Inc. (diagnostic and chromatography products and systems); Tosoh Techno-System, Inc. (analytical instrument maintenance)

Tosoh Bioscience (U.S., Germany: packed columns for high-performance liquid chromatography and separation media; U.S., Belgium, Italy, Switzerland, U.K.: clinical diagnostic systems and reagents)

Organo Corporation (water purification and treatment system engineering); Eco-Techno Corporation (land survey, reclamation, and technological consulting services)

Tosoh Analysis and Research Center Co., Ltd. (research and development); Tosoh General Services Co., Ltd. (administration and security services); Tosoh Logistics Corporation (transportation, warehousing, and related services); Tosoh Information Systems Corporation (information services); Tosoh Plant Services Corporation (instrumentation, plant engineering and maintenance)

# EVOLUTIONARY STAIRCASE AND HISTORY OF TOSOH

*A Celebration of 70 Years of Service*



## Establishment (1935-1945)

In 1935, Managing Director Tokusaburo Iwase and 33 subordinates left Tokuyama Soda Co., Ltd., to found Toyo Soda Manufacturing Co., Ltd., Tosoh Corporation's predecessor. The new company was just gathering momentum—including building a membrane electrolysis plant for soda ash in 1940—when Japan entered World War II.



## Reconstruction (1945-1955)

With its operations commandeered for the war, the Company built the first factory in Japan able to extract bromine from seawater and constructed an electrolysis plant to supply chlorine. After the war, the Company's ammonia-method soda plant was confiscated for war reparations. The Company scraped by on noncore businesses for five years before a change in Allied Occupation policy enabled it to repossess and resume production at the soda plant.



## Turbulent Times (1973-1984)

the fast-growing field of petrochemicals. The Company took its first big step in petrochemicals when, in 1964, its joint venture with Tokuyama Soda, Shunan Petrochemicals Co., Ltd., began producing ethylene dichloride (EDC), an important raw material in the production of vinyl chloride monomer (VCM).

This step launched Toyo Soda Manufacturing into a period of dramatic growth. The Company ramped up its VCM production, adding the 50,000-ton G Plant at the Nanyo complex in 1966 and the 100,000-ton oxychlorination-method H Plant in 1968 to effectively start the Company's vinyl chain operations. Also in 1966, Tosoh got involved in polyethylene production through its joint venture Nippon Polychemicals Co., Ltd. A wide range of other products made their debut at the Company from

## High Growth (1955-1973)

Toyo Soda Manufacturing's revival, then, commenced in 1950, five years later than for most Japanese companies. The Company nonetheless moved swiftly to position itself in the mainstream of the reconstruction of Japan. Toward this end, it started cement operations that complemented its other operations by efficiently using the waste products of its ammonia-method soda and electrolysis production processes. By 1953, the Company had three cement kilns in operation and two healthy core businesses driving its growth.

In the late 1950s, the Company used investments, joint ventures, and imported high-pressure gas technologies to diversify, particularly into chemical fertilizers and



## New Growth 2003-

bioscience, and new materials, in search of additional profit growth. In 1985, the Company put in place a major plan targeting diversification and growth, only to see that plan thwarted by the sharp appreciation of the yen versus the U.S. dollar following the Plaza Accord of September 1985.

Nevertheless, the Company took various important steps during the mid-1980s that positioned it for future growth. These include the stakes it took in the precursors of Tosoh Quartz Corporation and Tosoh Bioscience N.V., its 1990 merger with Shin-Daikyo Petrochemical Co., Ltd., its installation of another coal-fired boiler, its expansion of its ion exchange membrane electrolysis facilities, and its establishment of TosohHaas. The Company also acquired the Specialty Metals Division of Varian Associates, which later became Tosoh SMD, Inc., and, in 1987, Toyo Soda Manufacturing changed its name to Tosoh Corporation.

To cope with a downturn in business conditions at the beginning of the 1990s, Tosoh entered its first restructuring phase in 1992. It reviewed its approximately 50 businesses to reduce its exposure to and to weed out nonperforming operations. And it drafted a plan to reduce its labor force by 500 employees, supplemented later by a voluntary retirement plan that was accepted by about 300 employees.

## THE FUTURE

Driven by the semiconductor booms, Tosoh's Specialty Group expanded substantially over the next few years of the 1990s, contributing strongly to Tosoh's growth and profitability. But with the bursting of Japan's bubble economy, Tosoh was again forced to cut costs and reorganize. Luckily, having decided in 1994 to strengthen its basic operations, Tosoh was equipped with the largest and most-modern VCM production facility in Asia by 1999. This early move to strengthen its core business assured Tosoh a share of the emerging high-growth markets in Asia.

By the end of the century, Tosoh's Specialty Group had built a solid international reputation for providing world-class products. It was well-known for its zirconia advanced ceramics, electrolytic manganese dioxide, zeolites, scientific and diagnostic instruments and reagents, and sputtering targets and quartz products.

Tosoh's constant streamlining of its corporate structure, timely upgrade to reinforce its vinyl chain operations, and stronger specialty businesses have coalesced to forge a company that continues to be profitable and competitive in its 70th year in business. Today, 90% of Tosoh's sales come from products that it has launched since 1965. In that sense, Tosoh and all the members of the Tosoh Group who contribute to that product mix combine to live up to the ideal of being an evolving corporation.

## Rebuilding (1992-2003)

Tekkosha Co., Ltd., further strained the Company's resources, although this difficult assimilation did bring scale and other advantages to the Company's polyvinyl chloride (PVC), quartz glass, and sputtering target businesses. When the second oil shock struck, in 1979, the Company's electric power generation costs soared, pushing the Company into the red.

What turned the situation around was the Company's decision to build a coal-fueled boiler for its power plant. After the installation of that boiler in 1982, the Company made a meteoric comeback, posting record operating profits in 1984 and wiping its accumulated losses off the books. Cheaper power, moreover, became the cornerstone for the development of the Company's leading vinyl chain operations.

In the mid-1980s, the Company got caught up in two major trends sweeping through the chemical industry. The industry shifted its focus from bulk chemicals to fine chemicals in response to changing demand and the desire for higher profit margins. It also immersed itself in promising advanced technology fields, such as electronics,

## Bubble Economy (1984-1992)

the mid-1960s to early 1970s: dicalcium phosphate (1965); alkyl aluminum (1965); ethylene amines (1967); and chloroprene rubber (1971). And with demand for its products exceeding supply during this period, the Company also began constructing its Yokkaichi Complex.

The early 1970s, however, ushered in a series of setbacks for the Japanese chemical industry. In 1973, the first oil shock signaled the end of Japan's high economic growth. The fallout, meanwhile, from the discovery of mercury poisoning as the cause of Minamata disease placed a heavy burden on the chemical industry. Compensation payments and retooling to eliminate the use of mercury-based production methods cost the Company alone more than ¥30 billion.

The Company's difficulties, however, did not end with this situation amid a rapid decline in market growth. In 1975, a merger with

PETROCHEMICAL GROUP



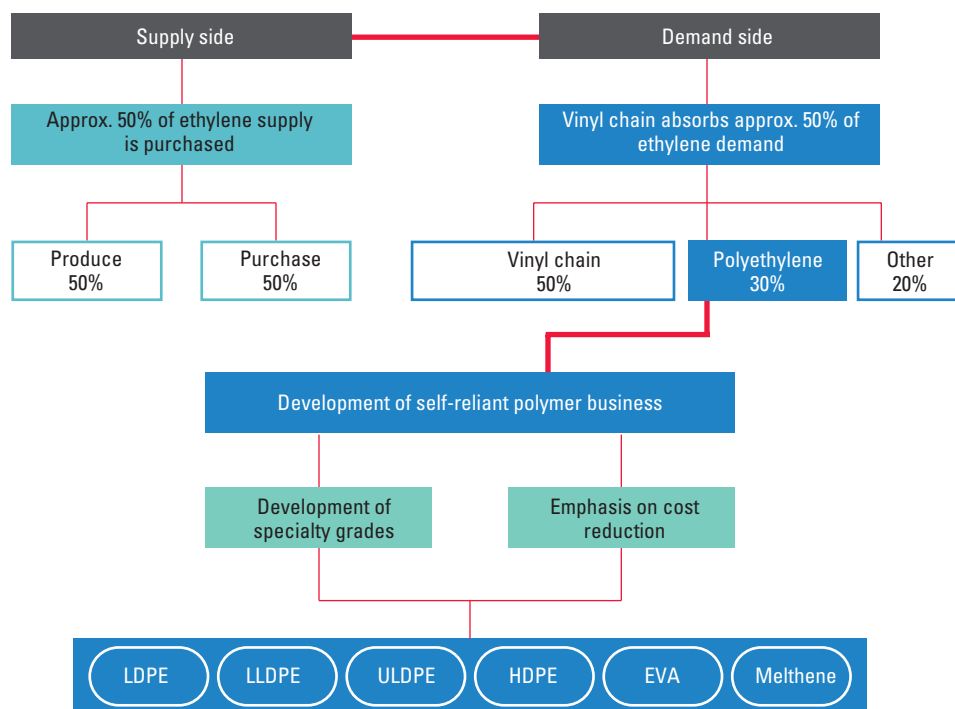
Man's eternal search for new challenges and horizons leads him relentlessly into the future. Tosoh's role in the quest for technological progress is to supply industry with a constant flow of breakthroughs and improvements in the materials used to produce next-generation products. The Petrochemical Group serves such major industries as the consumer products, electronics, automobile, and plastics industries around the world.

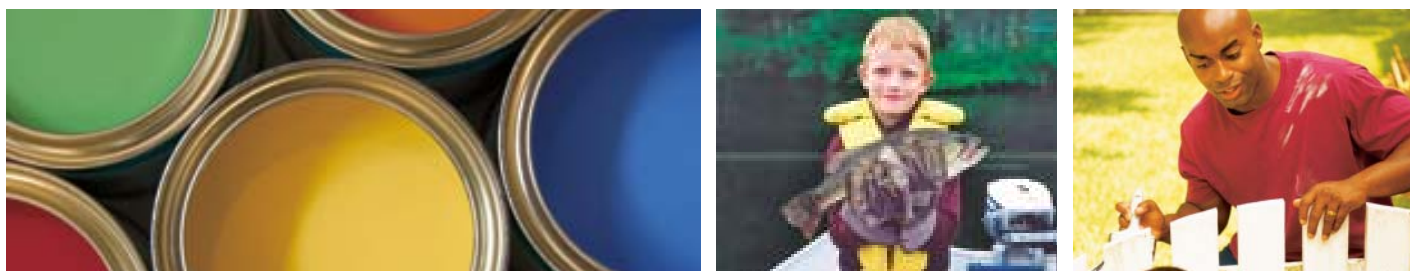
Throughout its 70 years in operation, Tosoh has constantly expanded, improved, and integrated its core chemical operations. It has sculpted those operations into a highly efficient manufacturing base that is the source of its competitiveness in Japan and abroad. Central to this process is the symbiotic relationship between the petrochemical and vinyl chain operations of the Company's Petrochemical and Basic groups. Integrating those operations makes Tosoh unique within the Japanese chemical industry.

The petrochemical process begins with the naphtha cracker at our Yokkaichi Complex, which has an annual ethylene capacity of approximately 500,000 metric tons. The complex supplies most of its basic feedstocks to the nearby petrochemical operations of many other companies and to our Nanyo Complex for downstream processing—a highly cost-effective system. In recent years, we have also improved our recovery efficiency by, for example, building a tertiary butyl alcohol (t-BA) plant that makes use of the spent C4 fraction that we previously sold off.

Our naphtha cracker supplies our vinyl chain and polymer operations with the essential feedstock ethylene. We use nearly one million metric tons of ethylene yearly, of which we produce about half and purchase the remainder. This dual role as a supplier and a purchaser greatly reduces our operating risk. We allocate about 50% of the ethylene for our vinyl chain operations and use 30% in our self-reliant polymer business. The diagram below provides an overview of Tosoh's ethylene operations.

## Ethylene Operations





## OLEFINS

Olefins are basic chemical building blocks used in the manufacture of a wide range of electronics products, plastics, and rubber goods. Tosoh combines its technological prowess with a cost-efficient infrastructure to provide industrial customers with a stable supply of olefins that meet international standards for excellence in quality.

<i>Product</i>	<i>Capacity (m/t/y)</i>	<i>Markets Served</i>	
<b>Ethylene</b>	493,000	●	
Ethylene is the basic feedstock for a vast array of petrochemical products, and Tosoh is a major ethylene user and producer. Leading-edge automated production technology helps Tosoh maintain its competitiveness in world markets.			
<b>Propylene</b>	288,000	●	
Propylene is an essential ingredient in the production of polypropylene, cumene, and OXO process alcohol.			
<b>C4 fraction</b>	100,000	● ●	
Tosoh extracts a wide variety of C4 hydrocarbons, such as butadiene, butylenes, and butane, from C4 fraction. The Company also uses the fraction to produce tertiary butyl alcohol and Skyprene, a premium-quality polychloroprene rubber.			
<b>Cumene</b>	230,000	● ●	
Cumene, a benzene and propylene derivative, is used in the production of phenol, a key ingredient for the manufacture of phenolic resins, polycarbonate resins, and epoxy resins.			
<b>Aromatic compounds</b>	154,000	● ●	<i>Benzene</i>
Tosoh is a significant producer of benzene, toluene, and xylene (BTX). These aromatic compounds are important raw materials for the production of the organic compounds used in a wide variety of industrial and consumer products.			

## POLYMERS

An integral part of today's consumer lifestyle, Tosoh's polymer products have application in a gamut of plastic ranging from food packaging to products used in agriculture, engineering, fishing, distribution, and other industries. The Company's lineup includes polyethylene for mainstream plastic production and functional polymers for niche markets. With particular strength in the adhesive field, Tosoh's polymers have a strong reputation for consistent quality.

<i>Product</i>	<i>Markets Served</i>	<i>Brand Name</i>
<b>Ethylene vinyl acetate copolymer</b>	● ● ● ●	<i>Nipoflex</i> <sup>®</sup>
Nipoflex is a Tosoh ethylene vinyl acetate (EVA) copolymer with applications in foaming for shoe soles, blown film, stretch and agricultural film and lamination, sheet extrusion, hot-melt adhesives, and injection molding. It combines clarity, gloss, and weather resistance with flexibility. Nipoflex retains its elasticity even amid low temperatures yet remains resistant to flex and environmental stress cracking.		
<b>Low-density polyethylene</b>	● ● ● ●	<i>Nipolon</i> <sup>®</sup> , <i>Nipolon-L</i> <sup>®</sup> , <i>Nipolon-Z</i> <sup>®</sup> , <i>LUMITAC</i> <sup>®</sup>
Nipolon (LDPE), Nipolon-L (LLDPE), Nipolon-Z (LLDPE), and Lumitac (ULDPE) are low-density polyethylenes available in a range of resins noted for their superior elasticity, transparency, shock resistance, and processing. These products are used in blown film and blow molding for packaging applications; in heavy-duty bags; in stretch, shrink, and agricultural film; in extrusion coating and laminating a variety of materials; and in injection molding.		

Market Color Code

- Asia
- North America
- Europe
- Japan





Product	Markets Served	Brand Name
<b>High-density polyethylene</b>	● ● ● ●	<i>Nipolon® Hard</i>
Nipolon Hard is a high-density polyethylene (HDPE) with great tensile strength and hardness and excellent processing characteristics. It includes a specialized grade for the chemical containers used in semiconductor production. Other applications include blow molding and blown film for containers, bags, and packages; extrusion pipe; injection molding; and fishing net filament.		
<b>Adhesive polymer</b>	● ● ● ●	<i>Melthene®-M, Melthene®-H, Melthene®-G</i>
Melthene-M, Melthene-H, and Melthene-G adhesive polymers ensure superior adhesive properties that, depending on the functional grade, are available for a variety of materials substrates. Utilizing standard pressing techniques, Melthene-M provides solid adhesion for plastic containers, paper, and wood materials. In working with metals, glass, and cloth, Melthene-H is an EVA-related product that is weather resistant and displays excellent adhesion and solvency properties. Melthene-G's adhesive properties are best put to use with glass, polyethylene terephthalate (PET), and polycarbonate. Melthene-G also is used as a film for inter-layer glass and plasma display panel (PDP) filters.		
<b>Chloroprene rubber</b>	● ● ● ●	<i>SKYPRENE®</i>
Skyprene is a prime example of why Tosoh's chloroprene rubber boasts superior cold, heat, abrasion, ozone, oil, and chemical resistance and competitive prices. Skyprene is available in a variety of grades to suit diverse applications in wire and cable jackets, industrial and automotive parts, construction materials, extruded products, adhesives, and even wet suits.		
<b>Chlorosulphonated polyethylene</b>	● ● ● ●	<i>TOSO-CSM®</i>
Toso-CSM exemplifies why chlorosulphonated polyethylene, which is manufactured by only a handful of companies globally, is a superior coating material resistant to ozone, weather, oil, and chemicals and available in brilliant colors. Tosoh makes various grades of Toso-CSM for use in automobile- and industrial-use hoses, coatings, and linings for electrical and mechanical products and in such consumer products as raincoats.		
<b>High-performance CSM</b>	● ● ● ●	<i>extos®</i>
Extos is a high-performance grade of Toso-CSM. It boasts extended low-temperature and dynamic properties and is used in the manufacture of automobile belts and in other similar applications.		
<b>Polyvinyl chloride paste</b>	● ● ● ●	<i>Ryuron®</i>
Ryuron, whose manufacture is based on a seed micro-suspension polymerization process, is designed to improve processing and to provide superior finished products. Unlike commodity polyvinyl chloride (PVC) resins that require heat, Ryuron, with the addition of a plasticizer, can be processed at room temperature, resulting in facility cost and energy savings. Primary applications for Ryuron include wall paper, flooring materials, artificial leather, toys, and gloves.		
<b>Polyphenylene sulfide resins</b>	● ● ● ●	
Polyphenylene sulfide (PPS) resins are unique engineering plastics that combine many of the best properties of plastics and metals. They feature excellent resistance to temperature, chemical, and flame and outstanding electrical properties, precision moldability, and dimensional stability. Even without adding flame retardants, PPS resins have a UL94V-0 rating. They are environmentally preferable to many other engineering plastics and find use in electrical and electronic parts, appliance components, and automotive applications.		
<b>C9 hydrocarbon resins</b>	● ● ● ●	<i>Petcoal®</i>
Petcoal is a C9 hydrocarbon resin that exhibits excellent solvency and good thermal stability and weathering properties. Aromatic hydrocarbon resins of this sort are compatible with a vast range of synthetic resins and rubbers. Applications include paints, printing inks, adhesive tape, hot-melt adhesives, and rubber agents.		



The Basic Group contributes to people's daily lives by supplying major industries with key feedstocks for such essential materials as plastics, glass, pulp and paper, aluminum, and soaps and detergents. It also manufactures cement for the construction industry. The group leverages the highly integrated efficiencies of its infrastructure and advanced technologies in its commitment to being the strongest link in the manufacturing chain on behalf of the end user.

## Vinyl Isocyanate Chain Operations Position Tosoh in Global Markets

Vinyl chain refers to an integrated sequence of manufacturing operations that produce several key vinyl-related chemicals from the basic commodities salt and ethylene. Salt is electrolyzed to yield chlorine and caustic soda. The chlorine reacts with ethylene to produce ethylene dichloride (EDC), and the balance of the chlorine is used to manufacture other chlorine derivatives.

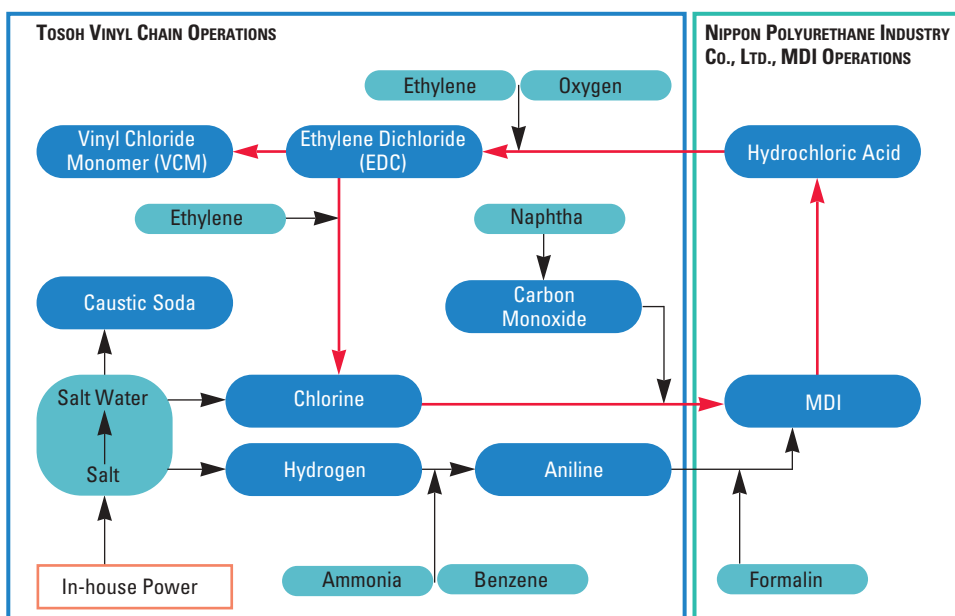
Another method for producing EDC used by Tosoh is through a proprietary oxychlorination process. Tosoh converts EDC—which can be combined with caustic soda to produce ethylene amines, another major Tosoh product—to VCM. Some of the VCM is, in turn, converted into various PVC resins, and the rest is sold to other downstream manufacturers.

A high degree of plant integration is required to achieve VCM process efficiencies. Our Nanyo Complex features port facilities where 48,000-ton tankers can dock directly and an on-site 675-megawatt power plant capable of generating the electricity for salt electrolysis at low cost. The complex also is strategically located close to oil refinery and naphtha cracker facilities so that it can benefit from locally supplied ethylene.

Tosoh recently expanded its Nanyo Complex vinyl chain operations by integrating them with the operations of Tosoh Group company Nippon Polyurethane Industry Co., Ltd. (NPU), to form a vinyl isocyanate chain. The Nanyo Complex will supply aniline, carbon monoxide, and chlorine to NPU for the production of isocyanate and urethane products. NPU will pump to the Nanyo Complex the hydrogen chloride that it produces during these downstream processes for the Nanyo Complex to use in the production of EDC.

Tosoh's strategy is to expand the scope of its vinyl isocyanate chain operations. It will do so to take advantage of various additional groupwide synergies and to establish comprehensive downstream and upstream operations to maintain its position as a leader in VCM production in the Asian market and to expand its product lineup.

### Vinyl Isocyanate Chain





## CHLOR-ALKALI

Product	Capacity (m/t/y)	Markets Served	Brand Name
<b>Caustic soda</b>	1,200,000	● ●	
Tosoh is Japan's largest producer of caustic soda, or sodium hydroxide, which is used in producing such sodium compounds as sodium bicarbonate (baking soda). It also finds application in the manufacture of rayon, pulp and paper, alumina, soaps and detergents, textiles, and vegetable oils. Tosoh uses advanced proprietary ion exchange membrane technology to supply this vital basic chemical competitively to the global market.			
<b>Vinyl chloride monomer</b>	1,046,000	● ●	
The basic building block for PVC, VCM is a colorless gas that the Basic Group produces. Tosoh is the largest producer of VCM in Japan and a major supplier to Asia.			
<b>Calcium hypochlorite</b>	10,080	● ● ●	Niclon®
Niclon is a product typically used for sterilizing and disinfecting swimming pools and drinking water. It also finds use in sewage treatment systems.			
<b>Sodium bicarbonate</b>		● ●	
Sodium bicarbonate (baking soda) is widely used in food products, animal feeds, bath additives, and pharmaceuticals.			
<b>Others</b>		●	
Tosoh's other chlor-alkali products include fused (magnesium) phosphate, calcium silicate, calcium carbonate, calcium oxide (quicklime), calcium hydroxide (hydrated lime), liquid chloride, hydrochloric acid, poly-aluminum chloride, ferric chloride solution, sodium hypochlorite, calcium chloride, sodium sulfate, mixed fertilizers, magnesia fertilizer, limestone, and phosphoric acid.			

## CEMENT

Our Nanyo Complex cement manufacturing operations make optimal use of resources. They take advantage of the facilities' natural deepwater port facilities and on-site source of inexpensive power. They also use as raw material the 170,000 metric tons of coal ash produced yearly by our power plant boilers. Adding to the operations' environmental benefits is their significant contribution to local recycling. Our cement operations consume a variety of waste products, including more than 15,000 metric tons of used tires annually and approximately 10 metric tons of refuse-derived fuel (RDF) daily, a solid fuel produced at a nearby municipal RDF plant.

The marketing and sale of Tosoh's entire cement production has been consigned to Taiheiyo Cement Corporation. Taiheiyo is one of Japan's leading cement manufacturers.

### Market Color Code

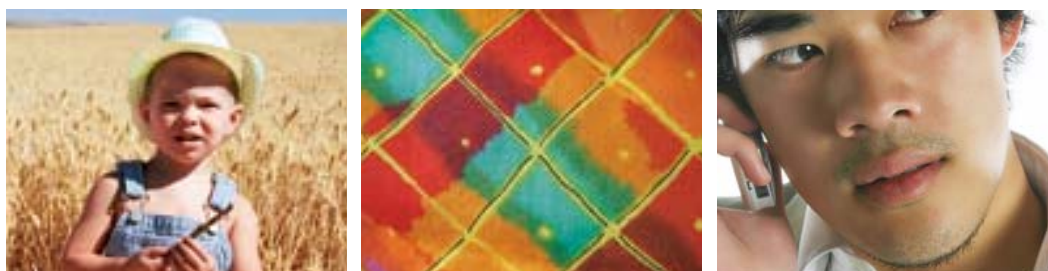
- Asia
- North America
- Europe
- Japan

Product	Capacity (m/t/y)	Markets Served	Brand Name
<b>Cement</b>	2,900,000	● ●	
Tosoh cement products span ordinary portland cement, portland fly ash cement, and portland blast furnace slag cement.			

## SPECIALTY GROUP



The Specialty Group is an invisible contributor to the marvels of our new information age. It enables Tosoh to balance the bulk chemicals and materials side of its business with technologically sophisticated high-value-added products that supply industries on the frontiers of progress, such as the semiconductor, consumer electronics, pharmaceutical, and medical industries. Originally, the Specialty Group served mainly advanced niche markets, but Tosoh is regrouping and strengthening many of the group's specialty operations with an eye to developing them into core businesses.



## ORGANIC CHEMICALS

Tosoh is the chief manufacturer of ethylene amines, bromine, and brominated compounds in Asia. A worldwide network, high-quality standards, and custom synthesis capabilities support a reputation as a global supplier of organic chemicals. Approximately half of sales are exports. The Organic Chemicals Division supplies fine chemicals for numerous applications, including pharmaceuticals, agrochemicals, electronics, organometallic catalysts, fragrances and flavors, urethane polymers, and specialty coatings.

Product	Capacity (m/t/y)	Markets Served	Brand Name
<b>Ethylene amines</b>	41,000	● ● ● ●	
Impressive product quality and reliability are Tosoh's calling cards in the specialized market for ethylene amines. In conjunction with a European manufacturing subsidiary, the Company has established a prompt and stable global supply network and can produce polyamines upon request.			
<b>Polyurethane foam catalysts</b>		● ● ● ●	<i>TEDA, TOYOCAT®</i>
Teda and Toyocat, which Tosoh produces entirely in-house, are highly cost-competitive ethylene amine derivatives. Teda triethylenediamine is used extensively as a catalyst to promote both gelling and blowing activities in the production of flexible, semirigid, and rigid polyurethane foams and in elastomers. Toyocat, a specialty tertiary amine catalyst for polyurethane foams, is available in a broad range of standard and customized grades, including conventional catalysts, reactive catalysts, acid-blocked catalysts, and trimerization catalysts.			
<b>Organic intermediates</b>		● ● ● ●	
In addition to being Japan's only bromine manufacturer, Tosoh produces halogenated intermediates, particularly bromine compounds, that are important intermediate materials for diverse chemicals used in the pharmaceutical and electronics industries. The Organic Chemicals Division combines expertise in organometallic synthesis, halogenation, and fluorination technologies to serve the high-growth markets for pharmaceuticals and specialty products geared to electronic materials. Its products include mono bromo alkanes, dibromo and bromochloro alkanes, halo aromatics, mono chloro alkanes, halo carboxylic acids and esters, halo alkyl amines, p-tert-butoxystyrene as a resist monomer for electronic devices, piperazine derivatives, and benzaldehydes and their derivatives.			
<b>Sodium styrenesulfonate</b>		● ● ● ●	<i>SPINOMAR® NaSS</i>
Spinomar NaSS is an additive widely used in dye-improving agents for acrylic and polyester fibers; in reactive emulsifiers for water-borne coatings; and in antistatic agents for textiles, plastics, and paper.			
<b>Bromine</b>	24,000	●	
Tosoh is Japan's sole manufacturer of bromine, an indispensable raw material for inorganic pharmaceuticals, photosensitive materials, dyes, and medicines.			

Market Color Code

- Asia
- North America
- Europe
- Japan



<i>Product</i>	<i>Markets Served</i>	<i>Brand Name</i>
<b>Hydrobromic acid</b>	● ●	
Hydrobromic acid features high reactivity and unique physical properties. It is used extensively in the production of organic intermediates, inorganic pharmaceuticals, photosensitive materials, dyes, and medicines. Additional applications for hydrobromic acid include lithium bromide and the catalyst for producing terephthalic acid.		
<b>Flame retardants</b>	● ●	<i>FLAMECUT<sup>®</sup>, 110R, 120G</i>
Flamecut 110R and 120G are flame-retardant additives that transform regular plastics into thermo- and flame-resistant plastics.		
<b>Chelating agents</b>	●	<i>TS-275, TX-10</i>
TS-275 is a high-performance heavy metal treatment agent for fly and combustion ash. In addition to its superior heavy metal trapping properties, TS-275 overcomes a weakness of conventional fly ash treatment methods by sharply reducing the volume of the carbon disulfide generated during treatment. TX-10 precipitates heavy metals in wastewater, contributing to its purification.		
<b>Solvents</b>	● ● ● ●	
A variety of hydrocarbon (HC)-based solvents are available for the wide range of cleaning requirements in metal processing, electronics, and electrical machinery.		
<b>High-purity ethylene dichloride</b>	● ●	
Tosoh also produces high-purity ethylene dichloride (EDC), a chlorine-based organic solvent. The product is also utilized as an intermediate in the manufacture of medicines and agricultural chemicals.		
<b>Aspartame</b>	● ● ● ●	
Aspartame is 200 times sweeter than sugar and remains the most widely used intense sweetener in the world. Tosoh produces aspartame through Holland Sweetener Company V.O.F., a joint venture with Koninklijke DSM N.V., at a world-class plant in the Netherlands.		



## SPECIALTY MATERIALS

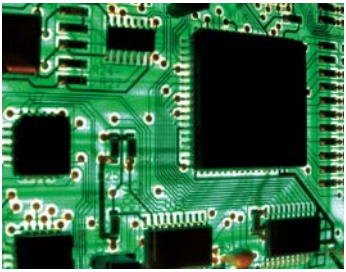
The Specialty Materials Division is one of the world's leading manufacturers of advanced materials and electronics products. It supplies those products to the world's best-known producers of consumer, industrial, and high-technology goods. Electrolytic manganese dioxide (EMD), ceramics, and zeolite—the core products of the division—are essential components of many electronic and high-tech products and of many industrial and environmentally related processes.

Product	Capacity (m/t/y)	Markets Served	Brand Name
<b>Yttria-stabilized zirconia powders</b>	1,300	● ● ● ●	
Tosoh has a global reputation for its high-purity, high-quality yttria-stabilized zirconia (YSZ) powders. Because of its superior mechanical properties, high fracture strength, resistance to abrasion, and smooth finish, manufacturers are using zirconia in an increasingly wider range of applications, including machine parts, electronic parts and tools, optical fiber connector parts, and watch cases.			
<b>Zirconia compounds for injection molding</b>		● ● ● ●	
Tosoh supplies optical fiber connector ferrule blanks and various injection molded components produced by Tosoh Ceramics Co., Ltd. The base material for the production of these products is Tosoh's zirconia compounds, which are based on Tosoh's YSZ powders. In addition to powder production, Tosoh is an injection molding compound manufacturer with extensive experience in the mass production of sintered bodies. This know-how ensures that Tosoh's zirconia compounds exhibit high quality, provide easy sintering, and possess superior handling features.			
<b>Grinding media</b>		● ● ● ●	YTZ®
In cooperation with Nikkato Corporation, Tosoh markets a top-of-the-line yttria-stabilized zirconia grinding media that offers ultrahigh grinding efficiency without product contamination. Applications include piezoelectric and dielectric materials, ceramics and minerals, pigments and paints, magnetic materials, and pharmaceuticals.			
<b>Electrolytic manganese dioxide</b>	52,000	● ● ● ●	
Electrolytic manganese dioxide (EMD) is used in the production of dry cell batteries and soft ferrites. Tosoh boasts the largest battery-grade EMD capacity in the world and a global supply network centered on manufacturing facilities in Japan and Greece and is thus able to meet the most-demanding requirements of its customers for high-performance primary alkaline batteries and lithium manganese batteries.			
<b>Manganous manganic oxide</b>		● ● ● ●	Brownox®
Brownox is widely regarded for its consistent purity and particle size. Such highly purified reactive manganous manganic oxide compounds are in growing demand for ferrite and thermistor applications.			
<b>Zeolite molecular sieves</b>		● ● ● ●	Zeolum®
Zeolum displays strong selective adsorption properties that make it suitable for drying, purifying, and separating a wider variety of feeds than any other adsorbent. Common uses include the separation of nitrogen and oxygen from air, pressure swing adsorption (PSA) systems, the removal of carbon dioxide and moisture from air, and the drying of naphtha-cracked gas and organic solutions.			
<b>Zeolite for catalysts</b>		● ● ● ●	HSZ® Series
HSZ Series high-silica zeolites have higher SiO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> mol ratios than zeolite molecular sieves. Their high thermal and acid stability make them useful for a range of catalyst and adsorbent applications, including as petroleum-refining catalysts for hydrocracking, isomerization, and dewaxing; as petrochemical catalysts for alkylation and isomerization; as petrochemical adsorbents; as removers of volatile organic compounds (VOCs) and as cleaners of hydrocarbons in automobile exhaust.			

### Market Color Code

- Asia
- North America
- Europe
- Japan





Through constant innovation made possible with its development capabilities, the Electronic Materials Division is enabling the technologies of the future. The division provides new products and solutions for the high-tech, high-growth semiconductor, flat-panel display, and materials markets worldwide. Its integrated quartz (silica glass) business covers all major geographical markets and supplies global semiconductor and optical markets. The thin film materials business (sputtering targets) includes the manufacture and sale of a wide range of high-purity deposition materials and of PVD, CVD, etch, and CMP Process Kit Management™ services.

## ELECTRONIC MATERIALS

Product	Markets Served	Brand Name
<b>Silica glass materials</b>	● ● ● ●	
Tosoh's quartz materials excel in quality and value, reflecting Tosoh's advanced technology, more than 60 years of experience in the field, and highly competitive utility costs. The Company is among the few suppliers with a lineup that includes transparent and opaque, natural and synthetic, and flame and electrically fused quartz materials.		
<b>Fabricated quartzware</b>	● ● ● ●	
Through its global network of quartz fabrication facilities, Tosoh provides customers in the semiconductor, LCD, and optical markets with a uniformly high-quality supply of products. Customers can take advantage of Tosoh's cutting-edge technology, stringent quality control, and engineering support to achieve their required specifications with the highest precision possible.		
<b>Machined quartzware</b>	● ● ● ●	
Tosoh's integrated domestic and international network of machining facilities and access to stable material supplies enables it to assure customers of a reliable, high-volume supply of high-precision machined quartzware. Tosoh utilizes state-of-the-art machining centers and an understanding of materials and fabrication to offer optimized machining.		
<b>Sputtering targets</b>	● ● ● ●	
Tosoh's sputtering targets are produced at its operating bases in Japan, the United States, South Korea and at its bonding facilities in Taiwan. They are available in a variety of high-purity metals, metal alloys, and ceramic compositions. Tosoh can make its sputtering targets in all shapes and sizes and to all purity levels to meet design specifications for thin film deposition in semiconductor, flat-panel display, and electronic component manufacturing processes.		
<b>Process Kit Management</b>	● ● ● ●	Process Kit Management™
Tosoh's wholly owned subsidiary, Tosoh SET Inc., specializes in PVD* and CVD*, etch, and CMP* kit refurbishment for the semi-conductor industry. The Process Kit Management™ program combines parts cleaning with mechanical inspection, advanced surface treatment, and parts replacement. Assembling all the components into one kit box significantly reduces material management requirements for customers around the world.		

\* PVD Physical Vapor Deposition  
 CVD Chemical Vapor Deposition  
 CMP Chemical Mechanical Planarization



## SCIENTIFIC INSTRUMENTS

Tosoh is a world leader in the development and production of high-performance liquid chromatography (HPLC) systems and packing materials. It also is an internationally recognized pioneer in the introduction of highly sophisticated diagnostic systems. The Company frequently garners acclaim for the achievements of its Scientific Instruments Division from academia, government, and scientific institutions because Tosoh and its researchers are responding to some of society's more crucial needs. The division's fully automated systems incorporate the latest immunoassay technologies and are utilized for the rapid diagnosis of life-threatening diseases, such as diabetes and certain cancers. Tosoh Bioscience companies are vigorously promoting these and a wide array of other Tosoh life sciences technologies around the world.

<i>Product</i>	<i>Markets Served</i>	<i>Brand Name</i>
<b>Fully automated random-access enzyme immunoassay system</b>	● ● ●	<i>AIA®-1800</i>
The AIA-1800 is the successor to the highly acclaimed AIA-21 series. It provides continuous random access, full automation, full STAT capability, high throughput, operational simplicity, and an unprecedented degree of flexibility as a complete, full-featured platform. Designed under Open-LA21 standardization, the AIA-1800 is compatible for creating highly integrated laboratory automation systems.		
<b>Random-access enzyme immunoassay system</b>	● ● ● ●	<i>AIA®-600</i>
The AIA-600 II builds on the proven reliability of Tosoh's original AIA-600. It is equipped with such advanced functions as STAT assay results, primary tube sampling, and automated sample dilution and pretreatment. The AIA-600 II offers all the automation, power, and performance of a large system in a compact, benchtop design.		
<b>Newest automated immunoassay analyzer</b>	● ● ● ●	<i>AIA®-360</i>
The AIA-360, which is a slim 16 x 16 x 21 inches and weighs approximately a mere 61 pounds, is ideal for small-volume hospital labs and physicians' offices and for cardiac and specialty testing. The system boasts a throughput of 36 tests per hour and results in under 20 minutes, bar-coded primary tube sampling, reagent level sensing, clot detection, and positive cup ID.		
<b>Reagent systems</b>	● ● ● ●	<i>AIA-PACK®, ST AIA-PACK</i>
Among Tosoh's AIA-PACK and ST AIA-PACK reagent systems, AIA-PACK test cup technology contributes significantly to lab efficiency and productivity. Pre-measured, prepackaged, and labeled test cups eliminate human error, minimize waste, and save operator time, while quality reagents and automated procedures provide consistent and fast performance. The ST AIA-PACK provides a quicker, 10-minute reaction time.		

### Market Color Code

- Asia
- North America
- Europe
- Japan



<i>Product</i>	<i>Markets Served</i>	<i>Brand Name</i>
<b>Automated glycohemoglobin analyzer</b>	● ● ● ●	<i>HLC®-723G7</i>
<p>Glycohemoglobin measurements are widely utilized as a diabetic screening test index and as a therapeutic index for the long-term blood glucose control of diabetes mellitus. Tosoh's fifth-generation glycohemoglobin analyzer, the HLC-723GHbV, achieved the first complete separation of labile A1c from stable A1c on the chromatogram and minimized interference from variant hemoglobin within three minutes of its Variant Analysis Mode. The new HLC-723G7 features even higher resolution and faster result reporting capabilities.</p>		
<b>Ion chromatography</b>	●	<i>IC-2001</i>
<p>The IC-2001 is a compact, full-function ion chromatography system with auto sampling onboard that makes use of Tosoh's proprietary suppressor technology. With a new design and the latest high-performance separation columns, this system provides high-sensitivity anion and cation measurement that is simple and accurate.</p>		
<b>High-performance gel permeation chromatography system</b>	●	<i>HLC®-8220GPC</i>
<p>The HLC-8220GPC is a fully automated liquid chromatography system for gel permeation chromatography. This system combines a dual solvent delivery system and a highly efficient optical system that reduces baseline noise to a very low level.</p>		
<b>High-temperature GPC system</b>	●	<i>HLC®-8121 GPC/HT</i>
<p>The HLC-8121GPC/HT is a superior high-temperature GPC system. It was designed and developed for extraordinary reliability, safety, sensitivity, and start-up time.</p>		
<b>High-performance liquid chromatography</b>	●	<i>CCP®-8020 SERIES</i>
<p>The CCP, Tosoh's computer-controlled pump system, provides the automatic self-optimization of the minimum pulse flow and the automatic compensation of the liquid compression ratio. The Tosoh 8020 series offers a highly sensitive and stable detector, a data processor, and accessories.</p>		
<b>Packing materials for medium-pressure liquid chromatography</b>	● ● ● ●	<i>TOYOPEARL®</i>
<p>Tosoh's Toyopearl packing material is popular with major pharmaceutical companies in Europe and the United States. It is a totally porous, rigid, and spherical gel that can be applied at high flow rates. Toyopearl is most suitable for preparative separation and scaled-up industrial purification processes and is widely used for purifying and separating biopolymers and other biochemicals.</p>		
<b>Packing materials and packed columns for HPLC</b>	● ● ● ●	<i>TSK-GEL®</i>
<p>TSK-Gel packing materials and packed columns are used extensively in laboratories worldwide and hold top share of the Japanese market. This product covers the full HPLC range and offers high-resolution even at high flow rates, excellent reproducibility, and long column life. TSK-Gel, moreover, makes scaling up from analytical to preparative columns simple and easy.</p>		



Tosoh is dedicated to providing its customers with the most-effective and reliable products and services in the industry. We maintain a fleet of trucks and even our own ships to guarantee state-of-the-art quality distribution and logistics. The Service Group is an alliance of Tosoh subsidiaries and affiliates that provides the critical support Tosoh relies on to operate cost-efficiently and to deliver its products in a timely manner. Below are three Tosoh companies within the Service Group.

**Tosoh Analysis and Research Center Co., Ltd.**

Provides comprehensive services in materials analysis, specializing in organic, inorganic, polymer, and electronic materials.

**Tosoh Information Systems Corporation**

Responsible for system consultation, business system development, operations and maintenance, LAN and WAN design, implementation and maintenance, and the provision of Internet services and IT training. Tosoh Information Systems likewise assists Tosoh Group companies in IT solutions, such as the introduction and development of a new enterprise resource planning (ERP) system. The aim is to enable management to quickly and easily assess performance throughout the entire Tosoh Group.

**Tosoh General Services Co., Ltd.**

Provides security, disaster prevention, payroll, facility maintenance, and other services.

## CORPORATE GOVERNANCE POLICY AND MEASURES

Today's expanding global markets and cross-border transactions increasingly demand an active and formal approach to corporate governance. To ensure the continued viability of the Company, Tosoh is building an efficient organization that can quickly respond to changes in the business environment. At the same time, it strives to achieve sound operations that demonstrate fair business practices and that are highly transparent.

The Board of Directors meets, in principle, at least once a month to make decisions on important matters concerning the operation of the business. In addition, the Board oversees the business activities of directors in charge of operations. Moreover, to enable quick decision making the Executive Committee meets, in principle, once a week to decide on important business proposals. The Company employs a corporate auditor system under which four corporate auditors—two of whom are non-standing auditors—monitor the business activities of directors. Furthermore, to strengthen the Auditors' Committee, an Auditors' Committee Office was established in fiscal 2003. Each of the companies in the Group also conducts business audits through their corporate auditing departments. Neither of the Company's non-standing auditors has a vested interest in Tosoh.

Tosoh has Anti-monopoly, Export Management, and Compliance committees and a guidance manual for compliance activities to ensure compliance with legal regulations. When deemed necessary, the Company also consults with its legal advisors. To increase the transparency of its business activities, Tosoh is making efforts, such as the earlier reporting of performance announcements, to proactively and quickly disclose information.

## CORPORATE COMPLIANCE

When Tosoh opened its doors for business in Japan in 1935, corporate compliance was a combination of simple ethics and following governmental regulations at home and abroad. To ensure compliance with ever-more stringent local, national, and international laws and standards and regulations for business practices across its expanding organization, the Tosoh Group requires a proactive and systematic structure. Our efforts to raise our level of corporate compliance to match heightened international expectations involve the employees of the parent company, Tosoh Corporation, and 22 wholly owned subsidiaries.

Heading up Tosoh's corporate compliance organization, the Compliance Committee is responsible for devising and improving the system, for establishing the system's principles of conduct, and for monitoring the application of the system. The Compliance Committee Promotion Team provides feedback regarding the Compliance Committee's work and acts on the committee's instructions. Meanwhile, compliance officers in each division, department, and facility of the Tosoh Group further enforce the Group's compliance with expectations worldwide.

Fair business practices regarding purchasing and selling, for example, fall under the Antitrust Law of Japan and under Tosoh's antitrust compliance, purchase and sale management, and quality control regulations. Tosoh provides its employees with its *Antitrust Compliance Manual* to guide their actions in meeting the law and the regulations. And the Group's Antitrust Compliance Committee; Legal and Patent Department; and Environment, Safety, and Quality Control Department are charged with overseeing compliance on fair business issues.

Tosoh's response to environmental preservation is governed by a host of conservation and antipollution laws and by the regulations set internally by the Group's Responsible Care Council and under the Group's quality control system. Seeing that those laws and regulations are adhered to is the purview of our Environment, Safety, and Quality Control and our Corporate Strategy & Planning departments.

Tosoh set up its first overseas representative office, in New York, more than 40 years ago, beginning its unwavering pursuit of becoming a global corporation. At first, we were merely attracted by the large potential markets for our rapidly growing array of products. Next, we were enamored of advanced technologies in fields that we determined we would succeed in. Later, of course, we recognized that to be globally competitive and truly global we needed a global presence based on actual on-the-ground operational networks—true localization.

After less than half a century of evolving stage by stage since the opening of that first office in New York, we have become a multinational corporation with global reach. The 133 companies of the Tosoh Group employ more than 9,000 people worldwide and give us an extensive global presence. Indeed, more than 28% of our sales are from abroad, a figure that we expect to significantly increase over the medium term.

We believe in the positive aspects of our multiethnic, multicultural corporate group. Our diversity brings vitality and creativity to all aspects of our business and supports our core strategy of innovation in technology and business. But it has been a steep learning curve for us in determining how to balance diversity with the efficiencies of strict organizational control. It also has been challenging to know how to focus the sharp minds that work for us on a single vision of our future.

In many cases, this process has involved expanding and then regrouping, an approach most common to our Specialty Group as it rushes to take advantage of opportunities for our specialized technologies. We reorganize as a group when appropriate to form a more cohesive structure with a more solid vision for the future.

Take, for example, our Tosoh Bioscience companies, which market scientific and diagnostic systems. We had built up operations for these systems by various means over the years to establish a network covering the European and U.S. markets. Two years ago, we rebranded all of those companies under the Tosoh Bioscience name to present a unified image to our international markets. This consolidation has significantly increased the presence of these companies in markets worldwide and raised their efficiency through better integration, benefiting our customers. We now proudly promote our life sciences



**NORTH & CENTRAL AMERICA**

**United States**

Tosoh America, Inc.  
Tosoh Bioscience, Inc.  
Tosoh Bioscience LLC  
Tosoh SMD, Inc.  
Tosoh SGM USA, Inc.  
Tosoh Quartz, Inc.  
Tosoh SET, Inc.  
Tosoh USA, Inc.  
Tosoh Wyoming, Inc.  
General Chemical (Soda Ash) Partners  
Holland Sweetener North America, Inc.  
NSG Precision Cells, Inc.

**Panama**

Oriental Marine Corporation

**ASIA**

**Korea**

Tosoh SMD Korea, Ltd.

**Taiwan**

Tosoh Quartz Co., Ltd.  
Tosoh SMD Taiwan, Ltd.

**Singapore**

Tosoh Singapore Pte., Ltd.

**The Philippines**

Mabuhay Vinyl Corporation  
Philippine Resins Industries, Inc.

Tosoh Polyvin Corporation

**China**

Tosoh (Shanghai) Co., Ltd.  
Tosoh (Guangzhou) Chemical Industries, Inc.

**Indonesia**

P.T. Standard Toyo Polymer

**Malaysia**

Organo (Asia) Sdn. Bhd.

**EUROPE**

**The Netherlands**

Tosoh Europe B.V.  
Toyo Soda Nederland B.V.  
Holland Sweetener Company V.O.F.

Delamine B.V.

**Germany**

Tosoh Bioscience GmbH

**Greece**

Tosoh Hellas A.I.C.

**Belgium**

Tosoh Bioscience N.V.

**Switzerland**

Tosoh Bioscience A.G.

**Italy**

Tosoh Bioscience SRL

**United Kingdom**

Tosoh Bioscience, Ltd.

technologies for the medical market under the single name of Tosoh Bioscience around the world.

Earlier, in 2000, we had used this strategy with success for our quartz fabrication companies. We unified those operations under the name Tosoh Quartz.

At the parent company, we have employed a similar strategy in our electronics operations. In June 2003, we combined the quartz, fabricated quartzware, sputtering target, and industry service operations of our Specialty Group into a new Electronic Materials Division. We had developed areas of expertise in these various niche markets over the years but felt the time had come to bring all of our specialty electronics operations under one umbrella. This, we reasoned correctly, would achieve the critical mass required to develop electronic materials into a core business serving the world.

Years earlier, during our domestic expansion stage, we gained some understanding of the processes of assimilating acquisitions, making joint ventures work, and integrating operations. We have since put this knowledge to good use internationally.

A good case in point is our entrance into the Chinese market. With China's economy growing at a tremendous clip, we had been looking at making a full-scale entrance into that nation's market. It was clear, though, that the many special features of that market also posed significant barriers and risks for the kind of success we wanted to achieve in both the domestic and export sides of China's market.

We therefore chose to bide our time until we could see a clear window of opportunity for entering the Chinese market on our terms. When that opportunity appeared, we were ready. We established a trading company, Tosoh (Shanghai), to support our growth strategies in China in early 2004. At the same time, Tosoh Logistics, NPU, Lonseal, and Hodogaya Chemical joined the trading company in the same building in Shanghai to begin developing our China network.

Our first manufacturing plant in China, Tosoh (Guangzhou) Chemical Industries, is a PVC joint venture with other Japanese corporate partners. Already approved by the Chinese government, the plant is being built in Guangzhou, Guandong Province, at a cost of ¥8 billion and is slated for completion in 2006. It will have a capacity of 220,000 metric tons a year and will position Tosoh to take advantage of the strong economic growth in China and throughout Asia.



#### JAPAN

Nippon Styrene Monomer Co., Ltd.  
Ace Pack Co., Ltd.  
Hiyoshi Chemical Industry Co., Ltd.  
Hokuetsu Kasei Co., Ltd.  
Rensol Co., Ltd.  
Sankyo Kasei Industry Corporation  
Shinomura Chemical Industry Corporation  
Toyo Polymer Co., Ltd.  
Toei Co., Ltd.

Lonseal Corporation  
Minami Kyushu Chemical Industry Co., Ltd.  
Nihon Kaisuikako Co., Ltd.  
Plas-Tech Corporation  
Rinkagaku Kogyo Co., Ltd.  
Taihei Chemicals Ltd.  
Taiyo Vinyl Corporation  
Toho Acetylene Co., Ltd.  
Tohoku Tosoh Chemical Co., Ltd.  
Tokuyama Sekisui Co., Ltd.  
Taihei Kasei, Inc.

Tosoh Finechem Corporation  
Tosoh F-Tech, Inc.  
Tosoh Organic Chemical Co., Ltd.  
Tosoh Ceramics Co., Ltd.  
Tosoh Hyuga Corporation  
Tosoh Silica Corporation  
Tosoh Zeolum, Inc.  
Shin-Nippon Silica Glass Co. Ltd.  
Tosoh Quartz Corporation  
Tosoh SGM Corporation  
Tosoh Speciality Materials Corporation  
Hodogaya Chemical Co., Ltd.  
Nippon Polyurethane Industry Co., Ltd.

Tosoh AIA, Inc.  
Tosoh Hi-Tec, Inc.  
Tosoh Techno-System, Inc.

Eco-Techno Corporation  
Organo Corporation and Group Companies

Tosoh Analysis and Research Center Co., Ltd.  
Tosoh Information Systems Corporation  
Tosoh General Services Co., Ltd.  
Tosoh Logistics Corporation  
Tosoh Plant Services Corporation

*(Incomplete list of companies)*

### **The Quest for Technological Progress**

Today's society counts on technological progress to continually boost comfort and safety. This expectation applies equally to the IT systems used to transmit massive amounts of information, to the so-called green transport and energy systems that we rely on to minimize environmental impact, and to the medical diagnostic systems that we depend on for the early discovery of debilitating and life-threatening diseases.

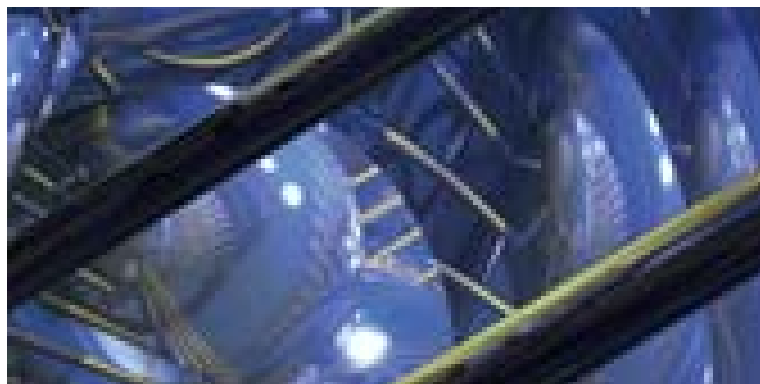
To fulfill that expectation, Tosoh is committed to imparting ever-superior functionality and reliability to chemicals and other materials used in advanced technologies. The Tosoh Group's approximately 800 researchers join their know-how with that of researchers at leading-edge research institutions and in the academic community in the quest for innovation in technology and business. To that end, the Tosoh Group invested more than ¥10 billion in R&D in fiscal 2004.

### **Fueling the Electronics Revolution**


Rapid advances in IT systems demand increased integration in semiconductor chips. Accomplishing improved integration, in turn, requires nanometer-level design accuracy, extremely high-purity materials, and a high degree of formation control. Tosoh contributes by utilizing its accumulated technologies in metallurgy, metal organics, organic compound molecular design, and organic synthesis to provide the advanced building blocks needed for increasingly sophisticated IT systems.

Tosoh sputtering targets are an example. They provide the high-purity chrome, aluminum, and other metals essential to the production of semiconductors, flat-panel display devices, recording media, thin film resistors, and other miscellaneous coatings.

Our expertise in molecular design and thin film formation technologies serves us well in our work







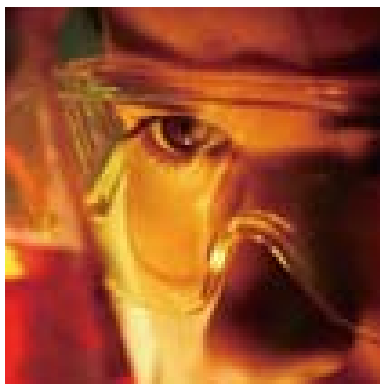
developing superior chemical vapor deposition (CVD) materials, such as ruthenium and iridium complexes. CVD technology increasingly will underpin semiconductor thin films.

Tosoh-produced quartz parts, such as reaction chambers and boats, and substrates play an important role in the manufacture of semiconductors. To increase yields, quartzware must exhibit high levels of purity and superior heat resistance, durability, and ease of processing. Researchers at Tosoh are improving on our refining, formation, molding, fabrication, powder molding, and plasma spraying technologies for quartz to steadily develop a line of quartzware products that is in a class by itself globally.

In response to the revolution under way in flat-panel displays, a ubiquitous component of our information society, the Tosoh Group has brought to the fore proprietary technologies instrumental in bringing large-screen displays to consumers. Large-screen LCD production places tremendous demands on quartz substrates, which must have precise dimensions and a uniformly polished face despite their big size.

The indium tin oxide (ITO) sputtering target used in the manufacture of transparent electrodes is another Tosoh material important to LCD production. We are constantly improving our products in this area, aiming for the next level of excellence to maintain and enhance our position as a global leader in ITO sputtering targets. Tosoh-developed maleimide-based transparent heat-resistant resin, which is used as an optical film, is equally important to the sharp picture quality of flat-panel displays.

The organic electroluminescent (EL) displays quickly gaining popularity in the display market benefit greatly from the materials Tosoh develops through its molecular design and organic synthesis technologies. The ability to synthesize high-efficiency electron hole transport materials, a long-standing industry stumbling block, is a result of our work with these technologies.



### **Pushing the Health Care Envelope**

Our organic polymer Toyopearl packing materials feature superior rigidity and separation capabilities that extend their uses beyond research to pharmaceuticals, food products, and diagnostics. Our move into health care diagnostics was made possible by the coupling of our know-how in high-performance liquid chromatography (HPLC) equipment with our trace amount analysis and other technologies. The speed and precision of our glycohemoglobin analyzers are the basis of our reputation as a leading manufacturer of these important tools in the long-term care of diabetic patients, who must regularly monitor their blood sugar levels. We also are developing an analyzer for specific lipoproteins that indicate patients are at high risk for arteriosclerosis.

The immunodiagnosics systems that Tosoh has developed reflect the combination of our scientific instrument analysis technology with biotechnology. These systems function by measuring monoclonal antibodies, and our clinical diagnosis customers are extremely pleased with them.

Tosoh has also begun its entry into genetic diagnostics with an innovative transcription reverse transcription concerted (TRC) amplification method and monitoring system. This product is notable for quickly and accurately diagnosing infectious diseases.

### **Innovations for Environmental Protection and Energy Conservation**

The chemical industry must use its knowledge of chemistry to contribute to environmental preservation and remediation. For its part, Tosoh is heavily engaged in wastewater, groundwater, and contaminated soil purification. We are applying the special properties of various Tosoh Group chemicals and other materials to preserve and clean up the environment.

Fly ash emitted from garbage incinerators threatens the surrounding environment and nearby communities with heavy metal pollution. In response, Tosoh has produced a chelating agent that traps toxic heavy metals and keeps them from harming the environment. Our chelating agent is employed in fly ash processing systems at garbage incinerators in Japan. Work is ongoing at Tosoh to devise soil remediation applications of this agent.

Organo Corporation, a Tosoh Group subsidiary, specializes in wastewater treatment technology. A Tosoh research team complements Organo's expertise with materials that it has developed to



efficiently remove small amounts of fluorine ions and other harmful substances from wastewater and groundwater. Overall, we continue to look for new ways to use chemistry to protect water.

Our extensive experience producing synthetic zeolites led us to apply zeolite to clean automobile exhaust emissions. That application finds use in vehicle exhaust systems in Japan and Europe. Modifications have expanded the application, with zeolite used to purify gas exhaust at factories.

We also continue to make progress in our environmental pollutants measuring business, especially in improved analytic technologies. Our subsidiary Eco-Techno Corporation provides technologies that test for dioxin efficiently and rapidly. Tosoh, meanwhile, has capitalized on its expertise in developing medical diagnostic systems to devise a simple method of using antibodies to measure endocrine-disrupting substances, such as estrogen, in the environment.

### **Improving Consumer Lifestyles**

Tosoh is primarily a materials manufacturer and as a result does not produce numerous end-user products. End users, though, are exposed directly to many of our polymers and other materials. For that reason, we undertake R&D to improve consumers' lives with safer and better materials.

Efforts at Tosoh include developing grades of major bulk products to better match customer needs. We are cultivating markets for specialty ethylene for intravenous drip bags and film used in agriculture and for ethylene vinyl acetate (EVA) applied in heat-resistant hot-melt adhesives. In addition, we have launched a low viscous grade polyvinyl chloride paste.

We also are developing improved grades of our important engineering plastic, polyphenylene sulfide (PPS), for use in electrical and electronic parts, optical devices, and automotive components. Demand for PPS has begun emerging from hybrid car manufacturers.

Multiple products, from car seats to sofas to insulation to shoe soles, employ Tosoh's tertiary amine catalyst for making polyurethane foam. The expertise that we acquired in developing this catalyst has enabled us to devise many new catalysts to meet requirements for environmentally friendly processes free of chlorofluorocarbons and amine emissions. To extend this knowledge, our research centers provide technical services worldwide.



### **Introduction**

Resource-poor Japan is home to the Tosoh Group and many of its companies and facilities. So we are fully cognizant of the importance of conservation. Our experience of Japan's phenomenal economic growth during the last century makes us acutely aware of the impact of business operations on the environment and on public health and safety.

We also recognize that—like product-quality management—our efforts on behalf of the environment must be constantly reviewed and improved. It is for these reasons that our programs take a multifaceted approach to environmental issues.

### **Our Corporate Commitment: Responsible Care Activities**


In 1995, we became a founding member of the Japan branch of the worldwide Responsible Care® (RC) movement to help further systematize our environment-related efforts. We took our concern for our surroundings to the next level in 1999 by issuing our Basic Principles of the Environment, Safety and Health and Implementation Guidelines. Our RC activities follow a plan-do-check-act (PDCA) cycle that results in continuous improvement. Internal and external audits likewise ensure that feedback from the previous fiscal year is reflected in the planning of the next fiscal year.

We also believe in the value of the ISO certification program as an external check of our environmental activities. Since 1999, all our manufacturing complexes in Japan have been certified under ISO 9000 series quality assurance and ISO 14001 environmental management standards. And the trend to gain ISO certification is spreading groupwide. Tosoh AIA, Inc., Tosoh Techno-System, Inc., Tosoh Hi-Tec, Inc., and Tosoh's Scientific Instruments Division have each obtained ISO 13485 certification—a special standard for medical devices.

### **Our Public Commitment: Environmental Goals and Handling Procedures**

We have established concrete goals and timelines for our pollution-control programs. Our target for the emissions singled out for reduction by the Japanese government under the Pollutants Release and Transfer Register (PRTR) Law is a 75% decrease compared with 1995 figures by March 2007. As





of fiscal 2004 year-end, we had achieved a 70% reduction. We also are cutting our emissions of benzene and several other chemicals singled out by the government for voluntary control. For industrial waste, our sights are set on an 80% reduction in our disposal volume by 2010 compared with 1990. We already have attained a 78% decrease.

The safe handling and use of our products is another important concern. We monitor our products throughout their life cycle by looking at such factors as toxicity and proper use. In addition, we provide tools, such as Material Safety Data Sheets (MSDS), to manage any discernible risks. For the transport of hazardous materials, we prepare emergency contact information cards, known as Yellow Cards, that provide essential information to enable a prompt response should an accident occur.

In a wider public sense, we communicate our environmental preservation concerns and activities to the communities where we do business and make every effort to take part in community environmental preservation activities. We provide tours of our production facilities; hold regional Responsible Care meetings with government officials, educators, and community members; and participate in regional volunteer cleanup activities. Sharing leads to greater commitment on both sides to contribute to environmental preservation.

### **Our Business Commitment: Eco-business and Recycling**

We are committed to providing other companies with environmental technology and products geared to their own environmental issues. Tosoh, for example, supplies the amine-based toxic heavy metal chelating agents used at municipal incinerators and the environmentally friendly hydrocarbon-based cleaning agents used in the precision machinery and electronics industries. Tosoh subsidiary Organo Corporation offers advanced wastewater treatment facilities and groundwater and soil purification services. Eco-Techno Corporation, another of our subsidiaries, provides land survey, reclamation, and technological consulting services. And the Tosoh Group overall markets a broad range of analytical equipment for environmental monitoring from among its other products and services.

Recycling, meanwhile, is good for the environment, business, and local communities. The cement plant at our Nanyo Complex recycles the coal ash from Tosoh operations, the sludge from petroleum



refineries and electronic materials manufacturers, and the slag from steelmakers. In addition, Tosoh works with Shunan City in Yamaguchi Prefecture, Japan, in using as fuel for its Nanyo Complex cement plant all of the refuse-derived fuel (RDF) produced at the city's Phoenix fuel production facility. RDF is produced by solidifying waste generated by households.

## **Environmentally Friendly Products and Technology**

### *Manufacturing Industry*

We drew on our years of accumulated molecular technology to develop TS-275, a high-performance heavy metal treatment agent for fly and combustion ash. In addition to its superior heavy metal trapping properties, TS-275 overcomes a weakness of conventional fly ash treatment methods by sharply reducing the volume of the carbon disulfide generated during treatment.

Similarly, our TX-10 precipitates heavy metals in wastewater, contributing to its purification. To help clean up industrial processes, Tosoh is utilizing the strong adsorption and catalyst properties of zeolites to develop a range of products that collect the volatile organic compounds (VOCs) emitted by factories.

### *Electronics Industry*

Tosoh is working on minimizing the impact on the environment of the new organic electroluminescent (EL) displays to which the world is rapidly shifting. The triaryl amines used for hole transport in EL displays, which are the next generation of flat-panel displays, required large volumes of copper for synthesis. By developing an organometallic complex catalyst with higher activity and selectivity, we have succeeded in significantly reducing the required amount of copper, thereby conserving resources and generating less waste.

### *Automobile Industry*

For the automobile industry, we have produced a variety of environmentally friendly amine catalysts that, unlike previous catalysts, do not use organic tin or other heavy metal compounds. Amine catalysts are essential to the manufacture of polyurethane, which is used extensively in automobile interiors.

The silica that we produce can likewise be used in the manufacture of an automotive product: tires. Silica reduces tires' rolling resistance and that, in turn, reduces fuel consumption. And speaking of fuel, our zeolite catalytic converters for exhaust emissions are making a significant contribution to lessening pollution from automobiles.





*Chikara, a Japanese word whose ideogram means strength or force, is used at Tosoh to represent the Company's financial policy. We seek to maintain a solid financial position and to avoid overextending ourselves. It was not always so, and we have paid the price in time and effort and money to redress previous excesses. Over the past three years through fiscal 2003, we cut our fixed expenses at the parent company by an average of ¥3 billion annually. We also reduced our interest-bearing debt 50%, to approximately ¥200 billion, by fiscal 2004 year end. This triumph, of strengthening our operations while cutting our costs, was made possible through innovations in our businesses and in our technologies. Whether in its operations or its financial strategies, Tosoh builds from strength.*

## BUSINESS OVERVIEW

### Market Conditions

During the fiscal year ended March 31, 2005, Japan's economic recovery continued, albeit with several hiccups throughout the year. Exports remained the biggest driver of economic growth, with China's markets at the core of Asia's seemingly insatiable appetite for goods and raw materials. Combined with the soaring prices of oil, this demand allowed Japan's manufacturers to overcome entrenched resistance to price hikes at home and thereby improve their profitability while chalking up substantially higher margins in international markets.

Although exports and capital investment in Japan slowed, corporate performances and the labor market were firm. Japanese stock markets made no progress during the fiscal year, but did remain robust, posting high turnover volume despite being buffeted by the ups and downs of the Japanese economy. Overall, the economy exhibited a mild deflationary trend, some signs of an upward trend in personal consumption notwithstanding.

The global economy was strong during the fiscal year under review. The economies of the United States and Europe slowed somewhat but remained firm, while Asian economies, especially the somewhat overheated economy of China, played an ever-increasing role in expanding the global economy. The global semiconductor and IT markets continued to thrive, although inventory adjustments began to occur in various sectors. As before, the digital electronic device boom remained a major contributor to economic growth worldwide.

Driven by strong Asian demand, the upswing in the Japanese chemical market that began at the end of the previous fiscal year continued. That demand from Asia combined with higher prices for chemicals in Japan and globally to boost by an approximate average of 26% the sales of each Petrochemical and Basic groups. These groups provide core sources of earnings along with the Company's highly profitable Specialty Group. The Specialty Group, meanwhile, also posted double-digit sales growth, a sterling performance given that this group had less exposure to the forces driving the growth in the bulk material groups.

### Significant Events

During the year under review, management at Tosoh continued to solidify the business operations of the Company's Petrochemical and Basic groups. It did so by expanding the scope and improving the competitiveness of those operations.

Tosoh strengthened its chlor-alkali operations in fiscal 2004 in line with accelerating demand in Asia for chlor-alkali products. In June 2004, the Company completed an expansion of its electrolysis



facilities at its Nanyo Complex, boosting the complex's caustic soda production capacity to 1.2 million metric tons a year. Tosoh is also planning to construct another electric power plant, scheduled for completion sometime in 2008, to enable additional chlor-alkali production increases at the Nanyo Complex.

In view of Asia's growing appetite for PVC, Tosoh is in the process of adding 400,000 metric tons to its production capacity for the PVC precursor VCM. The heightened capacity will be available by December 2005. In the previous fiscal year, the Tosoh Group sought to further integrate its strategies for PVC in the global market by making Plas-Tech Corporation and Philippine Resins Industries, Inc., consolidated subsidiaries. It also raised Philippine Resins' PVC production capacity to 90,000 metric tons annually by eliminating bottlenecks in that company's operations.

More recently, in December 2004 Tosoh established a manufacturing company in Guangzhou, China, that will add 220,000 metric tons to the Group's PVC manufacturing capacity. Slated to come onstream by the end of 2006, this new plant will push our global PVC production to approximately 1.2 million metric tons annually.

Also in fiscal 2004, the Company began expanding its vinyl isocyanate chain when it initiated the construction of aniline and naphtha-based carbon monoxide production facilities at its Nanyo Complex. The carbon monoxide plant has already begun operations, whereas the aniline plant is slated to come onstream by mid-summer of 2005. These plants will supply those raw materials for the MDI needed to make polyurethane to Tosoh affiliate NPU. This will grant Tosoh Group a fully integrated MDI production system with an annual capacity of 200,000 metric tons.

Our business in petrochemicals benefits from our building of a production facility that more effectively utilizes the spent C4 fraction from the naphtha cracker at our Yokkaichi Complex to make t-BA. T-BA is an intermediate raw material used in the production of acrylic resins.

Fiscal 2004 saw Tosoh make every effort to build on the technological capabilities of its Specialty Group and on the development by the group of product lines in Asian and global markets. In April 2004, Tosoh established a trading company in Shanghai to market the Specialty Group's products in China. Tosoh also began expanding its ethylene amine and diagnostic reagent production capacities, with completion scheduled for fall 2005.

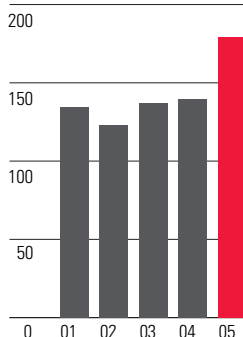
To further the Specialty Group's electronic materials business, Tosoh recently decided to build a new sputtering target factory in Taiwan to serve the need there for larger sputtering targets for larger LCDs. The Company also advanced its new business in genetic diagnosis with its decision to double the production of its TRCRapid-160 and related detection reagents to meet soaring demand.

## PETROCHEMICAL GROUP

In the fiscal year under review, the consolidated net sales of the Petrochemical Group jumped 28.2%, to ¥179.3 billion, with operating income climbing 256%, to ¥10.7 billion. Both major product categories, olefins and polymers, contributed with sales growth.

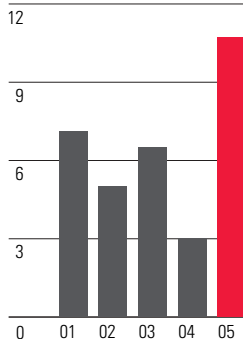
### Net Sales

Billions of Yen



### Operating Income

Billions of Yen



All figures in graphs in MD&A section are for fiscal years ended March 31. As defined on page 1 of this report, fiscal year 2004 ended on March 31, 2005.

### Olefins

Olefin sales were excellent, supported by a vibrant global economy and especially robust markets in China and the United States. Strong demand kept the Yokkaichi Complex naphtha cracker operating at full capacity. Prices for crude oil and naphtha advanced during the fiscal year, as did prices for olefin- and aromatic hydrocarbon-related products, particularly for cumene and styrene monomer. This resulted in substantial profit growth in olefins.

The bulk chemical nature of olefins makes improving their competitiveness an ongoing issue. Tosoh's strategy has been to share production with neighboring petrochemical operations in the Yokkaichi area to maximize resources, minimize distribution costs, and reduce operating risks.

More recently, Tosoh adopted a strategy to optimize yields by increasing its naphtha cracker output. The Company brought a new plant onstream at the Yokkaichi Complex in May 2004 that produces t-BA, a raw material for methyl methacrylate acid (MMA), from the spent C4 fraction left over after extracting butadiene. It also is scheduled to construct a hydrogenation facility for the C5 fraction. This latter facility is part of Tosoh's plans to acquire substitutes for increasingly expensive naphtha and will contribute to better feedstock utilization. Tosoh, therefore, is expanding its product portfolio and making better use of its resources.

Amid strong global competition in olefins, Tosoh's advantage is in being a major consumer and producer of ethylene. This allows the Company to adjust its usage of ethylene as necessary. In addition, because Tosoh's olefin operations are part of its vinyl isocyanate chain operations the Company can pursue synergies across a wide range of products within its Nanyo Complex. As the Nanyo Complex ramps up its production of aniline, for example, it will require more benzene, presenting the Olefins Division with a larger role and great responsibility.

Olefin demand globally remains high, so olefin sales are expected again to be strong in the fiscal year ahead. For Tosoh, the competitiveness of its Yokkaichi Complex naphtha cracker remains the key issue, and the Company will concentrate on its strategies to improve plant efficiencies and to develop new markets.

### Polymers

Strong demand from Southeast Asia and China combined with higher prices to produce favorable markets for many polymer products during fiscal 2004. Skyprene, PVC pastes, PPS, and Toso-CSM recorded firm export growth. On the other hand, EVA exports declined because more of production was consumed domestically, and Melthene exports lost ground because production cutbacks and a scarcity of raw materials resulted in price hikes not matched by overseas producers.

Domestic markets were not as robust as those overseas, but product price increases resulting from soaring naphtha prices supported firm sales of most polymer products in Japan. The Company, for example, raised its domestic HDPE prices four times in calendar 2004.

Tosoh's polymer products fall into the two major product categories of polyethylene and functional polymers. Sales performances vary among the different grades of polyethylene, with such specialty-type products as EVA and LDPE being in high demand, while LLDPE and HDPE struggle against mounting competition from large-scale overseas plants. But the Company's functional polymers in general enjoy firm demand from stable niche markets served by a limited number of competitors globally.

Tosoh's general-purpose polymers, conversely, face conditions of overproduction, declining domestic demand, and competition from low-price imports. The Company employs various strategies to overcome these difficulties. They include reducing costs to boost cost-competitiveness, developing

high-margin and higher-quality general-purpose polymers to command better prices and thereby increase profitability, restructuring or eliminating unprofitable product lines, and inventing polymers to open new markets. Tosoh, for example, is in the process of bringing a C5-rich hydrocarbon resin to market to complement its C9 hydrocarbon resin. The C5-rich hydrocarbon resin will enable Tosoh to expand applications for the adhesive market.

Alongside its efforts to improve the competitiveness of its weaker products, Tosoh is emphasizing the strongest growth candidates among its functional polymers. Products such as Skyprene chloroprene rubber, EVA copolymer resins with 30% or more vinyl acetate, our adhesive polymer Melthene, and our superengineering plastic PPS resin have wide application in a variety of fields. They also enjoy a limited number of competing producers and hold top market share worldwide. As a method of differentiating its higher-value-added functional polymers from competitors' products, the Company is focusing on its adhesive-related business.

The outlook for polymers in the fiscal year ahead is bright given the continued growth in markets in Southeast Asia and China. Underlying problems in domestic and export markets, while not going away, will be smoothed over by higher product prices and strong demand. Tosoh will continue to address challenges while positioning itself to take advantage of growth opportunities.

Basic Group consolidated net sales rose 24.1%, to ¥171.7 billion, on operating income of ¥20.4 billion. The group's chlor-alkali and cement operations posted favorable results in fiscal 2004. And the fiscal year under review was the first to include the consolidated results of new PVC-related subsidiaries Plas-Tech and Philippine Resins Industries.

### Chlor-Alkali

World markets, especially those of Southeast Asia and China, exhibited strong demand for chlor-alkali products in fiscal 2004. Exports of VCM declined somewhat because of several typhoons and scheduled maintenance at Tosoh's production plant, but domestic VCM shipments expanded favorably. Shipments of PVC and of caustic soda rose to domestic and to overseas markets.

Prices were also on the rise. A domestic price hike for caustic soda worked its way through the market, and the price of caustic soda for supply to the alumina industry in Australia rose as well. VCM and PVC likewise increased in price, at home and abroad, including substantial hikes in export markets. Price increases and strong demand enabled the Basic Group to cope with the higher cost of raw material caused by soaring oil and naphtha prices.

Tosoh aims to be one of Asia's most-competitive suppliers of VCM and Japan's largest supplier of VCM and caustic soda. It is achieving this goal by strengthening its vinyl chain operations, including broadening the scope of those operations to encompass the vinyl isocyanate chain. In the process, it is leveraging its integrated vinyl chain operations at the Nanyo Complex, its economies of scale, its advantages as Japan's largest buyer of the vinyl feedstock ethylene, and its constant upgrading of its cost-competitiveness.

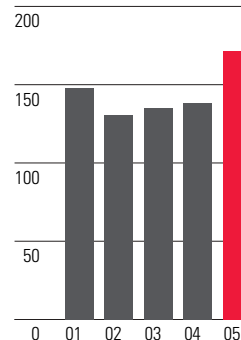
Tosoh, moreover, is reinforcing and expanding its vinyl isocyanate chain operations by increasing capacity at its production facilities and by bringing new facilities onstream. In June 2004, the Company completed the construction of naphtha-based carbon monoxide production facilities at the Nanyo Complex that will supply NPU. This new source of carbon monoxide will substantially reduce the cost of NPU's products.

NPU is the leading domestic supplier of isocyanate, an important raw material in the manufacture of polyurethane derivatives and related intermediates for which demand in Asia is expected to balloon. In a further link with NPU, in March 2005 Tosoh completed production facilities for aniline at the Nanyo Complex. Those facilities have an annual capacity of 150,000 metric tons and will supply NPU

## BASIC GROUP

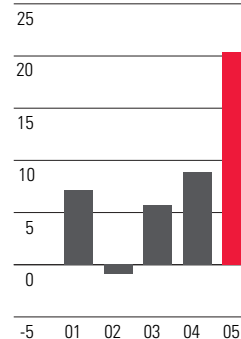
### Net Sales

Billions of Yen



### Operating Income

Billions of Yen



with aniline, an MDI feedstock. New MDI production by NPU is scheduled to start in July 2005.

To increase its VCM and PVC production capacities, Tosoh is building a VCM plant in Japan's Yamaguchi Prefecture that will add 400,000 metric tons to production, with another 200,000 metric tons possible. The new plant will begin operating by the end of 2005 and will provide the VCM feedstock for the 220,000-metric-ton-a-year PVC plant in Guangzhou, China, where construction is scheduled for completion in December 2006. In May 2004, Tosoh increased the annual PVC capacity of Philippine Resins by 90,000 metric tons, and further expansion could be forthcoming.

In June 2004, Tosoh significantly expanded its overall vinyl isocyanate chain operations when it completed enlarging its electrolysis facilities. The result was a boost in caustic soda capacity of 130,000 metric tons, to 1.2 metric million tons a year.

For Tosoh's electrolysis operations, which produce chlorine and caustic soda from salt, maintaining a balance between the sale of chlorine and caustic soda is essential to overall chlor-alkali operations.

The Company is expanding its production of caustic soda and chlorine in response to growing demand, which is being driven by the major purchasers of caustic soda in Asia and Oceania as well as from the increased consumption of VCM and PVC in China and Asia. Tosoh is closely monitoring supply-demand conditions while maintaining long-term relationships with major purchasers. To prepare for further anticipated growth, Tosoh is commissioning another electric power plant that is scheduled to be operational sometime in 2008.

Tosoh, meanwhile, is reviewing its strategies to increase the profitability of such other Basic Group products as phosphoric acid, sodium sulfate, and sodium bicarbonate. In addition, the Company is exiting unprofitable markets. It decided in fiscal 2004 to leave the soda ash and ferric chloride markets.

Tosoh's outlook in the fiscal year ahead for the chlor-alkali and other products of its Basic Group is for continued strong performances. The Company's expectations are buoyed by the group's improved competitiveness and by robust demand from Asia.

## **Cement**

In fiscal 2004, Tosoh's cement operations posted overall growth in sales volume despite mixed conditions. Although public-sector demand again fell substantially, reflecting annual cuts in public works' budgets, this decline was offset by an increase in private-sector demand and by strong exports to Southeast Asia. Tosoh sought a price increase during the fiscal year in light of its rising coal costs, but agreement was not reached for the full amount of the increase, and negotiations continue.

Tosoh, meanwhile, has a supply agreement under which its entire annual cement output of approximately 1.8 million metric tons is consigned to Taiheiyō Cement, Japan's principal cement firm. This agreement has provided significant stability for Tosoh's cement operations during a long period of market deterioration.

Tosoh's cement operations are integral to the competitiveness and the efficiency of the Nanyo Complex. Those operations make good use of the Nanyo Complex's natural deepwater port facilities and on-site source of inexpensive power. They also use as raw materials the 170,000 metric tons of coal ash produced yearly by the complex's power plant boilers and un-neutralized gypsum, slag, sludge, and scrap tires from external sources. In addition, Tosoh's cement operations daily consume almost 10 metric tons of refuse-derived fuel (RDF), a solid fuel produced at a nearby municipal RDF plant.

In fiscal 2005, Tosoh sees market conditions for cement remaining much the same as in recent years. Tosoh, fortunately, can expect stable cement sales regardless of market conditions because its entire cement output is consigned for sale to Taiheiyō Cement. Moreover, the decline in public-sector demand will be balanced by rising private-sector demand and by strong exports. The Company, in fact, foresees the upswing in private-sector demand halting the deterioration in overall domestic demand in a few years. In the medium and long term, however, the rising cost of coal will drive the

cement industry to further reduce its operating costs and to increase its recycling of industrial waste, including its use of such substitute fuels as plastic and wood refuse. Among other issues, the Company's plans for a new coal-fired boiler at the Nanyo Complex compel the cement operations to consider how to recycle additional coal ash.

Fiscal 2004 consolidated net sales for the Specialty Group climbed 16.3%, to ¥191.7 billion. The group's operating income rose 43.5%, to ¥22.7 billion.

### Organic Chemicals

In fiscal 2004, many of the products of the group's Organic Chemicals Division enjoyed firm sales growth. This was especially true of ethylene amines and their derivatives and of bromine and its derivatives. Rising raw material costs and a strong yen put pressure on profit margins, but the division was able to cover shortfalls by raising most of its product prices and by expanding its sales volume.

The outlook for the Organic Chemicals Division in fiscal 2005 is for continued demand growth from Asian economies, especially from China, and this bodes well for organic chemical products. Ethylene amines and their derivatives, such as epoxy hardeners, paper viscosity boosters, chelates, and pharmaceutical and agricultural chemical intermediates, have application in an array of fields. In Japan, the division expects to maintain its top share of the market for its heavy metal chelates, which are in high demand because of rising environmental awareness and because of their strong cost-competitiveness. Applications for organic intermediates likewise are broad and broadening to include pharmaceuticals, agricultural chemicals, electronic materials, and more. Tosoh, therefore, expects to benefit from growing demand for increasingly sophisticated organic intermediates as technologies advance globally.

The Organic Chemicals Division is doing everything possible to heighten its profitability. It looks constantly to improve its production efficiency; to maximize its cost reductions; and to develop new, high-margin segments into which to shift its product mix, including its resist monomers, pharmaceutical intermediates, and urethane foaming catalysts.

#### Ethylene Amines and Derivatives

As one of Asia's principal manufacturers of ethylene amines and their derivatives, Tosoh is committed to serving the region's expanding market needs for these products. The Company has increased production capacity several times in recent years at its Nanyo Complex to meet growing demand from China and Southeast Asian countries. An additional 10,000 metric tons of capacity is planned for November 2005.

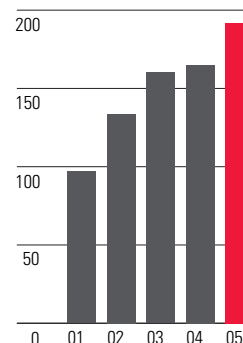
Working with Delamine, the Company's 50-50 joint venture with Dutch firm Akzo Nobel, Tosoh has become a leading provider of organic chemicals worldwide. Responding to evolving demand, it is aggressively developing markets for its polyurethane catalysts, heavy metal chelates, and new amine derivatives. Tosoh's reaction to growing concern over amine emissions from polyurethane foam, especially in Europe and the United States, has been to produce reactive amine catalysts for the amine-based catalysts used by the automobile and other industries. The Company also has developed a tin-free catalyst as a substitute in the manufacture of elastomer and other products.

Tosoh's ethylene amines derive their market power from the technical expertise and cost-competitiveness of their underlying caustic soda and chlorine production process at the Nanyo Complex. These cost benefits are, in turn, passed on to such derivatives as urethane foaming catalysts and chelates for heavy metals. Technical prowess developed over the years underpins superior product and application development capabilities that enable Tosoh to serve specific customer needs.

## SPECIALTY GROUP

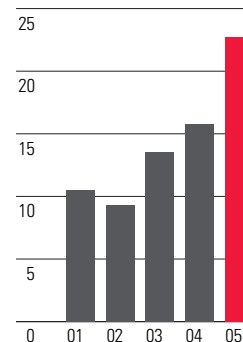
### Net Sales

Billions of Yen



### Operating Income

Billions of Yen



### *Bromine and Brominated Derivatives*

Tosoh is utilizing its edge as a major manufacturer of bromine and brominated derivatives in Japan to steadily expand the Japanese and other Asian markets for these substances. Bromine serves as the base for products ranging from flame retardants to organic intermediates sold around the world. Tosoh produces bromine utilizing an integrated manufacturing system that employs the seawater used to cool the electric power generators at Tosoh's power plant.

### *Organic Intermediates*

Tosoh's organic intermediates operations boast strong competitive advantages based on cutting-edge chemical technologies and technological synergies. Each of three wholly owned Tosoh subsidiaries contributes to advanced technology in a specific field of organic intermediates production at Tosoh. Tosoh Organic Chemical contributes expertise in halogenation, Tosoh Finechem specializes in low-temperature and organometallic synthesis, and Tosoh F-TECH is a leader in fluorination.

The seamless integration of the advanced contributions of these Tosoh Group companies has proven highly successful. The combination has enabled Tosoh to develop a custom synthesis business for pharmaceutical and medical research. It also has freed up the Tosoh Group to focus on developing advanced organic intermediates and specialty fine chemicals for the high-growth pharmaceutical and electronic materials fields.

### **Specialty Materials**

The Specialty Group's Specialty Materials Division concentrated on capitalizing on Tosoh's strengths in fiscal 2004. This included emphasizing Tosoh's HSZ zeolite series for catalysts. In the battery industry, there was a balance of supply and demand for EMD despite notable production growth in China. Although fiscal 2004 demand for zirconia for fiber-optic applications did not reach fiscal 2000 IT boom levels, zirconia demand nevertheless rose substantially because of a growing recognition of zirconia's high-performance properties. Zirconia increasingly is being used as a structural material and in the components of fuel cells, automobile oxygen sensors, and other products in the environmental field.

Tosoh is also the leading global supplier of zirconia, a yttria-stabilized ceramic that combines the best properties of ceramics, without their usual brittleness, with metal-like qualities. Zirconia is testament to Tosoh's advanced production and development capabilities and is rapidly becoming the standard material in fiber-optic connectors. It is also finding wide-ranging additional applications, helped by Tosoh's focus on R&D and market development, which features the advantages of zirconia to a broader scope of industries.

The Specialty Materials Division is likewise developing global markets for Tosoh's HSZ Series of zeolites for catalysts, which has earned a reputation worldwide for high quality and detailed technical support. The Company offers high-quality zeolite grades not available from competitors, including highly durable and highly heat-resistant grades. Tosoh's Zeolum zeolite molecular sieves, for example, are of such quality and come with such a degree of technical support that they contribute significantly to solving customers' production issues. Overall, Tosoh's strategy for its zeolite lineup is to develop products whose quality meets customers' every adsorption, separation, and catalyst requirement.

Tosoh plays an important role in the manufacture of the high-performance alkaline batteries required for today's advanced digital electronic devices. The Company supplies EMD to customers worldwide from its plants in Japan and Greece and has a reputation for meeting the procurement needs of those customers. Tosoh is also encouraging its two EMD plants to share more technology to strengthen its global operations.

To contend with intensifying competition and remain a stable, profitable operation, the Specialty Materials Division constantly seeks to reduce its costs, to optimize its use of its production facilities

and resources, and to develop markets for high-margin products. Formerly, the division depended to some extent on the fortunes of the IT market. Today, however, it boasts products for high-growth segments in non-IT fields, such as zirconia ceramics for use in fuel cells and biomedical applications, high-silica zeolites for automobile exhaust systems, and higher-performance lithium manganese for battery materials.

Sales by the Specialty Materials Division are expected to remain robust in fiscal 2005. Demand is anticipated to be strong for the HSZ Series of zeolites for their catalyst applications in the petroleum refining and petrochemical fields and for their adsorbent applications in the environmental field, including for VOC removal and the reduction of harmful automobile emissions. Sales of Zeolum zeolite molecular sieves are also anticipated to be firm. In the increasingly oligopsonistic battery market, the Specialty Materials Division will maintain top position by concentrating on being able to supply high-performance EMD from manufacturing plants in Japan and Greece. The growing awareness, meanwhile, of the superior properties of zirconia should lead to solid demand for that product from new markets to boost Specialty Materials Division sales overall.

### **Electronic Materials**

The Electronic Materials Division was formed in June 2003 through a combination of Tosoh's quartz, fabricated quartzware, sputtering target, and industry service operations. Its core businesses are supplying quartz and thin film materials for the global semiconductor and flat-panel display (FPD) markets.

During its second year of operations in fiscal 2004, the division continued to ride the wave of growth in its markets prompted by the popularity of flat-screen televisions and digital home appliances. Sales of its sputtering targets for semiconductors, FPDs, and magnetic recording media; of its shield refurbishing service (PVD, CVD, etch, and CMP); and of its CVD and low-k materials were favorable. Demand also was strong for its quartz materials, including fused silica, synthetic quartz, and ultra-high-purity materials. The division's machined and fabricated quartzware found markets in the manufacture of 300-millimeter wafers, large masks for LCDs, and optical-related products.

The Electronic Materials Division boasts a global organization to match its global markets. The division has manufacturing and marketing bases in Japan, Taiwan, South Korea, nations in Europe, and the United States. It is thus able to serve its well-established customer base among leading semiconductor, FPD, and equipment companies in the world's biggest regional markets: Asia, Europe, and the United States.

The division offers a broad lineup of electronic materials essential to the manufacture and development of state-of-the-art products in the semiconductor and FPD markets. Its concentration on growth areas and cutting-edge technologies is supported by full access to the Tosoh Group's entire range of inorganic, organic, and other technologies.

For the longer term, the division plans to aggressively invest in high-growth fields. It also intends to expand its business based on the development of technologies for such next-generation products as 65- and 45-nano-level IC chips and large FPDs.

To buffer itself against the inevitable downturns in the silicon and crystal cycle, the division is focusing on new fields not closely related to semiconductors. These include quartz microchips for biomedical applications and space optics and energy conservation.

The Electronic Materials Division anticipates another good year in fiscal 2005. There were slow-downs in demand for its products from the semiconductor and FPD markets towards the end of fiscal 2004 because of inventory adjustments. But the division expects this trend to be short lived. The semiconductor market should rise again in the second half of the year ahead, and the FPD market is forecast to continue its upward climb for the long term, driven by flat-screen televisions and digital home appliances.

The division plans to further strengthen its position in high-tech, high-growth fields and aims to develop electronic materials into a core business. It intends on advancing its development capabilities to respond rapidly to increasingly sophisticated market needs.

### **Scientific Instruments**

The Scientific Instruments Division posted favorable results in fiscal 2004. It continued to reap the benefits of its strong position in growth markets, which results from its sophisticated technology.

Despite the mature HPLC market in Japan, the division's sales of Tosoh's all-in-one gel permeation chromatography (GPC) columns expanded in fiscal 2004. The division, moreover, launched a new HPLC system, BioAssist eZ, for purifying protein during the year that has been highly successful and that further expands Tosoh's popular BioAssist series of HPLC columns.

Tosoh is the market leader in Japan for TSK-gel HPLC packing materials and packed columns, which also enjoy an excellent reputation worldwide. The division likewise continued to make progress in selling the Company's ion chromatography (IC) products to the highly competitive IC domestic market. Strong overseas demand propelled additional divisional sales growth for Toyoppearl packing materials, popular with major pharmaceutical companies in the United States and Europe.

In the division's AIA business, the combination of Tosoh's compact AIA-360 automated immunoassay analyzer with the Company's rapid-result, short-time (ST) diagnostic reagents contributed to substantial sales growth. The division also increased its production capacity for AIA diagnostic reagents at its Toyama plant by almost 50% during the fiscal year under review.

Difficulties in the immunoassay test market continued during fiscal 2004. The number of tests performed in Japan, the United States, and in European nations is increasing, but end-user prices are declining. The division's introduction of the compact AIA-360, however, boosted its sales and profits in this market through expansion in new customers and in business from established customers.

The division's business in diagnostic liquid chromatography met with mixed results. Sales of consumables rose in Japan, nations in Europe, and the United States, but sales of equipment struggled amid aggressive marketing by competitors. Undeterred, the division commenced its full-scale development of this business in the potentially high-growth markets of China and elsewhere in Asia in fiscal 2004.

In Japan, divisional sales of Tosoh's automated glycohemoglobin analyzer HLC-723G7 continued to post growth, and Tosoh retained top share of the market. The same model also maintained its growth in the U.S. market. To meet expanding demand arising from the increasing number of diabetics, Tosoh increased its production of glycohemoglobin-related consumables in fiscal 2004.

The Scientific Instruments Division serves four global markets: separation materials, diagnostic HPLCs, immuno-diagnostics, and most recently molecular testing. Among its advantages in these markets, Tosoh is one of the few companies that develops, manufactures, and sells instruments, columns, and reagents and that provides maintenance services for them. The Company, moreover, has a global footprint based on its Tosoh Bioscience network in Japan, nations of Europe, and the United States and is expanding into China and other Asian markets.

In its AIA analyzer business, Tosoh's proprietary freeze-drying technology has enabled the Company to produce sophisticated, fast, easy-to-use systems with top-class sensitivity and result reproducibility.

In January 2004, Tosoh completed its full-scale entrance to the gene test reagent and device market with the launch of its easy-to-use TRCR-160/TRCRapid-160 real-time fluorescence monitoring system and TRC reagent.

The TRCR-160 real-time monitoring system for TRC reactions is fast, simple to use, and compact. By utilizing a homogenous amplification and fluorescence monitoring technique, the system requires only 10 minutes to 30 minutes to test a pretreated sample. Strong sales are predicted for the moni-



toring system because of its many features and for Tosoh's ever-expanding family of test reagents.

Among tests under development by the Scientific Instruments Division are those for detecting mRNA specific to a variety of diseases. Domestically, the division has received many purchase inquiries for its gene-testing products since the end of 2004 because of an outbreak of norovirus infections in Japan. Consequently, the division expects even greater sales than originally forecast for its test reagent for the bacteria that causes tuberculosis, which is scheduled for launch in summer 2005.

In fiscal 2005, the outlook for the Scientific Instruments Division is for further growth in most of its operations. The division is pressing forward with the development of new and improved models of its core GPC columns and IC systems. Sales of the newly launched BioAssist eZ and other BioAssist columns should expand.

To foster additional growth in the sales of Tosoh's popular packing materials for separation columns, the division is developing new processes and planning a further expansion of production capacity. In its AIA business, the division is promoting sales through the addition of BNP and other cardiac markers, new testing categories, and reagents with improved functionality and by introducing large, midsize, and compact analyzers.

The division, moreover, is following up on the success of its automated glycohemoglobin analyzer, the HLC-723G7, by targeting the top share of the Japanese market and a larger share of the U.S. and European markets for glycohemoglobin analyzers. Its efforts in the new gene-testing market focus on the development of more-automated monitoring systems and on positioning Tosoh as a leading authority in the market.

Service Group consolidated net sales for fiscal 2004 increased 10.4%, to ¥45.6 billion. The group's operating income rose 32.8%, to ¥3.0 billion.

The growth in sales was primarily due to good performances by Tosoh's construction, trading, and logistics services subsidiaries. It reflected the general upswing in Tosoh's core operations.

Service Group operations primarily comprise logistics, construction, engineering support, and related services. These services have been set up under an autonomous group that supports the rest of Tosoh's business groups to ensure the cost-efficient concentration of resources and expertise.

Tosoh's analytical chemistry, information technology, and general administrative operations have also been spun off into independent operating companies to provide the most-efficient support to the rest of the Company's operations.

Tosoh Analysis and Research Center specializes in organic, inorganic, polymer chemistry, and electronic materials and provides a range of sophisticated analytical services to Tosoh Group members. Tosoh Information Systems likewise assists Tosoh Group companies, in IT solutions, such as the introduction and development of a new enterprise resource planning (ERP) system. Tosoh General Services provides support for personnel management, employee benefit administration, and training activities. It is particularly focused on developing social services that support employees.

The Service Group, meanwhile, also operates financial services in Japan. In other regions, this function is undertaken by regional service platforms.

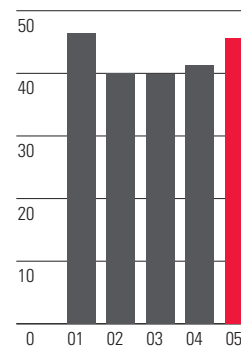
Service Group companies are constantly working to improve the quality of their operations. Tosoh Logistics received ISO 9001 certification for all its quality control systems at 13 sites in Japan, as did Tosoh Analysis and Research Center for its 3 sites in Japan.

In addition, most Service Group companies are evolving from cost centers to profit centers by operating more on a commercial basis. Prices are determined by market rates, allowing for competition with external suppliers. This shift is being implemented as a means to further increase cost performance.

## SERVICE GROUP

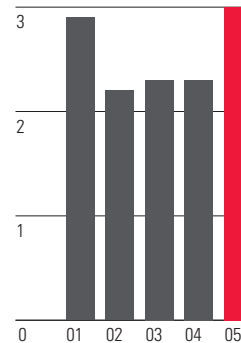
### Net Sales

Billions of Yen



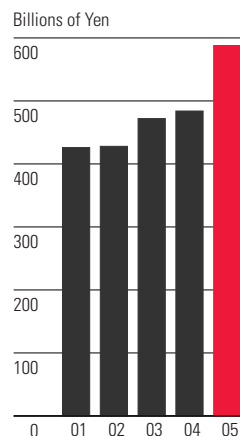
### Operating Income

Billions of Yen

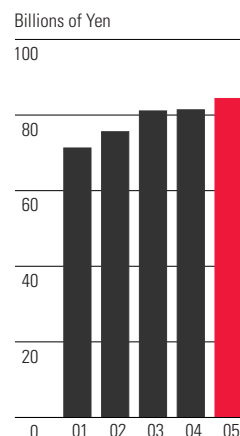


## PERFORMANCE

### Net Sales



### SG&A Expenses



### Net Sales

Tosoh Group consolidated net sales rose 21.5%, to ¥588.3 billion (\$5,478 million), in fiscal 2004. The increase reflects the wave of demand in Asia and higher prices in domestic and overseas markets for the Company's products.

The Company's Petrochemical Group leveraged the strong business climate to achieve sales growth in both its major product categories: olefins and polymers. The group's sales increased 28.2%, to ¥179.3 billion (\$1,669 million), accounting for 30.5% of consolidated net sales.

Our Basic Group enjoyed strong worldwide demand for its products in fiscal 2004 and had the consolidated results of PVC-related subsidiaries Plas-Tech and Philippine Resins Industries included in its results for the first time. Basic Group sales thus rose 24.1%, to ¥171.7 billion (\$1,599 million), to contribute 29.2% to consolidated net sales.

The Specialty Group, which typically is our main generator of profit growth, again achieved strong sales during the fiscal year under review. This, however, was due more to the expansion of specific areas of the IT market and to strong sales of scientific instruments than to the booming market for bulk materials. Sales by the Specialty Group increased 16.3%, to ¥191.7 billion (\$1,785 million), accounting for 32.6% of consolidated net sales.

Our Service Group likewise contributed to our overall sales growth. Service Group sales rose 10.4%, to ¥45.6 billion (\$425 million), generating 7.7% of consolidated net sales.

Overseas sales—defined as export sales and sales outside Japan by overseas subsidiaries—jumped 30.1%, to ¥167.6 billion (\$1,561 million). As a proportion of consolidated net sales, overseas sales increased to 28.5%, from 26.6%, indicating the booming business conditions during the fiscal year under review. Sales to Asia totaled ¥122.3 billion (\$1,139 million), up 34.8%, and contributed 20.8% of consolidated net sales.

### Costs and Expenses

#### Operating Expenses

Alongside our 21.5% growth in consolidated net sales we experienced a 19.8% rise in our cost of sales. Tosoh's cost of sales increased ¥74.0 billion (\$689 million), to ¥447.0 billion (\$4,162 million). The cost of sales ratio declined to 76.0%, from 77.0% in the previous fiscal year.

Selling, general and administrative (SG&A) expenses increased 3.8%, to ¥84.4 billion (\$786 million). The ratio of SG&A expenses to sales declined to 14.4%, from 16.8%.

R&D expenditures totaled ¥10.2 billion (\$95 million). This was approximately the same as the previous year's ¥10.3 billion.

The average price of naphtha, one of the Tosoh Group's major costs, rose to ¥32,000 per kiloliter, from ¥25,500 per kiloliter, during the fiscal year under review. The average yen to U.S. dollar exchange rate depreciated slightly, from ¥113.19 to ¥107.55.

#### Capital Expenditures and Depreciation and Amortization

Tosoh Group capital expenditures during the fiscal year ended March 2005 totaled ¥45.4 billion (\$423 million). This was up substantially from the previous fiscal year because of ongoing production capacity expansion in fiscal 2004. Management's policy is to generally keep capital expenditures within the scope of depreciation; however, that goal was not achieved in fiscal 2004 because of the need to keep pace with growing demand for Tosoh products in Asia. Depreciation and amortization expenses edged down slightly, to ¥22.8 billion (\$213 million).

## Earnings

### Operating Income

Gross profit climbed ¥29.9 billion (\$279 million), or 26.8%, to ¥141.3 billion (\$1,316 million). The gross profit margin rose to 24.0%, from 23.0%. Subtracting SG&A expenses yielded an increase in consolidated operating income of ¥26.8 billion (\$250 million), or 89.3%, to ¥56.9 billion (\$530 million). The operating profit margin improved to 9.7%, from 6.2%.

Tosoh's business segment performances reflected strong product demand and higher product prices. The operating income of the Petrochemical Group more than tripled, to ¥10.7 billion (\$100 million), while the operating income of our Basic Group more than doubled, to ¥20.4 billion (\$190 million). Specialty Group operating income advanced 43.5%, to ¥22.7 billion (\$212 million), and Service Group operating income increased 32.8% year on year, to ¥3.0 billion (\$28 million).

### Other Income

The major item in the fiscal year under review was a gain on sales of property, plant and equipment of ¥1,900 million (\$18 million). At ¥698 million (\$7 million), interest and dividend income increased 37.2% compared with the previous fiscal year. Among other items, there were foreign exchange gains, net, of ¥359 million (\$3 million) and equity in earnings of affiliates of ¥777 million (\$7 million).

### Other Expenses

Among other expenses, interest expenses continued to decline in line with Tosoh's efforts to cut interest-bearing debt and the continued low interest rate climate, falling 10.6%, to ¥4.1 billion (\$39 million).

Other expenses also included an impairment loss on fixed assets of ¥1.5 billion (\$14 million); loss on the disposal of property, plant and equipment of ¥1.4 billion (\$13 million); and loss on investments in affiliates of ¥1.6 billion (\$15 million).

### Net Income

Income before income taxes more than tripled, to ¥51.9 billion (\$483 million). Income taxes increased, to ¥16.6 billion (\$155 million), and were raised a further ¥3.3 billion (\$31 million) by the reversals of deferred income taxes. Net income, therefore, more than quadrupled, to ¥29.5 billion (\$275 million), compared with ¥7.3 billion the year before. Net income per share was ¥49.09 (\$0.46), compared with ¥11.96 in the previous fiscal year. Return on equity (ROE) rose, improving to 26.0%, from 7.6% the year before.

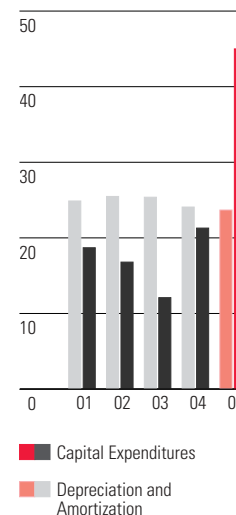
## Assets

Current assets expanded to ¥272.3 billion (\$2,535 million), an increase of ¥37.1 billion (\$345 million), or 15.8%, over the previous year. This increase can be mainly attributed to higher levels of trade receivables, less allowance for doubtful accounts, which increased 14.6%, to ¥152.7 billion (\$1,422 million), and to a 19.8% rise in inventories, to ¥82.6 billion (\$769 million). Cash and cash equivalents were up 9.6%, to ¥18.6 billion (\$173 million).

Total investments grew 8.9%, to ¥60.3 billion (\$561 million). Property, plant and equipment, less accumulated depreciation, rose 7.2%, to ¥252.7 billion (\$2,353 million). Total assets advanced 9.8%, to ¥603.2 billion (\$5,617 million). At fiscal year-end, our net assets per share amounted to ¥213.8 (\$1.99).

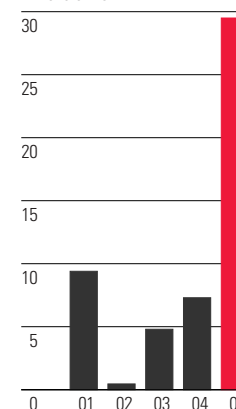
## Capital Expenditures and Depreciation and Amortization

Billions of Yen



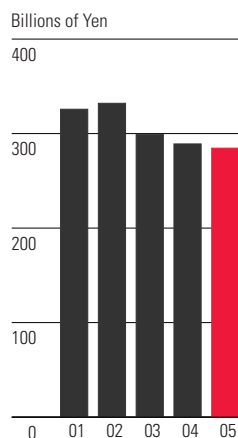
## Net Income

Billions of Yen

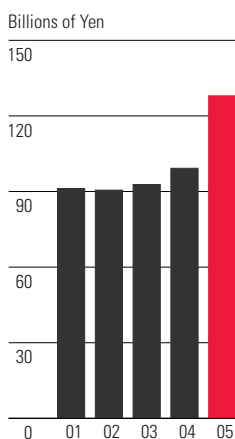


## FINANCIAL POSITION

## Short-Term Bank Loans and Long-Term Debt



## Total Shareholders' Equity



## Liabilities

Current liabilities expanded 8.1% year on year, to ¥283.7 billion (\$2,642 million). The increase can be mainly attributed to an 18.5% increase in trade payables, to ¥86.0 billion (\$801 million), and to a 55.0% increase in income taxes payable, to ¥13.0 billion (\$121 million). Other current liabilities rose 15.0%, to ¥37.9 billion (\$352 million).

The gap between current assets and liabilities contracted in fiscal year 2004, producing a significant improvement in our working capital deficit, which dropped ¥15.9 billion (\$148 million), or 58.2%, to ¥11.4 billion (\$106 million). Negative working capital is largely attributable to the Tosoh Group's ongoing expansion of its business.

Long-term debt, less current maturities, edged down 1.9% year on year, to ¥137.7 billion (\$1,283 million), because of reductions in long-term bank loans.

At fiscal year-end, the decreases in short-term bank loans and long-term debt resulted in a net decrease in interest-bearing debt of ¥4.5 billion (\$42 million), or 1.6%, to ¥284.6 billion (\$2,650 million). Retirement and severance benefits declined slightly, to ¥20.3 billion (\$189 million). Total liabilities and minority interests, therefore, climbed 5.6%, to ¥475.2 billion (\$4,425 million).

## Shareholders' Equity

Shareholders' equity at fiscal year-end was up 29.0%, to ¥128.0 billion (\$1,192 million). Retained earnings, which expanded ¥26.0 billion (\$242 million), or 81.9%, to ¥57.8 billion (\$538 million), were the main factor in this growth. Reflecting expanded value, our shareholders' equity ratio improved to 21.2%, from 18.1% in the prior fiscal year.

## Cash Flows

Although free cash flow for the year fell ¥5.7 billion (\$53 million), or 39.7%, to ¥8.7 billion (\$81 million), Tosoh maintained adequate liquidity for operations. There was an overall net increase in cash and cash equivalents of ¥1.6 billion (\$15 million). The effect of exchange rate changes on cash and cash equivalents was positive but not material.

Net cash provided by operating activities increased 32.0%, to ¥44.8 billion (\$417 million). In addition to the substantial increase in income before income taxes, there was a ¥13.1 billion (\$122 million) increase in trade payables. A ¥19.2 billion (\$179 million) rise in trade receivables and a ¥13.6 billion (\$127 million) surge in inventories were among the factors that impinged negatively on cash flow in fiscal 2004.

Net cash used in investing activities amounted to ¥36.1 billion (\$336 million), up 84.9% year on year. A 91.3% increase in the purchases of property, plant and equipment, to ¥38.8 billion (\$361 million), was mainly responsible for this expansion.

Net cash used in financing activities totaled ¥7.2 billion (\$67 million), down 60.9% from the previous year.

# CONSOLIDATED STATEMENTS OF INCOME

Years ended March 31, 2005 and 2004

	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2005	2004	2005
<b>Net sales</b> (Note 12)	<b>¥ 588,332</b>	¥ 484,389	<b>\$ 5,478,462</b>
Cost of sales	<b>446,997</b>	372,969	<b>4,162,371</b>
Gross profit	<b>141,335</b>	111,420	<b>1,316,091</b>
<b>Selling, general and administrative expenses</b>	<b>84,437</b>	81,365	<b>786,265</b>
Operating income (Note 12)	<b>56,898</b>	30,055	<b>529,826</b>
<b>Other income (expenses):</b>			
Interest and dividend income	<b>698</b>	509	<b>6,500</b>
Foreign exchange gains (losses), net	<b>359</b>	(1,711)	<b>3,343</b>
Equity in earnings (losses) of affiliates	<b>777</b>	(1,005)	<b>7,235</b>
Insurance received	<b>627</b>	2,482	<b>5,839</b>
Gain on sales of property, plant and equipment	<b>1,900</b>	241	<b>17,692</b>
Gain on sales of investment securities	<b>465</b>	1,301	<b>4,330</b>
Recognized prior service credit (Note 8)	—	3,768	—
Interest expense	<b>(4,136)</b>	(4,625)	<b>(38,514)</b>
Impairment loss on fixed assets (Note 12)	<b>(1,459)</b>	(10,841)	<b>(13,586)</b>
Loss on disposal of property, plant and equipment	<b>(1,443)</b>	(1,144)	<b>(13,437)</b>
Loss on investments in affiliates	<b>(1,628)</b>	—	<b>(15,160)</b>
Provision for retirement benefits for directors and corporate auditors	<b>(950)</b>	—	<b>(8,846)</b>
Other, net	<b>(244)</b>	(2,637)	<b>(2,272)</b>
<b>Income before income taxes and minority interests</b>	<b>51,864</b>	16,393	<b>482,950</b>
<b>Income taxes:</b>			
Current	<b>16,620</b>	9,695	<b>154,763</b>
Deferred (Note 11)	<b>3,283</b>	(1,380)	<b>30,571</b>
<b>Minority interests</b>	<b>(2,428)</b>	(781)	<b>(22,609)</b>
<b>Net income</b>	<b>¥ 29,533</b>	¥ 7,297	<b>\$ 275,007</b>

	Yen		U.S. Dollars (Note 1)
<b>Per share of common stock:</b>			
Net income per share	<b>¥ 49.09</b>	¥ 11.96	<b>\$ 0.46</b>
Cash dividends applicable to the year	<b>¥ 6.00</b>	¥ 5.00	<b>\$ 0.06</b>

The accompanying notes are an integral part of these statements.

## CONSOLIDATED BALANCE SHEETS

Years ended March 31, 2005 and 2004

	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2005	2004	2005
<b>ASSETS</b>			
<b>Current assets:</b>			
Cash and cash equivalents	¥ 18,573	¥ 16,950	\$ 172,949
Marketable securities (Note 5)	105	89	978
Trade receivables, less allowance for doubtful accounts (Notes 3 and 7)	152,698	133,213	1,421,902
Inventories (Note 4)	82,575	68,934	768,926
Deferred tax assets (Note 11)	6,126	4,859	57,044
Other current assets (Note 7)	12,201	11,182	113,614
Total current assets	272,278	235,227	2,535,413
<b>Investments:</b>			
Investment securities (Notes 5 and 7)	28,612	26,324	266,431
Investments in affiliates	24,537	22,810	228,485
Long-term loans receivable	702	787	6,537
Other (Note 7)	6,402	5,410	59,614
Total investments	60,253	55,331	561,067
<b>Property, plant and equipment—net</b> (Notes 6 and 7)	<b>252,691</b>	235,715	<b>2,353,022</b>
<b>Other assets:</b>			
Deferred tax assets (Note 11)	11,443	15,244	106,555
Intangible	6,544	7,696	60,937
Total other assets	17,987	22,940	167,492
Total assets	¥ 603,209	¥ 549,213	\$ 5,616,994

The accompanying notes are an integral part of these statements.

	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2005	2004	2005
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>			
<b>Current liabilities:</b>			
Short-term bank loans (Note 7)	¥ 109,868	¥ 105,926	\$ 1,023,075
Current maturities of long-term debt (Note 7)	36,964	42,752	344,203
Trade payables	86,010	72,568	800,912
Income taxes payable	12,996	8,384	121,017
Other current liabilities	37,853	32,911	352,482
Total current liabilities	283,691	262,541	2,641,689
<b>Long-term liabilities:</b>			
Long-term debt, less current maturities (Note 7)	137,740	140,419	1,282,615
Retirement and severance benefits (Note 8)	20,333	21,969	189,338
Retirement benefits for directors and corporate auditors	1,358	388	12,645
Deferred tax liabilities (Note 11)	3,514	1,492	32,722
Other liabilities	4,132	1,865	38,477
Total long-term liabilities	167,077	166,133	1,555,797
Total liabilities	450,768	428,674	4,197,486
<b>Minority interests</b>	24,448	21,301	227,656
<b>Contingent liabilities</b> (Note 9)			
<b>Shareholders' equity:</b>			
Common stock:			
Authorized—1,200,000,000 shares;			
Issued—601,161,912 shares	40,634	40,634	378,378
Capital surplus	29,865	29,726	278,098
Retained earnings	57,808	31,775	538,300
Net unrealized holding gains on securities	5,743	3,729	53,478
Foreign currency translation adjustments	(5,036)	(5,721)	(46,895)
Treasury stock, 3,294,810 shares in 2005 and 3,033,269 shares in 2004	(1,021)	(905)	(9,507)
Total shareholders' equity	127,993	99,238	1,191,852
Total liabilities and shareholders' equity	¥ 603,209	¥ 549,213	\$ 5,616,994

# CONSOLIDATED STATEMENTS OF CASH FLOWS

Years ended March 31, 2005 and 2004

	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2005	2004	2005
<b>Cash flows from operating activities:</b>			
Income before income taxes	¥ 51,864	¥ 16,393	\$ 482,950
Adjustments to reconcile income before income taxes to net cash provided by operating activities:			
Depreciation and amortization	23,594	24,540	219,704
Impairment loss on fixed assets	1,459	10,841	13,586
Decrease in retirement and severance benefits	(2,580)	(7,851)	(24,025)
Interest and dividend income	(698)	(509)	(6,500)
Interest expense	4,136	4,625	38,514
Equity in losses (earnings) of affiliates	(777)	1,005	(7,235)
Net gain on sales of property, plant and equipment	(1,854)	(52)	(17,264)
Net gain on sales of investment securities	(465)	(1,288)	(4,330)
Loss on disposal of property, plant and equipment	1,443	1,144	13,437
Increase in trade receivables	(19,239)	(5,564)	(179,151)
Increase in inventories	(13,634)	(3,337)	(126,958)
Increase in trade payables	13,124	3,654	122,209
Other, net	3,241	1,050	30,180
Subtotal	59,614	44,651	555,117
Interest and dividends received	1,424	946	13,260
Interest paid	(4,241)	(4,735)	(39,491)
Income taxes paid	(12,018)	(6,941)	(111,910)
Net cash provided by operating activities	44,779	33,921	416,976
<b>Cash flows from investing activities:</b>			
Payments for purchases of property, plant and equipment	(38,792)	(20,281)	(361,226)
Proceeds from sales of property, plant and equipment	4,825	753	44,930
Purchases of investment securities	(1,766)	(2,789)	(16,445)
Proceeds from sales of investment securities	1,458	2,645	13,577
Other, net	(1,818)	156	(16,929)
Net cash used in investing activities	(36,093)	(19,516)	(336,093)
<b>Cash flows from financing activities:</b>			
Net increase (decrease) in short-term bank loans	4,000	(1,615)	37,247
Proceeds from long-term debt	39,684	54,548	369,532
Repayments of long-term debt	(48,032)	(68,086)	(447,267)
Cash dividends paid	(3,447)	(3,291)	(32,098)
Other, net	603	43	5,615
Net cash used in financing activities	(7,192)	(18,401)	(66,971)
Effect of exchange rate changes on cash and cash equivalents	153	(163)	1,425
Net increase (decrease) in cash and cash equivalents	1,647	(4,159)	15,337
Cash and cash equivalents at beginning of year	16,950	21,100	157,836
Increase in cash and cash equivalents resulting from changes in number of consolidated subsidiaries	—	9	—
Decrease in cash and cash equivalents due to change in subsidiaries' year-ends	(24)	—	(224)
Cash and cash equivalents at end of year	¥ 18,573	¥ 16,950	\$ 172,949

The accompanying notes are an integral part of these statements.



## CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

Years ended March 31, 2005 and 2004

	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2005	2004	2005
<b>Common stock:</b>			
Balance at beginning of period	¥ 40,634	¥ 40,634	\$ 378,378
Balance at end of period	40,634	40,634	378,378
<b>Capital surplus:</b>			
Balance at beginning of period	29,726	29,727	276,804
Increase due to revaluation of land of affiliates accounted for by the equity method	137	—	1,276
Gain on disposal of treasury stock	2	—	18
Loss on disposal of treasury stock	—	(1)	—
Balance at end of period	29,865	29,726	278,098
<b>Retained earnings:</b>			
Balance at beginning of period	31,775	28,028	295,884
Net income for the year	29,533	7,297	275,007
Change in subsidiaries' year-ends	49	—	456
Cash dividends paid at ¥5.00 per share	(3,002)	(3,003)	(27,954)
Bonuses paid to directors and corporate auditors	(127)	(99)	(1,182)
Decrease due to increase in consolidated subsidiaries	—	(3)	—
Decrease due to changes in shareholding ratio	(420)	(445)	(3,911)
Balance at end of period	57,808	31,775	538,300
<b>Net unrealized holding gains on securities:</b>			
Balance at beginning of period	3,729	262	34,724
Net increase	2,014	3,467	18,754
Balance at end of period	5,743	3,729	53,478
<b>Foreign currency translation adjustments:</b>			
Balance at beginning of period	(5,721)	(5,000)	(53,273)
Net increase (decrease)	685	(721)	6,378
Balance at end of period	(5,036)	(5,721)	(46,895)
<b>Treasury stock:</b>			
Balance at beginning of period	(905)	(856)	(8,427)
Disposal of treasury stock	7	12	65
Purchase of treasury stock	(118)	(45)	(1,099)
Other	(5)	(16)	(46)
<b>Balance at end of period</b>	<b>¥ (1,021)</b>	<b>¥ (905)</b>	<b>\$ (9,507)</b>

The accompanying notes are an integral part of these statements.

## 1. BASIS OF PRESENTING CONSOLIDATED FINANCIAL STATEMENTS

Tosoh Corporation (the “Company”) and its consolidated domestic subsidiaries maintain their accounts and records in accordance with the provisions set forth in the Japanese Securities and Exchange Law and its related accounting regulations and in conformity with accounting principles generally accepted in Japan (“Japanese GAAP”), which are different in certain respects as to application and disclosure requirements of International Financial Reporting Standards.

The accounts of consolidated overseas subsidiaries are based on their accounting records maintained in conformity with generally accepted accounting principles and practices prevailing in the respective countries of domicile. The accompanying consolidated financial statements have been restructured and translated into English (with some expanded descriptions and the inclusion of consolidated statements of shareholders’ equity) from the consolidated financial statements of the Company prepared in accordance with Japanese GAAP and filed with the appropriate local finance bureau of the Ministry of Finance as required by the Securities and Exchange Law. Some supplementary information included in the statutory Japanese language consolidated financial statements, but not required for fair presentation, is not presented in the accompanying consolidated financial statements.

The translations of the Japanese yen amounts into U.S. dollars are included solely for the convenience of readers outside Japan, using the prevailing exchange rate at March 31, 2005, which was ¥107.39 to U.S. \$1.00. The translations should not be construed as representations that the Japanese yen amounts have been, could have been, or could in the future be converted into U.S. dollars at this or any other rate of exchange.

## 2. SUMMARY OF ACCOUNTING POLICIES

### Consolidation and investments

The consolidated financial statements include the accounts of the Company and its significant subsidiaries. All significant intercompany transactions and accounts have been eliminated in the consolidation.

Investments in unconsolidated subsidiaries and affiliates are, with minor exceptions, accounted for by the equity method. Equity in earnings of unconsolidated subsidiaries and affiliates has been calculated by excluding unrealized intercompany profits.

In the elimination of investments in subsidiaries, the assets and liabilities of the subsidiaries, including the portion attributable to minority shareholders, are evaluated using the fair value at the time the Company acquired control of the respective subsidiaries.

### Translation of foreign currencies

Receivables and payables denominated in foreign currencies are translated into Japanese yen at the year-end rates.

Financial statements of consolidated overseas subsidiaries are translated into Japanese yen at the year-end rate, except that shareholders’ equity accounts are translated at historical rates.

### Cash and cash equivalents

Cash, readily available deposits and short-term, highly liquid investments with original maturities of three months or less are considered cash and cash equivalents.

### Securities

Securities are classified into one of the following categories based on the intent of holding, resulting in the different measurement and accounting for the changes in fair value. Held-to-maturity debt securities are stated at amortized cost. Equity securities issued by subsidiaries and affiliated companies, which are not consolidated or accounted for using the equity method, are stated at moving-average cost. Available-for-sale securities with available fair market values are stated at fair market value. Unrealized gains and unrealized losses on these securities are reported, net of applicable income taxes, as a separate component of shareholders’ equity. Other available-for-sale securities with no available fair market values are stated at moving-average cost.

Significant declines in fair market value or the net asset value of held-to-maturity debt securities and equity securities not on the equity method and issued by unconsolidated subsidiaries and affiliated companies and available-for-sale securities judged to be other than temporary are charged to income.

### Allowance for doubtful accounts

The Company and its consolidated subsidiaries (the “Companies”) provide the allowance for doubtful trade receivables by individually estimating uncollectible amounts and for normal receivables based on the Companies’ historical experience of write-offs of such receivables.

## **Inventories**

Inventories are principally valued at cost as determined by the weighted average method.

## **Property, plant and equipment and depreciation**

Property, plant and equipment are stated at cost. Cumulative amounts of impairment losses recognized have been deducted from acquisition costs. Depreciation is principally computed over the estimated useful lives of the assets on the straight-line basis. Repairs, maintenance and minor renewals are charged to expense as incurred.

Effective from the year ended March 31, 2004, the Company and its consolidated domestic subsidiaries adopted early the new Japanese accounting standard for impairment of fixed assets. The new standard requires the Company to review and evaluate its fixed assets for impairment when events or changes in circumstances indicate that the related carrying amounts may not be recoverable. When such events or circumstances arise, an estimate of the future undiscounted cash flows produced by the asset, or the appropriate grouping of assets, is compared to the asset's carrying value to determine if an impairment exists. If the asset is determined to be impaired, the impairment loss is measured based on the excess of its carrying value over its fair value. Assets to be disposed of are reported at the lower of carrying value or net realizable value. As a result of the adoption of this standard, income before income taxes and minority interests for the year ended March 31, 2004 decreased by ¥10,841 million.

## **Lease transactions**

Finance leases, except those leases for which the ownership is considered to be transferred to the lessee, are accounted for as operating leases.

## **Retirement and severance benefits**

The Companies provide two types of post-employment benefit plans—unfunded lump-sum payment plans and funded contributory pension plans—under which all eligible employees are entitled to benefits based on the level of wages and salaries at the time of retirement or termination, length of service and certain other factors.

The Companies provide allowance for employees' retirement and severance benefits based on the estimated amounts of projected benefit obligation, actuarially calculated using certain assumptions, and the fair value of the plan assets.

Prior service cost (credit) is recognized as expense (income) as incurred.

Actuarial gain (loss) is recognized as expense (income) using the straight-line method over 10 years commencing in the following period.

## **Retirement benefits for directors and corporate auditors**

Effective from the year ended March 31, 2005, the Company and some of its consolidated domestic subsidiaries changed their accounting method for retirement benefits for directors and corporate auditors from expensing when paid to an accrual basis in order to reflect period income and expenses more appropriately and to harmonize their group accounting methods.

The effect of this change was to increase operating income by ¥9 million (\$84 thousand) and to decrease income before income taxes by ¥941 million (\$8,762 thousand).

## **Income taxes**

The asset and liability approach is used to recognize deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes.

## **Shareholders' equity**

The maximum amount that the Company can distribute as dividends is calculated based on the non-consolidated financial statements of the Company in accordance with the Japanese Commercial Code.

## **Bonuses to directors and corporate auditors**

Bonuses to directors and corporate auditors are subject to approval by the shareholders and are accounted for by an appropriation of retained earnings.

## **Amounts per share**

Net income per share is computed based upon the weighted average number of shares of common stock outstanding during the period.

## **Reclassifications**

Certain reclassifications have been made in the 2004 financial statements to conform to the 2005 presentation.

### 3. ALLOWANCE FOR DOUBTFUL ACCOUNTS

Trade receivables have been reduced by allowances for doubtful accounts of ¥514 million (\$4,786 thousand) and ¥512 million, as of March 31, 2005 and 2004, respectively.

### 4. INVENTORIES

Inventories as of March 31, 2005 and 2004 consisted of the following:

	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2005	2004	2005
Finished products	<b>¥ 46,388</b>	¥ 40,139	<b>\$ 431,958</b>
Raw materials and supplies	<b>22,234</b>	18,771	<b>207,040</b>
Work-in-process	<b>13,953</b>	10,024	<b>129,928</b>
Total	<b>¥ 82,575</b>	¥ 68,934	<b>\$ 768,926</b>

### 5. MARKET VALUE INFORMATION OF SECURITIES

The following tables summarize acquisition costs, book values and fair values of securities with available fair values as of March 31, 2005 and 2004.

(1) Held-to-maturity debt securities:

	Millions of Yen						Thousands of U.S. Dollars (Note 1)		
	2005			2004			2005		
	Book value	Fair value	Difference	Book value	Fair value	Difference	Book value	Fair value	Difference
Total	<b>¥ 60</b>	<b>¥ 60</b>	<b>¥ (0)</b>	¥ 60	¥ 60	¥ (0)	<b>\$ 559</b>	<b>\$ 559</b>	<b>\$ (0)</b>

(2) Available-for-sale securities:

	Millions of Yen						Thousands of U.S. Dollars (Note 1)		
	2005			2004			2005		
	Acquisition cost	Book (fair) value	Difference	Acquisition cost	Book (fair) value	Difference	Acquisition cost	Book (fair) value	Difference
Securities with book values exceeding acquisition costs	<b>¥ 10,449</b>	<b>¥ 20,159</b>	<b>¥ 9,710</b>	¥ 8,457	¥ 14,882	¥ 6,425	<b>\$ 97,300</b>	<b>\$ 187,718</b>	<b>\$ 90,418</b>
Securities with book values not exceeding acquisition costs	<b>102</b>	<b>93</b>	<b>(9)</b>	615	596	(19)	<b>950</b>	<b>866</b>	<b>(84)</b>
Total	<b>¥ 10,551</b>	<b>¥ 20,252</b>	<b>¥ 9,701</b>	¥ 9,072	¥ 15,478	¥ 6,406	<b>\$ 98,250</b>	<b>\$ 188,584</b>	<b>\$ 90,334</b>

The following table summarizes book values of securities with no available fair values as of March 31, 2005 and 2004.

	Book Value		Thousands of U.S. Dollars (Note 1)
	Millions of Yen	2004	2005
Held-to-maturity debt securities	<b>¥ 1</b>	¥ 11	<b>\$ 9</b>
Equity securities issued by unconsolidated subsidiaries and affiliated companies	<b>23,443</b>	21,026	<b>218,298</b>
Available-for-sale securities	<b>8,404</b>	10,896	<b>78,257</b>

## 6. PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment as of March 31, 2005 and 2004 consisted of the following:

	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2005	2004	2005
Land	¥ 69,884	¥ 72,676	\$ 650,750
Buildings and structures	157,095	157,112	1,462,846
Machinery and equipment	522,717	521,059	4,867,464
Construction in progress	29,526	12,126	274,942
	<b>779,222</b>	762,973	<b>7,256,002</b>
Less accumulated depreciation	(526,531)	(527,258)	(4,902,980)
Net property, plant and equipment	<b>¥ 252,691</b>	¥ 235,715	<b>\$ 2,353,022</b>

## 7. SHORT-TERM BANK LOANS AND LONG-TERM DEBT

Short-term bank loans (partially secured) bore interest at weighted average annual rates of 0.91% and 0.89% as of March 31, 2005 and 2004, respectively. Such loans are generally renewable at maturity.

Long-term debt as of March 31, 2005 and 2004 consisted of the following:

	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2005	2004	2005
Loans from banks and other financial institutions, 1.56% maturing serially through 2022:			
Secured	¥ 15,962	¥ 22,856	\$ 148,636
Unsecured	158,742	160,315	1,478,182
	<b>174,704</b>	183,171	<b>1,626,818</b>
Less current maturities	(36,964)	(42,752)	(344,203)
Total	<b>¥ 137,740</b>	¥ 140,419	<b>\$ 1,282,615</b>

Assets pledged as collateral to secure primarily short-term bank loans and long-term debt as of March 31, 2005 and 2004 were as follows:

	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2005	2004	2005
Property, plant and equipment	¥ 116,688	¥ 132,015	\$ 1,086,581
Investment securities	254	221	2,365
Other	714	927	6,649
Total	<b>¥ 117,656</b>	¥ 133,163	<b>\$ 1,095,595</b>

The annual maturities of long-term debt as of March 31, 2005 were as follows:

Years ending March 31,	Millions of Yen	Thousands of U.S. Dollars (Note 1)
2006	¥ 36,964	\$ 344,203
2007	40,009	372,558
2008	32,000	297,979
2009	35,997	335,199
2010	12,752	118,745
2011 and thereafter	16,982	158,134
Total	¥ 174,704	\$ 1,626,818

## 8. RETIREMENT AND SEVERANCE BENEFITS

The liabilities for retirement and severance benefits at March 31, 2005 and 2004 were as follows:

	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2005	2004	2005
Projected benefit obligation	<b>¥ 73,411</b>	¥ 72,451	<b>\$ 683,592</b>
Fair value of pension assets	<b>(45,898)</b>	(41,311)	<b>(427,395)</b>
Unfunded benefit obligation	<b>27,513</b>	31,140	<b>256,197</b>
Unrecognized actuarial loss	<b>(8,114)</b>	(9,171)	<b>(75,556)</b>
Net benefit obligation	<b>19,399</b>	21,969	<b>180,641</b>
Prepaid pension cost	<b>934</b>	—	<b>8,697</b>
Retirement and severance benefits	<b>¥ 20,333</b>	¥ 21,969	<b>\$ 189,338</b>

Retirement benefit costs for the year ended March 31, 2005 and 2004 were as follows:

	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2005	2004	2005
Service costs	<b>¥ 2,797</b>	¥ 2,508	<b>\$ 26,045</b>
Interest costs on projected benefit obligation	<b>1,547</b>	1,779	<b>14,406</b>
Expected return on pension assets	<b>(765)</b>	(681)	<b>(7,124)</b>
Amortization of actuarial loss	<b>1,188</b>	1,480	<b>11,063</b>
Recognized prior service credit	—	(3,768)	—
Retirement and severance benefit costs	<b>¥ 4,767</b>	¥ 1,318	<b>\$ 44,390</b>

Notes:

- Both of the discount rate and the rate of expected return on pension assets used by the Companies are 2.5% for the year ended March 31, 2005. The discount rate and the rate of expected return on pension assets used by the Companies are 2.5% and 3.0%, respectively, for the year ended March 31, 2004.
- The estimated amount of all retirement benefits to be paid at the future retirement dates is allocated equally to each service year using the estimated number of total service years.
- In the year ended March 31, 2004, the Company revised its post-employment benefits plan. As a result of this revision, prior service credit arose and was charged to current income.

## 9. CONTINGENT LIABILITIES

Contingent liabilities primarily for loans from banks to unconsolidated subsidiaries and affiliates, which are guaranteed by the Companies, and for notes receivable discounted at banks with recourse as of March 31, 2005 were as follows:

	Millions of Yen	Thousands of U.S. Dollars (Note 1)
	Loans guaranteed	¥ 8,727
Notes receivable discounted	61	568
Notes receivable endorsed	194	1,806
Total	¥ 8,982	\$ 83,639

## 10. DERIVATIVE FINANCIAL INSTRUMENTS AND HEDGING TRANSACTIONS

The Companies use interest rate swaps only for the purpose of mitigating future risks of interest rate fluctuations with respect to borrowings.

The Companies use foreign currency forward exchange contracts only for the purpose of mitigating future risks of exchange rate fluctuations with respect to foreign currency denominated forecasted transactions.

The Companies also use currency swap contracts only for the purpose of mitigating future risks of exchange rate fluctuations.

All of the derivative transactions utilized by the Companies are accounted for as hedges.

## 11. INCOME TAXES

The Company and its consolidated domestic subsidiaries are subject to a number of income taxes, which, in the aggregate, indicate a statutory rate in Japan of approximately 40.4% and 41.7%, respectively, for the years ended March 31, 2005 and 2004.

The following table summarizes the significant differences between the statutory tax rate and the Companies' effective tax rate for financial statement purposes for the years ended March 31, 2005 and 2004.

	March 31, 2005	March 31, 2004
Statutory tax rate	<b>40.4%</b>	41.7%
Increase (reduction) in taxes resulting from:		
Non-deductible expenses	<b>0.7</b>	2.2
Amortization of consolidation difference	<b>0.9</b>	2.7
Equity in earnings of affiliates	<b>(1.5)</b>	(0.6)
Tax credit for research and development expenses	<b>(1.6)</b>	(5.2)
Valuation allowance	<b>(1.5)</b>	7.9
Other	<b>1.0</b>	2.0
Effective tax rate	<b>38.4%</b>	50.7%

Significant components of deferred tax assets and liabilities as of March 31, 2005 and 2004 were as follows:

	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2005	2004	2005
Deferred tax assets:			
Operating loss carryforwards	<b>¥ 1,522</b>	¥ 2,633	<b>\$ 14,172</b>
Unrealized gains on intercompany transactions	<b>5,993</b>	7,273	<b>55,806</b>
Retirement and severance benefits	<b>9,840</b>	10,454	<b>91,628</b>
Impairment loss on fixed assets	<b>1,506</b>	4,353	<b>14,024</b>
Other	<b>9,877</b>	7,380	<b>91,973</b>
Total gross deferred tax assets	<b>28,738</b>	32,093	<b>267,603</b>
Less valuation allowance	<b>(2,709)</b>	(3,401)	<b>(25,226)</b>
Total deferred tax assets	<b>26,029</b>	28,692	<b>242,377</b>
Deferred tax liabilities:			
Reserve for replacement of property, plant and equipment	<b>(3,206)</b>	(3,144)	<b>(29,854)</b>
Net unrealized holding gains on securities	<b>(3,909)</b>	(2,577)	<b>(36,400)</b>
Other	<b>(4,859)</b>	(4,360)	<b>(45,246)</b>
Total deferred tax liabilities	<b>(11,974)</b>	(10,081)	<b>(111,500)</b>
Net deferred tax assets	<b>¥ 14,055</b>	¥ 18,611	<b>\$ 130,877</b>

## 12. SEGMENT INFORMATION

The operations of the Companies are classified into four business segments—Petrochemical Group, Basic Group, Specialty Group and Service Group.

Operations of the Petrochemical Group include the manufacture and sale of olefins and polymers.

Operations of the Basic Group include the manufacture and sale of caustic soda, vinyl chloride monomer, polyvinyl chloride and cement.

Operations of the Specialty Group include the manufacture and sale of fine chemicals, scientific and diagnostic instruments and systems, water treatment equipment, quartz, specialty materials, and metals.

Operations of the Service Group include transportation, warehousing and construction.

"Operating expenses" used in the following segment information include cost of sales and selling, general and administrative expenses.

Business segment information was as follows:

Year ended March 31, 2005	Millions of Yen						
	Petro-Chemical Group	Basic Group	Specialty Group	Service Group	Total	Elimination and Corporate	Consolidated
<b>Net sales:</b>							
Outside customers	¥ 179,273	¥ 171,690	¥ 191,744	¥ 45,625	¥ 588,332	¥ —	¥ 588,332
Inter-segment	53,435	13,516	4,283	56,544	127,778	(127,778)	—
Operating expenses	221,995	164,766	173,299	99,152	659,212	(127,778)	531,434
Operating income	¥ 10,713	¥ 20,440	¥ 22,728	¥ 3,017	¥ 56,898	¥ —	¥ 56,898
Identifiable assets	¥ 111,206	¥ 183,301	¥ 220,443	¥ 43,914	¥ 558,864	¥ 44,345	¥ 603,209
Depreciation and amortization	¥ 3,568	¥ 9,128	¥ 8,138	¥ 1,336	¥ 22,170	¥ 652	¥ 22,822
Capital expenditures	¥ 3,544	¥ 31,153	¥ 9,230	¥ 1,177	¥ 45,104	¥ 275	¥ 45,379

Year ended March 31, 2004	Millions of Yen						
	Petro-Chemical Group	Basic Group	Specialty Group	Service Group	Total	Elimination and Corporate	Consolidated
<b>Net sales:</b>							
Outside customers	¥ 139,799	¥ 138,371	¥ 164,900	¥ 41,319	¥ 484,389	¥ —	¥ 484,389
Inter-segment	42,441	11,248	3,914	46,420	104,023	(104,023)	—
Operating expenses	179,235	140,681	152,974	85,467	558,357	(104,023)	454,334
Operating income	¥ 3,005	¥ 8,938	¥ 15,840	¥ 2,272	¥ 30,055	¥ —	¥ 30,055
Identifiable assets	¥ 100,818	¥ 150,457	¥ 205,666	¥ 43,039	¥ 499,980	¥ 49,233	¥ 549,213
Depreciation and amortization	¥ 3,763	¥ 9,610	¥ 8,472	¥ 1,316	¥ 23,161	¥ 807	¥ 23,968
Impairment loss on fixed assets	¥ 81	¥ 131	¥ 839	¥ 242	¥ 1,293	¥ 9,548	¥ 10,841
Capital expenditures	¥ 2,026	¥ 10,328	¥ 7,956	¥ 648	¥ 20,958	¥ 347	¥ 21,305

Year ended March 31, 2005	Thousands of U.S. Dollars (Notes 1)						
	Petro-Chemical Group	Basic Group	Specialty Group	Service Group	Total	Elimination and Corporate	Consolidated
<b>Net sales:</b>							
Outside customers	\$ 1,669,364	\$ 1,598,752	\$ 1,785,492	\$ 424,854	\$ 5,478,462	\$ —	\$ 5,478,462
Inter-segment	497,579	125,859	39,883	526,529	1,189,850	(1,189,850)	—
Operating expenses	2,067,185	1,534,277	1,613,735	923,289	6,138,486	(1,189,850)	4,948,636
Operating income	\$ 99,758	\$ 190,334	\$ 211,640	\$ 28,094	\$ 529,826	\$ —	\$ 529,826
Identifiable assets	\$ 1,035,534	\$ 1,706,872	\$ 2,052,733	\$ 408,921	\$ 5,204,060	\$ 412,934	\$ 5,616,994
Depreciation and amortization	\$ 33,225	\$ 84,998	\$ 75,780	\$ 12,441	\$ 206,444	\$ 6,071	\$ 212,515
Capital expenditures	\$ 33,001	\$ 290,092	\$ 85,949	\$ 10,960	\$ 420,002	\$ 2,561	\$ 422,563



The "Elimination and Corporate" column of "Identifiable assets" in the above schedules includes corporate assets of ¥61,391 million (\$571,664 thousand) and ¥65,127 million for the years ended March 31, 2005 and 2004, respectively, which mainly consist of cash, time deposits, investment securities and assets of administrative departments.

Geographic information for the years ended March 31, 2005 and 2004 was as follows :

Year ended March 31, 2005	Millions of Yen				Consolidated
	Japan	Other	Total	Elimination and Corporate	
Net sales:					
Outside customers	¥ 528,822	¥ 59,510	¥ 588,332	¥ —	¥ 588,332
Inter-segment	24,861	2,004	26,865	(26,865)	—
Operating expenses	501,575	56,724	558,299	(26,865)	531,434
Operating income	¥ 52,108	¥ 4,790	¥ 56,898	¥ —	¥ 56,898
Identifiable assets	¥ 521,093	¥ 51,307	¥ 572,400	¥ 30,809	¥ 603,209

Year ended March 31, 2004	Millions of Yen				Consolidated
	Japan	Other	Total	Elimination and Corporate	
Net sales:					
Outside customers	¥ 440,257	¥ 44,132	¥ 484,389	¥ —	¥ 484,389
Inter-segment	15,849	1,050	16,899	(16,899)	—
Operating expenses	427,129	44,104	471,233	(16,899)	454,334
Operating income	¥ 28,977	¥ 1,078	¥ 30,055	¥ —	¥ 30,055
Identifiable assets	¥ 466,342	¥ 47,082	¥ 513,424	¥ 35,789	¥ 549,213

Year ended March 31, 2005	Thousands of U.S. Dollars (Note 1)				Consolidated
	Japan	Other	Total	Elimination and Corporate	
Net sales:					
Outside customers	\$ 4,924,313	\$ 554,149	\$ 5,478,462	\$ —	\$ 5,478,462
Inter-segment	231,502	18,661	250,163	(250,163)	—
Operating expenses	4,670,593	528,206	5,198,799	(250,163)	4,948,636
Operating income	\$ 485,222	\$ 44,604	\$ 529,826	\$ —	\$ 529,826
Identifiable assets	\$ 4,852,342	\$ 477,763	\$ 5,330,105	\$ 286,889	\$ 5,616,994

Export sales and sales made outside Japan by overseas subsidiaries were ¥167,614 million (\$1,560,797 thousand) and ¥128,873 million for the years ended March 31, 2005 and 2004, respectively, representing 28.5% and 26.6% of consolidated net sales. For the years ended March 31, 2005 and 2004, such sales in Asia were ¥122,314 million (\$1,138,970 thousand) and ¥90,713 million, representing 20.8% and 18.7%, respectively, of consolidated net sales.

### 13. SUBSEQUENT EVENTS

At the general shareholders' meeting of the Company held on June 29, 2005, retained earnings of the Company as of March 31, 2005 were appropriated as follows:

	Millions of Yen	Thousands of U.S. Dollars (Note 1)
	Year-end cash dividends (¥6.00 per share)	¥ 3,602
Bonuses to directors	¥ 111	\$ 1,034

# INDEPENDENT AUDITORS' REPORT

To the Shareholders and Board of Directors of Tosoh Corporation:

We have audited the accompanying consolidated balance sheets of Tosoh Corporation and subsidiaries as of March 31, 2005 and 2004, and the related consolidated statements of income, shareholders' equity and cash flows for the years then ended, all expressed in Japanese yen. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to independently express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in Japan. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Tosoh Corporation and subsidiaries as of March 31, 2005 and 2004, and the consolidated results of their operations and their cash flows for the years then ended, in conformity with accounting principles generally accepted in Japan.

Without qualifying our opinion, we draw attention to the following:

- (1) As discussed in Note 2 to the consolidated financial statements, effective from the fiscal year ended March 31, 2004, Tosoh Corporation and its consolidated domestic subsidiaries adopted the new accounting standard for impairment of fixed assets.
- (2) As discussed in Note 2 to the consolidated financial statements, effective from the fiscal year ended March 31, 2005, Tosoh Corporation and some of its consolidated domestic subsidiaries changed their accounting method for retirement benefits for directors and corporate auditors.

The U.S. dollar amounts in the accompanying consolidated financial statements with respect to the year ended March 31, 2005 are presented solely for convenience. Our audit also included the translation of yen amounts into U.S. dollar amounts and, in our opinion, such translation has been made on the basis described in Note 1 to the consolidated financial statements.

*KPMG AZSA & Co.*

KPMG AZSA & Co.  
Osaka, Japan  
June 29, 2005

## BOARD OF DIRECTORS

(As of June 29, 2005)

### Chairman & CEO

Madoka Tashiro

### President

Takashi Tsuchiya

### Senior Managing Directors

Yukihiro Tsutsumi

Keiichi Ohtagaki

### Managing Directors

Ichiro Hiraki

Hiroshige Wagatsuma

Hideo Yamasaki

Kazuya Hoshi

Shinji Kurata

Yuzo Arima

### Directors

Hiroyuki Uchida

Koji Fujii

Katsumi Ishikawa

Kenichi Udagawa

Kazuo Higuchi

### Corporate Auditors

Osami Matsuura

Atsushi Minakawa

Akio Fujita

Yoshio Shibata

## INVESTOR INFORMATION

(As of March 31, 2005)

### Date of Incorporation

February 11, 1935

### Paid-in Capital

¥41 billion

### Common Stock

Authorized: 1,200,000,000 shares

Issued: 601,161,912 shares

### Number of Shareholders

52,657

### Stock Exchange Listings

Tokyo

TSE Ticker Symbol: 4042

### Transfer Agent for Shares

The Chuo Mitsui Trust & Banking Co., Ltd.

33-1, Shiba 3-chome

Minato-ku, Tokyo 105-0014

Japan

### Independent Auditors

KPMG AZSA & Co.

### Number of Employees

9,148

### Head Office

## TOSOH CORPORATION

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TOSOH

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# **TOSOH CORPORATION**

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