

MGC Group Data Book 2017

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MGC

CORPORATE INFORMATION

Company Name

MITSUBISHI GAS CHEMICAL COMPANY, INC.

Address

Mitsubishi Building, 5-2 Marunouchi 2-chome, Chiyoda-ku, Tokyo 100-8324, Japan

Original Establishment

January 15, 1918

Incorporation

April 21, 1951

Capital

¥41.97 billion (as of end of March, 2017)

Fiscal Year

Accounts closed in March

Number of Consolidated Subsidiaries and Affiliates

Consolidated subsidiaries: 71 Affiliates: 16 (as of end of March, 2017)

Number of Employees

Non-consolidated: 2,323 Consolidated: 8,034 (as of end of March, 2017)

Main Banks

The Bank of Tokyo-Mitsubishi UFJ, Ltd.
Japan Bank for International Cooperation
Mizuho Bank, Ltd.
Mitsubishi UFJ Trust and Banking Corporation
The Norinchukin Bank
The Bank of Yokohama, Ltd.

Main Operations

- 1) Manufacturing and sales of the following products:
 - Organic and inorganic chemicals, petroleum-derived chemicals
 - Chemical fertilizers, agricultural chemicals, feeds, feed additives
 - Synthetic resins, synthetic rubber and other high-molecular polymers
 - Dyes, pigments, paints and adhesives
 - Pharmaceutical products, quasi-drugs, biochemical products, food and food additives
 - Detergents, bleaches, gas absorbers
 - Materials and elements used for civil engineering, construction, agriculture and fisheries, distribution industry and electric appliances and equipment
 - Ceramic products
 - Information device, component, apparatus
 - All other products related to the aforementioned materials and products
- 2) Mining and sales of natural gas, petroleum and other minerals and offering consultations on related matters
- 3) Development, sales and consultations related to geothermal energy and other forms of energy
- 4) Design, manufacture, sales, operation, supervision and consulting of various machinery used in chemical industries and environmental preservation
- 5) Research and development, sales, commissioned research and consulting related to various technologies relevant to chemical industries
- 6) Conducting various tests and commissioned analyses and consultation related to environmental measurements and safety of chemical products
- 7) Design, implementation, contracting and supervision of civil engineering work and various other construction assignments
- 8) Sales, leasing, management and brokerage of real estate properties
- 9) Shipping, freight transportation, warehouse operation and tourist operations
- 10) All other business operations relevant to the aforementioned operations

Executives (as of July 1, 2017)

Representative Director, Chairman

Kazuo Sakai

Representative Director, President

Toshikiyo Kurai

Representative Directors, Senior Managing Executive Officers

Kunio Kawa

In charge of Finance & Accounting Center, Corporate Communications Division

Kenji Inamasa

In charge of Production Technology Division, Environment & Safety Division, Business Strategy Division; General Manager of Business Strategy Division

Directors, Managing Executive Officers

Masahiro Johno

President of Information & Advanced Materials Company

Yasuhiro Sato

Chairman of Internal Control Promotion Committee; In charge of Compliance; In charge of Risk Management; In charge of Internal Audit Division, Corporate Planning Division, Administrative & Personnel Center, Purchasing & Logistics Center

Masashi Fujii

In charge of LNG Project Team; President of Natural Gas Chemicals Company

Susumu Yoshida

President of Specialty Chemicals Company

Masamichi Mizukami

Deputy Chairman of Compliance Committee; In charge of Research & Development Division, Advanced Business Development Division;

Masato Inari

President of Aromatic Chemicals Company

Outside Directors

Kazuo Tanigawa

Tsugio Sato

Executive Officers

Chiharu Kubota

Plant Manager of Yamakita Plant, Specialty Chemicals Company

Toshiya Takagi

Plant Manager of Niigata Plant, Natural Gas Chemicals Company

Eiji Tsukiji

General Manager of Finance & Accounting Center

Kinji Hiramoto

General Manager of Aromatic Chemicals Division II, Aromatic Chemicals Company

Hiroya Fujii

Plant Manager of Yokkaichi Plant, Specialty Chemicals Company

Kazuhide Horiguchi

General Manager of Organic Chemicals Division, Natural Gas Chemicals Company

Tomohiko Okubo

General Manager of Methanol Division, Natural Gas Chemicals Company; Group Manager of Business Development Division, Methanol Division, Natural Gas Chemicals Company

Takao Ota

President of MITSUBISHI GAS CHEMICAL EUROPE GMBH

Hiroyuki Otsuka

General Manager of Tokyo Techno Park, Tokyo Research Laboratory, Specialty Chemicals Company

Nobuhisa Ariyoshi

General Manager of Electronics Materials Division, Information & Advanced Materials Company

Kenji Kato

Plant Manager of Kashima Plant, Specialty Chemicals Division

Yoshihiro Kayano

General Manager of Advanced Business Development Division; Group Manager of Business Strategy Group, Advanced Business Development Division; Deputy General Manager of Business Strategy Division

Naruyuki Nagaoka

General Manager of Corporate Planning Division

Yasuo Teraoka

General Manager of Engineering Plastics Division, Specialty Chemicals Company; Group Manager of Basic Products Department I, Engineering Plastics Division, Specialty Chemicals Company

Executive General Manager

Shinichi Mitsuda

General Manager of Energy & Resources Division; Project Leader of LNG Project Team, Natural Gas Chemicals Company

Audit & Supervisory Board Members

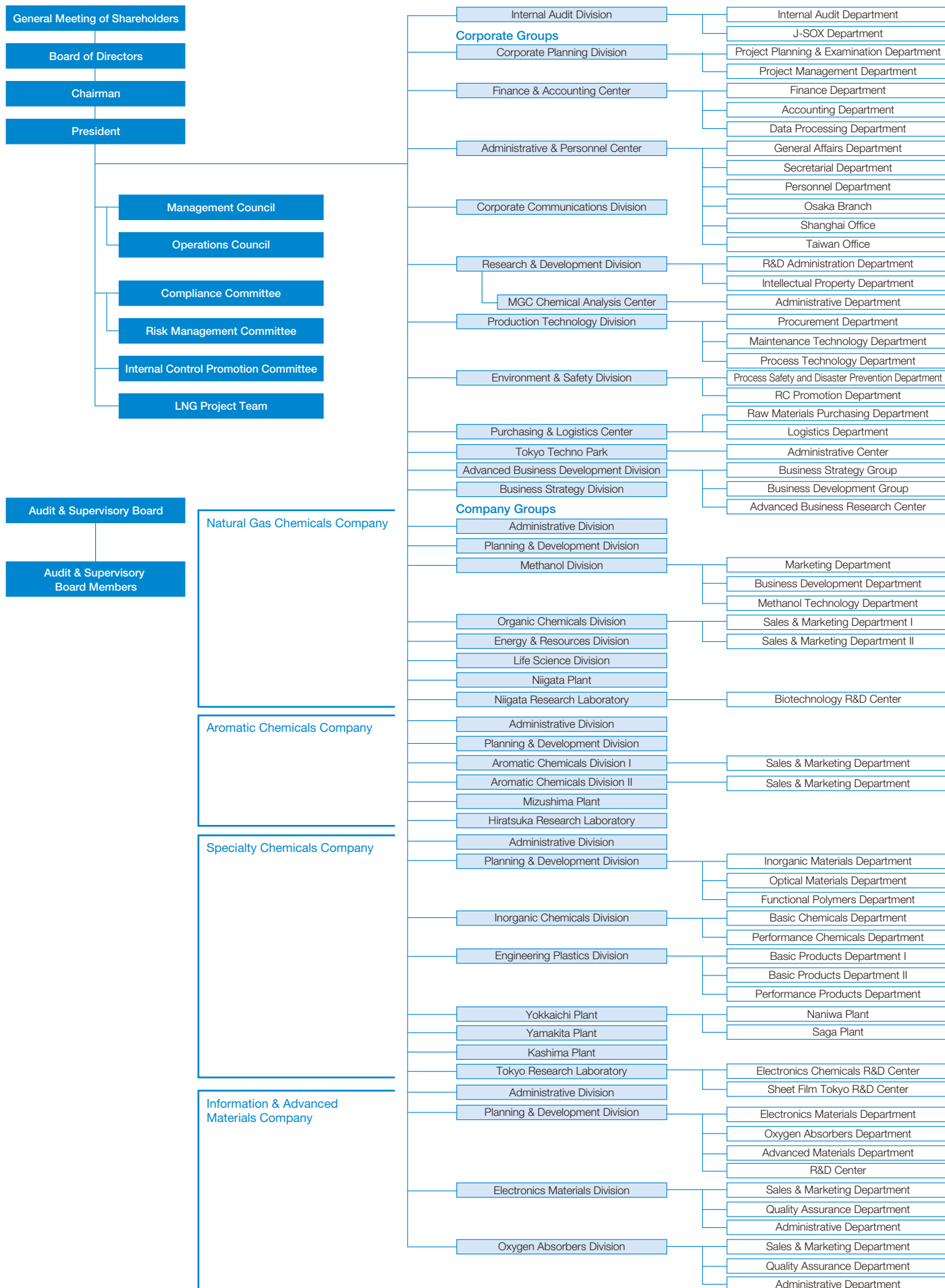
Takashi Kimura

Takayuki Watanabe

Katsuhiko Sugita

Yasuomi Matsuyama

ORGANIZATION CHART (as of July 1, 2017)



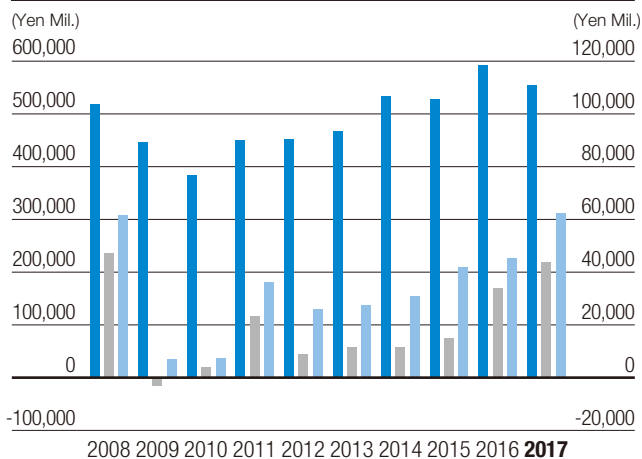
FINANCIAL HIGHLIGHTS

Mitsubishi Gas Chemical Company, Inc. and Consolidated Subsidiaries

	Mar. 2008	Mar. 2009	Mar. 2010
Net sales (Millions of yen)	519,329	447,647	384,528
Operating income (Millions of yen)	47,366	(3,103)	4,090
Ordinary income (Millions of yen)	61,759	6,975	7,365
Net income attributable to owners of the parent (Millions of yen)	40,209	7,014	5,827
Equity in earnings of affiliates (Millions of yen)	21,312	14,706	8,794
Total assets (Millions of yen)	601,386	530,592	539,431
Net assets (Millions of yen)	312,021	272,083	278,094
Operating activity cash flow (Millions of yen)	40,394	49,027	31,326
Investing activity cash flow (Millions of yen)	(20,907)	(41,253)	(33,662)
Financing activity cash flow (Millions of yen)	(22,251)	11,541	(15,354)
Total cash and cash equivalents at end of year (Millions of yen)	37,235	53,065	36,048
Basic net income per share (Yen)*	174.02	30.61	25.78
Diluted net income per share (Yen)*	170.26	29.94	25.21
Net assets per share (Yen)*	1,308.49	1,171.80	1,191.13
Return on equity (ROE) (%)	13.7	2.5	2.2
Return on assets (ROA) (%)	10.2	1.2	1.4
Operating income margin (%)	9.1	(0.7)	1.1
Equity ratio (%)	50.3	49.9	49.9
Number of employees	4,686	4,902	4,920

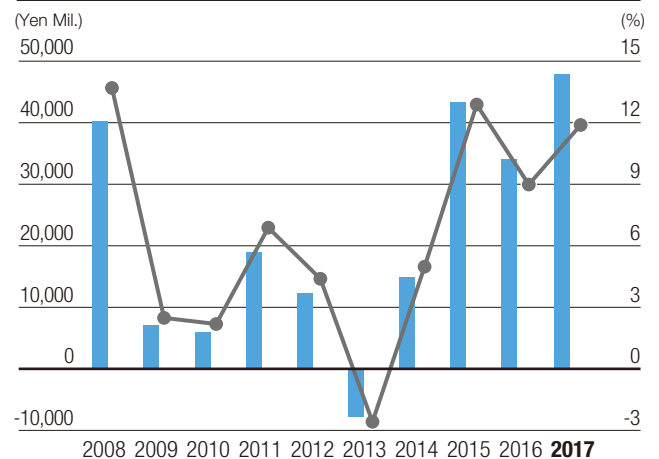
*With and effective date of October 1, 2016, MGC conducted a reverse stock split for MGC's ordinary shares on a 2:1 basis. As a result, each of the three amounts per share in the above table are calculated assuming that the reverse stock split had been conducted at the beginning of FY2007.

Net sales / Operating income / Ordinary income



■ Net sales ■ Operating income ■ Ordinary income

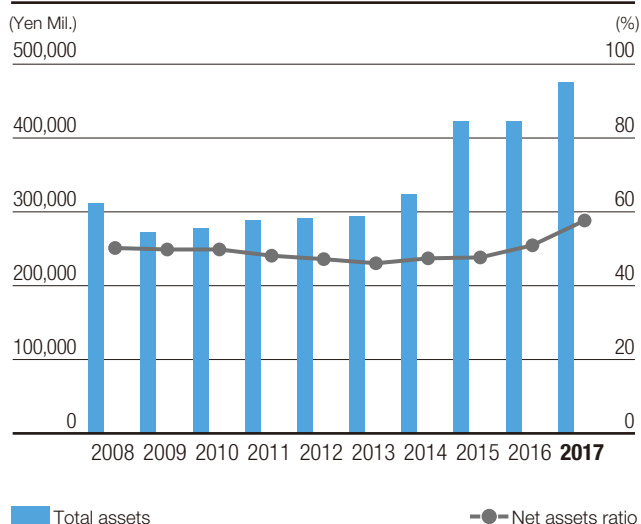
Net income attributable to owners of the parent / Return on equity (ROE)



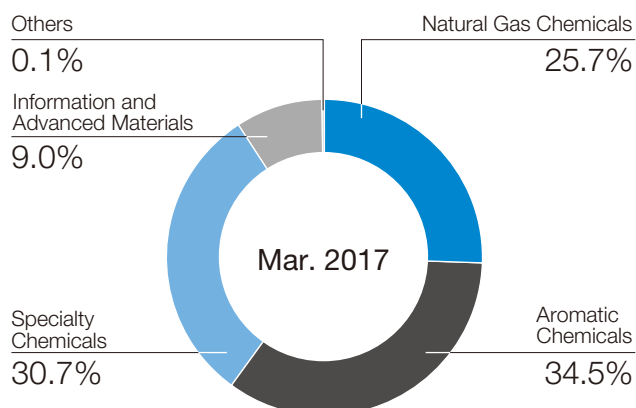
■ Net income attributable to owners of the parent ● Return on equity (ROE)

	Mar. 2011	Mar. 2012	Mar. 2013	Mar. 2014	Mar. 2015	Mar. 2016	Mar. 2017
	451,033	452,217	467,979	534,443	529,570	593,502	556,480
	23,363	9,083	11,421	11,488	14,996	34,018	43,762
	36,394	26,116	27,651	30,804	42,000	45,432	62,378
	18,950	12,327	(7,793)	14,921	43,346	34,134	47,958
	17,873	20,532	19,045	20,466	27,895	16,683	21,074
	577,045	595,250	613,908	657,838	790,784	739,582	741,639
	288,257	292,111	294,895	323,858	422,851	423,135	476,749
	39,773	37,348	31,169	27,182	76,982	84,671	82,711
	(24,626)	(37,274)	(30,818)	(29,883)	(23,531)	(31,922)	(31,119)
	(1,849)	(9,876)	(14,356)	7,124	(25,005)	(47,335)	(60,217)
	46,768	35,701	26,907	37,310	72,678	75,828	67,177
	83.85	54.56	(34.50)	66.07	191.94	153.85	221.57
	81.99	54.03	—	—	—	—	—
	1,230.50	1,246.92	1,256.81	1,382.52	1,672.25	1,707.01	1,983.60
	6.9	4.4	(2.8)	5.0	12.6	9.0	11.9
	6.5	4.5	4.6	4.8	5.8	5.9	8.4
	5.2	2.0	2.4	2.1	2.8	5.7	7.9
	48.2	47.3	46.2	47.5	47.8	51.0	57.7
	4,979	5,216	5,323	5,445	8,254	8,176	8,034

Net assets / Equity ratio



Sales by segment



CORPORATE HISTORY

Year	History	
1910-1940	<p data-bbox="292 342 871 394" style="border: 1px solid black; padding: 2px;">Mitsubishi Edogawa Chemical Co., Ltd.</p> <p data-bbox="292 416 871 521">1918 Edogawa Barium Industry Co., Ltd. is established. The company later becomes Mitsubishi Edogawa Chemical. The plant later becomes Mitsubishi Gas Chemical's Tokyo Plant.</p> <p data-bbox="292 533 871 584">1927 Begins production of formalin for the first time in Japan.</p> <p data-bbox="292 595 871 622">1930 Establishes Osaka Plant.</p> <p data-bbox="292 633 871 707">1933 Establishes Yamakita Plant; begins production of hydrogen peroxide using the electrolytic method for the first time in Japan.</p> <p data-bbox="292 719 871 770">1937 Begins production of laminate material for printed wiring boards for the first time in Japan.</p>	<p data-bbox="938 723 1516 775" style="border: 1px solid black; padding: 2px;">Japan Gas Chemical Co., Inc.</p>
1950	<p data-bbox="292 824 871 851">1951 Establishes Naniwa Plant.</p> <p data-bbox="292 947 871 999">1954 Takes a stake in Toyo Kagaku Industries, Inc. (current Toyo Kagaku, Inc.).</p>	<p data-bbox="938 824 1516 875">1951 Japan Gas Chemical Co., Inc. is established; establishes Enoki Plant; acquires natural gas assets.</p> <p data-bbox="938 887 1516 938">1952 Begins production of methanol from natural gas for the first time in Japan.</p> <p data-bbox="938 949 1516 1001">1954 Lists shares on the Tokyo Stock Exchange. Establishes Osaka Office (current Osaka Branch).</p> <p data-bbox="938 1012 1516 1086">1957 Establishes Matsuhama Plant; begins production of ammonia from natural gas for the first time in Japan.</p> <p data-bbox="938 1097 1516 1245">1959 Integrates Enoki Plant and Matsuhama Plant and renames the integrated entity as Niigata Plant. Establishes Niigata Research Laboratory. Establishes Japan Hydrazine Co., Inc. (current Japan Finechem Co., Inc.)</p>
1960	<p data-bbox="292 1279 871 1330">1961 Begins production of polycarbonate lupilon using interfacial polymerization.</p> <p data-bbox="292 1341 871 1460">1962 Changes the name to Mitsubishi Edogawa Chemical Co., Ltd. Begins production of hydrogen peroxide for electronics industry use.</p> <p data-bbox="292 1471 871 1576">1963 Establishes Yokkaichi Plant; begins commercial production of hydrogen peroxide using the company's proprietary technology (anthraquinone method).</p> <p data-bbox="292 1588 871 1615">1966 Takes a stake in Japan Circuit Industrial Co., Ltd.</p>	<p data-bbox="938 1279 1516 1352">1960 Nihon Plastic and Chemical Co., Ltd. establishes Mizushima Plant, which later becomes a Japan Gas Chemical plant in 1961 through merger.</p> <p data-bbox="938 1364 1516 1482">1962 Establishes Japan Styrene Paper Corporation (current JSP Corporation). Establishes Japan Pure Hydrogen Co., Ltd. (current Japan Pionics Co., Ltd.)</p> <p data-bbox="938 1494 1516 1520">1963 Establishes Hiratsuka Research Laboratory.</p> <p data-bbox="938 1532 1516 1606">1968 Establishes A.G. International Chemical Co., Inc. Begins production of high-purity meta-xylene for the first time in the world.</p>
1970	<p data-bbox="292 1653 871 1704">1970 Relocates the corporate research laboratory to Kanamachi (current Tokyo Research Laboratory).</p> <p data-bbox="292 1715 871 1767">1971 Begins production of polycarbonate sheet based on the extrusion method.</p> <p data-bbox="292 1863 871 1915" style="border: 1px solid black; padding: 2px;">Mitsubishi Gas Chemical Company, Inc.</p> <p data-bbox="292 1926 871 1977">1977 Begins production of AGELESS oxygen absorber; establishes Kashima Plant.</p>	<p data-bbox="938 1653 1516 1704">1970 Establishes Mizushima Aroma Co., Ltd. Begins production of MXDA.</p> <p data-bbox="292 1783 1516 1834" style="border: 1px solid black; padding: 2px;">Oct. 1971 Mitsubishi Gas Chemical Company, Inc. is established in an equal merger</p> <p data-bbox="938 1863 1516 1915" style="border: 1px solid black; padding: 2px;">Major Affiliates</p> <p data-bbox="938 1926 1516 2031">1977 Establishes Japan U-PICA Co., Ltd. Hiratsuka U-PICA Co., Ltd., and Inuyama U-PICA Co., Ltd. The three companies later merge to form Japan U-PICA Company, Ltd.</p> <p data-bbox="938 2042 1516 2094">1979 Establishes Japan Saudi Arabia Methanol Co., Inc.</p>

Year	History	
1980	<p>1981 Begins production of polyacetal.</p> <p>1984 Begins production of MX nylon.</p> <p>1986 Establishes Saga Plant.</p>	<p>1980 Establishes SAUDI Methanol Company(AR-RAZI).</p> <p>1982 Establishes Mitsubishi Gas Chemical Singapore Pte. Ltd.</p> <p>1984 Establishes Mitsubishi Gas Chemical America, Inc.</p> <p>1987 Establishes Korea Engineering Plastics Co., Ltd. Establishes PT Peroksida Indonesia Pratama.</p> <p>1989 Establishes Samyoung Pure Chemicals Co., Ltd.</p>
1990	<p>1991 Begins production of lens monomer; changes Japanese company name.</p> <p>1997 Declares the Implementation of Responsible Care.</p>	<p>1990 Establishes Mitsubishi Gas Chemical Europe GmbH.</p> <p>1991 Establishes MGC Electrotechno Co., Ltd.</p> <p>1992 Establishes Metanol de Oriente, METOR, S.A. (METOR).</p> <p>1994 Establishes Mitsubishi Engineering-Plastics Corporation.</p> <p>1995 Establishes MGC Pure Chemicals America, Inc. Establishes Thai Polyacetal Co., Ltd.</p> <p>1996 Establishes Thai Polycarbonate Co., Ltd.</p> <p>1997 Establishes MGC Pure Chemicals Singapore Pte. Ltd.</p> <p>1999 Establishes Yonezawa Dia Electronics Co., Inc.</p>
2000-	<p>2000 Introduces internal company system.</p> <p>2001 Establishes Electronics Chemicals R&D Center under Tokyo Research Laboratory. All business locations are made ISO 14001 compliant.</p> <p>2003 Introduces executive officer system.</p> <p>2005 Establishes Shanghai Office. Changes the name of Tokyo Plant to Tokyo Development Center. Establishes MGC Chemical Analysis Center.</p> <p>2007 Establishes Sheet Film Tokyo R&D Center under Tokyo Research Laboratory.</p> <p>2009 Tokyo Techno Park established; Tokyo Research Laboratory and MGC Chemical Analysis Center placed under it;operation of Tokyo Development Center discontinued</p> <p>2010 Establishes Taiwan Office.</p> <p>2015 Medium-term management plan "MGC Advance 2017" Announced</p> <p>2017 Establishes QOL Innovation Center Shirakawa</p>	<p>2000 Establishes MGC Pure Chemicals Taiwan, Inc. Establishes Kyodo Kasankasuiso Corporation.</p> <p>2002 Establishes Ageless (Thailand) Co., Ltd. Establishes MGC Advanced Polymers, Inc.</p> <p>2005 Establishes MGC Filsheet Co., Ltd.</p> <p>2006 Establishes Brunei Methanol Company Sdn. Bhd. Establishes MGC Trading (Thailand) Ltd.</p> <p>2008 Establishes Suzhou MGC Suhua Peroxide Co., Ltd. Establishes Mitsubishi Gas Chemical Shanghai Commerce Ltd.</p> <p>2009 Establishes Mitsubishi Gas Chemical Engineering-Plastics (Shanghai) Co., Ltd.</p> <p>2012 Establishes MGC Electrotechno (Thailand) Co., Ltd.</p> <p>2013 Establishes Caribbean Gas Chemical Ltd.</p> <p>2015 JSP Corp. gained as consolidated subsidiary via takeover bid.</p>

AWARD-WINNING TECHNOLOGIES

Theme	Year	Award	Organizer
Methanol synthesis from natural gas	1955	Fuel Association Award	Fuel Association
A contact reformer for hydrogen carbonate	1958	Okochi Memorial Prize for Production	Okochi Memorial Foundation
	1961	The Japan Petroleum Institute Award	The Japan Petroleum Institute
Low biuret urea manufacture	1961	Science and Technology Agency Award	Science and Technology Agency
Technology related to the manufacture of formalin	1961	Society of Synthetic Organic Chemistry, Japan Award	The Society of Synthetic Organic Chemistry, Japan
Research related to natural gas	1965	The Fuel Society of Japan Award	The Fuel Society of Japan
Technology related to the manufacture of Hydrogen peroxide through a method of automatic oxidization	1965	Chemical Technology Award	The Chemical Society of Japan
	1966	Okochi Memorial Prize for Technology	Okochi Memorial Foundation
	1966	Science and Technology Award	Science and Technology Agency
Technology related to the manufacture of sodium hydrosulfite	1969	Okochi Memorial Prize for Technology	Okochi Memorial Foundation
The separation of isomers of xylene	1969	The Japan Petroleum Institute Award	The Japan Petroleum Institute
	1969	The SCEJ Technical Achievement Award	The Society of Chemical Engineers, Japan
	1969	Chemical Technology Award	The Chemical Society of Japan
	1970	Okochi Memorial Prize for Production	Okochi Memorial Foundation
	1970	Science and Technology Agency Award	Science and Technology Agency
	1970	The Fuel Society of Japan Award	The Fuel Society of Japan
	1971	The Technology Award	Japan Chemical Industry Association
The manufacture of xylene resin	1969	Chemical Technology Award	The Chemical Society of Japan
Oxalic acid production technology used in the manufacture of ethylene glycol	1971	The Ichimura Industrial Prize	The New Technology Development Foundation
The development of automatic voltage regulator of electrolytic cell	1972	The Technology Award	The Japan Soda Industry Association
The development of chemical polishing agents based on Hydrogen peroxide	1974	The Technology Award	Metal Finishing Society
Manufacturing technology related to the extrusion of polycarbonate sheet	1976	The Ichimura Industrial Prize	The New Technology Development Foundation
The development of the oxygen absorber/AGELESS	1981	The Kinoshita Award	Japan Packaging Institute
	1984	The Technology Award	Japan Food Industry Academic Association
	1984	Japan Food Industry and Technology Distinguished Service Award	Shokuhin Sangyo Shimbunsha Co., Ltd.
	1993	First Century Anniversary Award	Agricultural Research & Development Association
	1995	Food Industry Distinguished Service Award	Japan Food Journal Co., Ltd.
	2000	20th century food industry development award	Japan Food Journal Co., Ltd.
Methods related to the manufacture of carbon monoxide	1983	The Invention Award	Institute of Invention and Innovation
Ethanol production methods	1983	Science and Technology Agency Award	Science and Technology Agency
The development and industrialization of production technology for aromatic aldehydes used to produce Trimellitic anhydride and Pyromellitic dianhydride	1987	The SCEJ Technical Achievement Award	The Society of Chemical Engineers, Japan
	1987	The Japan Petroleum Institute Award	The Japan Petroleum Institute
	1988	Chemical Technology Award	The Chemical Society of Japan
	1998	Science and Technology Agency Award	Science and Technology Agency
The development of production methods for methyl formate using anhydrous Methanol	1989	Technology Award	Catalysis Society of Japan
Research on classifications for cytochrome C1-microorganisms	1989	Saito Award	The Society of Fermentation Technology, Japan

Theme	Year	Award	Organizer
Consideration of corporate in-house databases	1990	Selected to commemorate the fortieth anniversary	Information Science and Technology Association
The development of new production technology for polyacetal	1991	The Ichimura Industrial Prize	The New Technology Development Foundation
	1997	Science and Technology Agency Award	Science and Technology Agency
Exploration and development of the Iwafune Offshore Oilfield	1991	The Japan Petroleum Institute Award	The Japan Petroleum Institute
Packaging of steamed rice for microwave ovens by AGELESS	1992	Good Packaging Award	Japan Packaging Institute
The development of new production methods for aromatic polycarbonates	1993	Okochi Memorial Prize for Production	Okochi Memorial Foundation
	1993	The Technology Award	Japan Chemical Industry Association
Catalytic reduction of nitrogen monoxide at room temperature using degraded activated charcoal	1994	The Japan Institute of Energy Award for Distinguished Paper	The Japan Institute of Energy
The development of meso phase production methods using aromatic hydrocarbons	1995	Bio Tsukuba Award	Tsukuba Foundation for Chemical and Bio-Technology
	1995	Chemical Technology Award	The Chemical Society of Japan
Custom factory integration processes	1996	Aoki-Katashi Award	The Japan Society of Polymer Processing
New synthetic methods for producing Methanol	1998	The SCEJ Technical Achievement Award	The Society of Chemical Engineers, Japan
The development of oxygen absorber film AGELESS OMAC	2000	Japan Food Journal Award	Japan Food Journal Co., Ltd.
The development of High-refractive-index plastic lenses	2001	Chemical Technology Award	The Chemical Society of Japan
The development of BT resin and BT resin base Printed Wiring Board	2003	The Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology: The Prize for Science and Technology	Ministry of Education, Culture, Sports, Science and Technology-Japan
On-site production of new bleaching agent "Peroxymonosulfuric acid" and application of it to pulp bleaching	2011	Sasaki Prize	Japan Technical Association of the Pulp and Paper Industry
Transparent PI for flexible Display	2011	Best Paper Award in the Flexible Display Material Division from the 18th International Display Workshops (IDW'11)	SID(Society of Information Display)
New Oxygen Absorbing Resin "OXY-CAPT" Characteristics and Applications	2013	Best Presentation Award	Japan Packaging Institute
Development of Oxygen Scavenger Packaging Material in Dry Condition	2014	Best Presentation Award	Japan Packaging Institute
	2015	Best Presentation Award	Japan Packaging Institute
	2016	Best Presentation Award	Japan Packaging Institute
Development of High-refractive-index and Low-double-refraction Special Polycarbonate Resin	2016	JCIA Technology Award: Grand Prize	Japan Chemical Industry Association
	2016	Chemical Technology Award	The Chemical Society of Japan
	2016	The Ichimura Industrial Prize: The Ichimura Prize in Industry for Outstanding Achievement	The New Technology Development Foundation
Oxyvanish: Oxygen Scavenger Packaging Material in Dry Condition	2017	WorldStar Packaging Awards: Pharmaceutical & Medical winner	World Packaging Organization

Licenses Offered

As a pioneer in the export of technological licenses and plants, MGC has been contributing to global industrial development by actively offering our technologies. Since 1957 we have offered over 220 licenses in Japan and overseas.

- Production process for hydrogen cyanide
- Production process for choline chloride
- Production process for methyl formate
- Production process for dimethyl formamide
- Production process for hydrogen (from methanol)
- Production process for super-pure hydrogen peroxide
- Production process for 2,6-naphthalenedicarboxylic acid dimethyl ester
- Production process for hexamine
- Production process for formalin
- Production process for methylamine
- Production process for electronics industry hybrid chemicals
- Production process for acetone cyanhydrin
- Production process for hydrogen peroxide
- Technology for separation and isomerization of xylene
- Production process for oxalic acid
- Production process for sodium hydrosulfite
- Production process for 2,3,6-trimethylphenol
- Production process for neopentyl glycol
- Production process for polyacetal
- Production process for methyl methacrylate
- Production process for dimethylacetamide
- Production process for chemical polishing agent
- Production process for carbon monoxide (from methanol)
- Production process for plasticizers (DOP/DIDP/DINP)
- Production process for dimethyl ether
- Production process for hydrazine hydrates
- Production process for copper clad laminates
- Production process for trimethylol propane
- Production process for paraformaldehyde
- Production process for polycarbonate
- Production process for methanol
- Production process for oxygen absorbers

PRODUCTS OF MGC GROUP

Product	Applications	Contact	Telephone	
Basic chemicals (amine)				
Formamide	Pharmaceuticals, agricultural chemicals	Organic Chemicals Division	81-3-3283-4784	
Dimethylacetamide	High grade solvent, pharmaceuticals, agricultural chemicals		81-3-3283-4746	
Dimethylaminoethanol	Flocculating agent, ion-exchange resin, urethane catalyst		81-3-3283-4746	
Dimethylformamide	High grade solvent		81-3-3283-4746	
Monomethylformamide	High grade solvent		81-3-3283-4746	
Monomethylamine	Rubber vulcanization accelerator, pharmaceuticals, agricultural chemicals, photographic chemicals, dye compound		81-3-3283-4746	
Dimethylamine	Fiber treatment agent, macromolecule flocculating, surfactant		81-3-3283-4746	
Trimethylamine	Crosslinker for resin, pharmaceuticals, agricultural chemicals, ion-exchange resin, choline chloride		81-3-3283-4746	
41% monomethylamine methanol solution	Pharmaceutical intermediate		81-3-3283-4838	
Trimethylamine hydrochloride solution	Paper durability enhancement agent		81-3-3283-4838	
3-Chloro-2-hydroxyethylpropyl trimethyl ammonium chloride	Paper durability enhancement agent		81-3-3283-4838	
Hexamine (hexamethylenetetramine)	Resin hardener, foaming agent, rubber vulcanization accelerator, pharmaceuticals		81-3-3283-4731	
Basic chemicals (methacrylic acid)				
2-Hydroxyisobutyric acid methyl ester	High grade solvent, photographic chemicals, pharmaceuticals, agricultural chemicals		Organic Chemicals Division	81-3-3283-4784
Methacrylic acid	Coating compounds, adhesive agent, adhesive modifier	81-3-3283-4784		
Allyl methacrylate	Coating compounds, AS adhesive modifier, silane coupling agent	81-3-3283-4784		
2-Ethylhexyl methacrylate	Coating compounds, adhesive agent, fiber treatment agent	81-3-3283-4784		
Glycidyl methacrylate	Coating compounds, antistatic additive, ion-exchange resin	81-3-3283-4784		
Diethylaminoethyl methacrylate	Antistatic additive, dyeing assistant, coating compounds	81-3-3283-4784		
Cyclohexyl methacrylate	Optical polymers, adhesive agent, coating compounds	81-3-3283-4784		
Dimethylaminoethyl methacrylate	Antistatic additive, flocculating agent, paper durability enhancement agent	81-3-3283-4784		
Stearyl methacrylate	Fiber treatment agent, coating compounds, adhesive compound	81-3-3283-4784		
2-Hydroxyethyl methacrylate	Coating compounds, photosensitive resins, contact lens	81-3-3283-4784		
i-Butyl methacrylate	Coating compounds, printing ink, fiber treatment agent	81-3-3283-4784		
n-Butyl methacrylate	Coating compounds, lubricating oil additive, surface treatment agent	81-3-3283-4784		
Methacrylate blend	Coating resins, adhesive modifier	81-3-3283-4784		
Benzyl methacrylate	Optical polymers, adhesive agent, coating compounds	81-3-3283-4784		
Methyl methacrylate	Acrylic board, molding compound, coating compounds	81-3-3283-4784		
Lauryl methacrylate	Coating compounds, adhesive agent	81-3-3283-4784		
s-Lauryl methacrylate	Coating compounds, adhesive agent, lubricating oil additive	81-3-3283-4784		
Basic chemicals (polyol)				
Glycol esters	UV cure resin	Organic Chemicals Division	81-3-3283-4791	
Dioxane glycol	UV cure resin, polyurethan		81-3-3283-4791	
di-Trimethylol propane	UV cure resin, polyurethane, ester for lubricant		81-3-3283-4791	
Spiroglycol	Polyester, polyurethane, UV cure resin, modifying agent for synthetic resin		81-3-3283-4791	
Trimethylolethane	Resin for alkyd paint, titanium oxide surface treatment agent		81-3-3283-4791	
Trimethylolpropane	Resin for alkyd paint, polyurethane, UV cure resin, ester for lubricant		81-3-3283-4791	
Neopentylglycol	Resin for alkyd paint, resin for powdered paint, unsaturated polyester, polyurethane		81-3-3283-4791	
Basic chemicals (aromatic aldehydes)				
para-Isobutylbenzaldehyde	Synthesis fragrances, pharmaceuticals, agricultural chemicals, pigment, additives for resin, electronic materials	Aromatic Chemicals Division I	81-3-3283-4817	
para-Ethylbenzaldehyde	Synthesis fragrances, pharmaceuticals, agricultural chemicals, pigment, Additives for resin, electronic materials		81-3-3283-4817	
Cuminaldehyde	Synthesis fragrances, pharmaceuticals, agricultural chemicals, pigment, additives for resin, electronic materials		81-3-3283-4817	
2,4-Dimethylbenzaldehyde	Synthesis fragrances, pharmaceuticals, agricultural chemicals, pigment, additives for resin, electronic materials		81-3-3283-4817	
3,4-Dimethylbenzaldehyde	Synthesis fragrances, pharmaceuticals, agricultural chemicals, pigment, additives for resin, electronic materials		81-3-3283-4817	
2,4,6-Trimethylbenzaldehyde	Synthesis fragrances, pharmaceuticals, agricultural chemicals, pigment, additives for resin, electronic materials		81-3-3283-4817	
para-Tolualdehyde	Synthesis fragrances, pharmaceuticals, agricultural chemicals, pigment, additives for resin, electronic materials		81-3-3283-4817	
n-Propylbenzaldehyde (NPBAL)	Synthesis fragrances, Pharmaceuticals, agricultural chemicals, pigment, additives for resin, electronic materials		81-3-3283-4817	
para-Phenylbenzaldehyde	Synthesis fragrances, pharmaceuticals, agricultural chemicals, pigment, additives for resin, electronic materials	81-3-3283-4817		

Product	Applications	Contact	Telephone
Basic chemicals (aromatic carboxylic acid)			
Purified isophthalic acid	Modifying polyester	Aromatic Chemicals Division II	81-3-3283-4808
Cyclohexane-1,2,4-tricarboxylic acid	Resin modifier	Aromatic Chemicals Company, Planning & Development Division	81-3-3283-4815
Cyclohexane-1,2,4-tricarboxylic acid-1,2-anhydride	Epoxy resin hardener, resin modifier		81-3-3283-4815
Phthalic anhydride	Plasticizer, coating compounds, unsaturated polyester	Aromatic Chemicals Division II	81-3-3283-4917
Basic chemicals			
Isophthalonitrile	Synthetic resin	Aromatic Chemicals Division I	81-3-3283-4754
Ortho-xylene	Phthalic anhydride, synthetic resin	Aromatic Chemicals Division II	81-3-3283-4917
3,5-Xylenol	Synthetic resin, agricultural chemicals	Aromatic Chemicals Division I	81-3-3283-4817
Acetic acid	Acetate fiber, reagent, dye compound, solvent	Aromatic Chemicals Division II	81-3-3283-4917
Para-xylene	Terephthalic acid, synthetic resin		81-3-3283-4808
1,3-Bis (Aminomethyl) cyclohexane	Epoxy resin hardener, organic synthesis, intermediary substance	Aromatic Chemicals Division I	81-3-3283-4800
Meta-xylene	Agricultural chemicals-pigment	Aromatic Chemicals Division II	81-3-3283-4808
Meta-xylenediamine	Synthetic resin, epoxy resin hardener, organic synthesis intermediate	Aromatic Chemicals Division I	81-3-3283-4800
Ammonia	Fertilizer, synthetic fibers, refrigerator-freezer refrigerant, acrylonitrile	Organic Chemicals Division	81-3-3283-4838
Aqueous ammonia	Denitration, active sludge nutrient		81-3-3283-4838
Methanol	Formalin, acetic acid, methyl methacrylate, methyl chlorides, coating compounds, synthetic resin, solvent, pharmaceuticals	Methanol Division	81-3-3283-4771
Formalin	Plywood binding agent, synthetic resin, vinylon, hexamine, pentaerythritol, paraform, pharmaceuticals	Organic Chemicals Division	81-3-3283-4731
Formalol M	Coating compounds		81-3-3283-4731
Formalol IB	Coating compounds		81-3-3283-4731
Formalol NB	Coating compounds		81-3-3283-4731
Methyl formate	Casting hardener, CO source		81-3-3283-4746
Dimethyl ether (for aerosol propellant)	Aerosol propellant		81-3-3283-4838
Paraform (paraformaldehyde)	Coating compounds, adhesive agent, textile-processing resins, phenol resins		81-3-3283-4731
Hydrogen peroxide	Bleaching agent for textiles, paper and pulp, other industrial applications		Inorganic Chemicals Division, Basic Chemicals Department
Formic acid	Dyeing assistant, pharmaceuticals, tanning	Fine Chemicals Sales & Marketing Division Ryoko Chemical Co., Ltd.	81-3-6861-0054
Oxalic acid	Alumite oxidizing film-forming agent, confectionery manufacture, synthetic resin, rare earth, dyeing assistant, pharmaceutical, pharmaceuticals		81-3-6861-0054
Hydrazine hydrate	Boiler compound, foaming agent, pharmaceuticals, agricultural chemicals, inflator for SRS airbags	Otsuka-MGC Chemical Co., Inc.	81-6-4706-7562
Organic titanates			
Tetraisopropyl titanate	Catalyzer, crosslinking agent, surface reforming agent, coupling agent	Inorganic Chemicals Division, Basic Chemicals Department	81-3-3283-4759
Tetra-n-butyl titanate	Catalyzer, crosslinking agent, surface reforming agent, coupling agent		81-3-3283-4759
Triethanol aminato titanium	Catalyzer, crosslinking agent, surface reforming agent, coupling agent		81-3-3283-4759
Titanium acetylacetonate	Catalyzer, crosslinking agent, surface reforming agent, coupling agent		81-3-3283-4759
Titanium ethyl acetoacetate	Catalyzer, crosslinking agent, surface reforming agent, coupling agent		81-3-3283-4759
Octylene glycol titanate	Catalyzer, crosslinking agent, surface reforming agent, coupling agent		81-3-3283-4759
Tetraoctyl titanate	Catalyzer, crosslinking agent, surface reforming agent, coupling agent		81-3-3283-4759
Inorganic salts			
Ammonium persulfate	Synthetic resin polymerization catalyst, etching agent, adhesive removal agent	Inorganic Chemicals Division, Basic Chemicals Department	81-3-3283-4759
Potassium persulfate	Synthetic resin polymerization catalyst, etching agent, adhesive removal agent		81-3-3283-4759
Sodium persulfate	Synthetic resin polymerization catalyst, etching agent, adhesive removal agent		81-3-3283-4759
Sodium formate	Mordant, tanning		81-3-3283-4759
Sodium hydrosulfite	Dyeing assistant, reduction cleaner for synthetic fibers, pulp/textile bleaching agent, reducing agent		81-3-3283-4759
Perbon (sodium perborate monohydrate)	Bleaching, oxidant, detergent, oxygen generator	Ryoko Chemical Co., Ltd.	81-3-6861-0050
Ammonium sulfate	Fertilizer	Organic Chemicals Division	81-3-3283-4838

PRODUCTS OF MGC GROUP





Product	Applications	Contact	Telephone
Plastics/monomers/resin hardener			
ALTESTER (heat-resistant PET resin)	Industrial and food packaging materials, optical sheets and films	Organic Chemicals Division	81-3-3283-4902
Optimas (high-performance acrylic polymer)	Light guide plate, protective cover for liquid crystal, lenses, automotive components, optical sheets and films		81-3-3283-4906
Cytester (thermosetting monomer)	Adhesive agents, insulating materials, various binder plastics, coating compounds		81-3-3283-4777
Nylon-MXD6 (N-MXD6)	Molding compound, packaging materials (gas barrier film, sheet and PET bottle)	Aromatic Chemicals Division I	81-3-3283-4799
Gaskamine 240	Epoxy resin hardener		81-3-3283-4754
Gaskamine 328	Epoxy resin hardener		81-3-3283-4754
TETRAD-C	Coating compound, adhesive agent, cast molding, cross-linker		81-3-3283-4754
TETRAD-X	Coating compound, adhesive agent, cast molding, cross-linker		81-3-3283-4754
MAXIVE (gas barrier epoxy-based resin)	Laminate adhesive, coating, anti-corrosive paint	Aromatic Chemicals Division	81-3-3283-4815
LEXTER	Films, sheets, fiber, molding material	Aromatic Chemicals Division I, Planning & Development Division	81-3-3283-4799 /4804
OPE (oligo-phenylene ether)	Resin for electrical and electronic parts	Engineering Plastics Division Performance products Department	81-3-3283-4853
Lumiplus	Optical material	Specialty Chemicals Company, Planning & Development Division	81-3-3283-4869
DIAPURESTE (adamantane derivatives)	Photoresist monomer	Inorganic Chemicals Division, Basic Chemicals Department	81-3-3283-4759
Lens monomer	Monomer for ultra-high refractive plastic glasses lenses		81-3-3283-4759
BT Resin	Insulating materials, printed circuit board materials, insulating varnish, coating compounds, adhesive agent	Electronics Materials Division	81-3-3283-4740
Nikanol (xylene resin)	Acrylic Adhesive, epoxy resin modifier	Fudow Co., Ltd.	81-45-548-4210
Special polycarbonates			
Iupizeta EP series (special polycarbonates)	Optical lens, optical films and sheets	Engineering Plastics Division Performance products Department	81-3-3283-4798
Iupizeta FPC series (special polycarbonates)	Electrophotography photoreceptor, various binder, film, sheet, optical use, various electronic device part		81-3-3283-4798
Iupizeta PCZ series (special polycarbonates)	Electrophotography photoreceptor, various binder, film, sheet, optical use, various electronic device part		81-3-3283-4798
Engineering plastic			
Iupilon (polycarbonate)	Electrical and electronic components, OA equipment, camera, automotive, optical disk, dialysis treatment equipment, building materials, miscellaneous goods	Mitsubishi Engineering-Plastics Corporation	81-3-6274-9000
Iupiace (modified-polyphenylene ether)	OA equipment, electronic parts, automotive parts		81-3-6274-9000
Iupital (polyacetal)	Functional parts (OA components, automotive, machine)		81-3-6274-9000
Reny (high-performance polyamide)	Automotive components, machinery parts, electronic parts, fishing reel, nail, screw, bolt		81-3-6274-9000
Sheets/films			
Neopulim (transparent polyimide film)	Printed circuit board material for various electronic devices	Aromatic Chemicals Company, Planning & Development Division	81-3-3283-4816
Polycarbonate sheet	Face plates, automotive components, machine parts, electronic parts, LCD front plates	Engineering Plastics Division Performance products Department	81-3-3283-4798
Polycarbonate film	Face plates, optical film for LCDs		81-3-3283-4798
Plasticizers			
Diocetyl Isophthalate (DOIP)	Polyvinyl chloride plasticizer	CG Ester Corporation	81-3-5203-2860
Diisononyl Phthalate (DINP)	Polyvinyl chloride plasticizer		81-3-5203-2860
n-Dioctyl phthalate (DOP)	Polyvinyl chloride plasticizer		81-3-5203-2860
Dibutyl phthalate (DBP)	Polyvinyl chloride plasticizer		81-3-5203-2860
Linevol phthalate (PL200)	Polyvinyl chloride plasticizer		81-3-5203-2860
Triocetyl trimellitate	Polyvinyl chloride plasticizer	Aromatic Chemicals Division II	81-3-3283-4917
Health food ingredients			
Pyrrroquinoline quinone (PQQ)	Food	Life Science Division	81-3-3283-4776
S-adenosylmethionine (SAmE)	Food		81-3-3283-4776
Environmental agents, water treatment agents and disinfectants			
CONTLIME	Inhibitor of slime, scale, legionella and corrosion	Dia Aqua Solutions Co. Inc.	81-3-5224-4871
DESLIME	Desliming agent, pipe cleaning agent		81-3-5224-4871
Deo-Power	Deodorization of drainage and wastewater		81-3-5224-4871
Peracetic acid	Oxidizing agent, bleaching agent, antibacterial agent	Inorganic Chemicals Division, Basic Chemicals Department	81-3-3283-4759

Product	Applications	Contact	Telephone
Electronic chemicals			
Super-pure hydrogen peroxide	Cleaner for electronics industry use, etching agent, resist stripping agent	Inorganic Chemicals Division, Basic Chemicals Department	81-3-3283-4755
Super-pure ammonium hydroxide	Cleaner for electronics industry use, etching agent		81-3-3283-4755
ELM clean	Cleaner for semiconductor and flat-panel display, etching agent, resist stripping agent	Inorganic Chemicals Division, Performance Chemicals Department	81-3-3283-4766
Chemical polishing agent (clean etch series)	Abrasive compound for printed wiring board, etching agent, resist development and stripping agent, Metal-surface treatment agent		81-3-3283-4766
Materials for printed wiring board			
High-performance epoxy material for multi-layered PWB	Printed wiring board	Electronics Materials Division	81-3-3283-4740
BT materials for Chip-LED	Printed wiring board		81-3-3283-4740
BT materials for IC Plastic Package	Printed wiring board		81-3-3283-4740
BT materials for High Speed IC Plastic Package	Printed wiring board		81-3-3283-4740
LE (lubricated entry) SHEET	Entry sheet for mechanical drilling of printed circuit boards		81-3-3283-4740
Oxygen absorbers			
AGELESS (oxygen absorber)	Keep freshness, aroma, flavor and taste, prevention of mold, vermination, oxidation and discoloration	Oxygen Absorbers Division	81-3-3283-4842
AGELESS-OMAC (oxygen absorber film)	Liquid food, pharmaceuticals		81-3-3283-4842
AGELESS EYE (oxygen indicator)	Packaging control, seal and airtight check of packaging container		81-3-3283-4842
AGELESS DRY (calcium oxide desiccant)	Desiccant		81-3-3283-4842
AGELESS EVA (alcohol generating agent)	Food quality control		81-3-3283-4842
Anaero Pack (anaerobic cultivation system)	Anaerobic cultivation system		81-3-3283-4842
RP System (RP agent-gas-barrier bags)	Metals/electronic components, deterioration prevention/insecticide for cultural assets		81-3-3283-4842
PharmaKeep (for pharmaceuticals/medical equipment)	Preservation of pharmaceuticals and medical equipment		81-3-3283-4842
Gas, gas generator			
MH-MD process (H ₂ gas and CO gas manufacturing device for methanol use)	High-purity hydrogen gas and CO gas production equipment	Methanol Division	81-3-3283-4831
Catalyzer			
Catalyzer (methanol synthesis)	Methanol synthesis	Methanol Division	81-3-3283-4831
Catalyzer (H ₂ -CO generation)	H ₂ -CO generation		81-3-3283-4831
Others			
Diaprone (reducing agent for high fluidity concrete)	Reducing agent for high fluidity concrete	Natural Gas Chemicals Company, Planning&Development Division	81-3-3283-4776

MAJOR GROUP COMPANIES

In Japan

 manufacturing/processing
  trading
  information/service
  distribution
  others

Classification	Company name	Business description	Company	Address	Zip Code	Telephone
	APPI GEOTHERMAL ENERGY CORPORATION	Development and provision of geothermal energy resources	 Natural Gas Chemicals Company	[Head office] 80-1, 39-chiwari, Dendo, Hachimantai-shi, Iwate	028-7112	81-195-68-7332
E	CG ESTER CORP.	Manufacturing and sales of plasticizers	 Aromatic Chemicals Company	[Head office] Landic Nihonbashi Building, 2-16-13 Nihonbashi, Chuo-ku, Tokyo	103-0027	81-3-5203-2860
	CULTIVECS INC.	Partnering and contract manufacturing of monoclonal antibody pharmaceuticals	 Natural Gas Chemicals Company	[Head office] Mitsubishi Building, 2-5-2 Marunouchi, Chiyoda-ku, Tokyo	100-8324	81-3-3283-4901
	DIA AQUA SOLUTIONS CO., INC.	Sales and technical service of water treatment agent	 Specialty Chemicals Company	[Head office] 5th Floor, Yurakucho Denki Building South-wing, 1-7-1 Yurakucho, Chiyoda-ku, Tokyo	100-0006	81-3-5224-4871
C	EIWA CHEMICAL INDUSTRY CO., LTD.	Manufacturing and sales of blowing agents	 Specialty Chemicals Company	[Head office] Daido Seimei Kyoto Building, 595-3 Sanjo-sagaru karasuma-dori, Nakagyo-ku, Kyoto-shi, Kyoto	604-8161	81-75-256-5131
C	FUDOW CO., LTD.	Manufacturing and sale of molding resins	 Aromatic Chemicals Company	[Head office] NMF Shin-yokohama Building, 2-15-16 Shin-yokohama, Kohoku-ku, Yokohama-shi, Kanagawa	222-0033	81-45-548-4210
E	GRANOPT CO., LTD.	Manufacturing and Sales of Magneto-optic Crystals	 Information & Advanced Materials Company	[Head office/plant] 4-4 Ougibuchi, Ougida, Noshiro-shi, Akita	016-0122	81-185-70-1800
	HACHIMANTAI GEOTHERMAL CORP.	Maintenance of steam facilities, environmental monitoring	 others	[Head office] 140 Kami-nakajima, Hanawa, Kazuno-shi, Akita	018-5201	81-186-23-3861
C	JAPAN FINECHEM CO., INC.	Manufacturing and sales of fine chemicals and electronic products	 Natural Gas Chemicals Company	[Head office] Uchisaiwaicho Tokyu Building, 1-3-2 Uchisaiwai-cho, Chiyoda-ku, Tokyo	100-0011	81-3-5511-4600
	JAPAN FORMALIN CO., INC.	Manufacturing and sale of formalin	 Natural Gas Chemicals Company	[Head office] 3-7-20 Nihonbashi, Chuo-ku, Tokyo	103-0027	81-3-5203-7751
C	JAPAN PIONICS CO., LTD.	Manufacturing and sales of gas purifier	 Natural Gas Chemicals Company	[Head office] 3-3-32 Tamura, Hiratsuka-shi, Kanagawa	254-0013	81-463-53-8300
E	JAPAN SAUDI ARABIA METHANOL CO., INC.	Business administration for AR-RAZI	 others	[Head office] Hibiya Kokusai Building, 2-2-3 Uchisaiwai-cho, Chiyoda-ku, Tokyo	100-0011	81-3-3593-3541
E	JAPAN U-PICA CO., LTD.	Manufacturing and sales of unsaturated polyester resins	 Corporate	[Head office] Madre Matsuda Building, 4-13 Kioi-cho, Chiyoda-ku, Tokyo	102-0094	81-3-6850-0251
C	JSP CORP.	Manufacturing and sales of foamed plastic	 Aromatic Chemicals Company	[Head office] Shin Nisseki Building, 3-4-2 Marunouchi, Chiyoda-ku, Tokyo	100-0005	81-3-6212-6300
	KAGAKU UNYU CO., LTD.	Transportation/storage	 Aromatic Chemicals Company	[Head office] 3-1-11 Mizushima-naka-dori Kurashiki-shi, Okayama	712-8072	81-86-448-3655
C	KINOE TERMINAL CO., LTD.	Storage terminal for methanol	 Natural Gas Chemicals Company	[Head office] Hibiya Kokusai Building, 2-2-3 Uchisaiwai-cho, Chiyoda-ku, Tokyo	100-0011	81-3-3593-3035
E	KOKUKA SANGYO CO., LTD.	Shipping	 Natural Gas Chemicals Company	[Head office] NBF Hibiya Building, 1-1-7 Uchisaiwai-cho, Chiyoda-ku, Tokyo	100-0011	81-3-3596-3663
C	KYODOU KASANKASUISO CORP.	Manufacturing of hydrogen peroxide	 Specialty Chemicals Company	[Head office/plant] 35 Higashi-wada, Kamisu-shi, Ibaraki	314-0102	81-299-97-0785
C	MARINE TRANSPORT AND TERMINAL CO., LTD.	Storage terminal for chemicals	 Natural Gas Chemicals Company	[Head office] 2881-30 Hamabe, Taroudai, Kita-ku, Niigata-shi, Niigata	950-3101	81-25-255-2041
	Meihan Shinku Kogyo Co., Ltd.	Surface Processing of Plastic Sheets & Films	 Specialty Chemicals Company	[Head office/plant] 106-1 Koyama, Kanan-cho, Minamikawachi-gun, Osaka	585-0034	81-721-90-3223
C	MGC ADVANCED CHEMICAL INC.	Manufacturing of life science-related materials	 Natural Gas Chemicals Company	[Head office] 4061-2 Tayuhama, Kita-ku, Niigata-shi, Niigata	950-3112	81-25-259-7187











C=Consolidated subsidiary E=Equity method affiliate

Classification	Company name	Business description	Company	Address	Zip Code	Telephone
	MGC AGELESS CO., LTD.	Manufacturing and technical support of oxygen absorbers	 Information & Advanced Materials Company	[Head office] Ryowa Building, 3-6-1 Kanda-surugadai, Chiyoda-ku, Tokyo	101-0062	81-3-3251-0761
	MGC COMPUTER SERVICE CO., LTD.	Computer system service	 Corporate	[Head office] Mitsubishi Building, 2-5-2 Marunouchi, Chiyoda-ku, Tokyo	100-8324	81-3-3283-4845
C	MGC ELECTROTECHNO CO., LTD.	Manufacturing of copper-clad laminates	 Information & Advanced Materials Company	[Plant] 9-41 Yone-sugiyama, Nishigo-mura, Nishishirakawa-gun, Fukushima	961-8031	81-248-25-5000
	MGC ENGINEERING CO., LTD.	Engineering/maintenance	 others	[Head office/plant] 1318 Tayuhama, Kita-ku, Niigata-shi, Niigata	950-3112	81-25-259-2711
C	MGC FILSHEET CO., LTD.	Manufacturing of polycarbonate sheets and films	 Specialty Chemicals Company	[Head office/plant] 4-2242 Mikajima, Tokorozawa-shi, Saitama	359-1164	81-42-948-2151
	MGC LOGISTICS YAMAKITA CO., LTD.	Operation duties	 Specialty Chemicals Company	[Head office] 950 Kishi, Yamakita-machi, Ashigarakami-gun, Kanagawa	258-0112	81-465-75-2635
	MGC PHARMA CO.,LTD.	Contract research and sample production for antibody drugs	 Natural Gas Chemicals Company	[Head office] Mitsubishi Building, 2-5-2 Marunouchi, Chiyoda-ku, Tokyo	100-8324	81-3-3283-4821
E	MITSUBISHI ENGINEERING-PLASTICS CORP.	Manufacturing and sales of engineering plastics	 Specialty Chemicals Company	[Head office] Shiodome Sumitomo Building, 1-9-2 Higashi-shinbashi, Minato-ku, Tokyo	105-0021	81-3-6274-9000
	MIZUSHIMA KASOZAI CO., LTD.	Manufacturing and sales of special plasticizer	 Aromatic Chemicals Company	[Head office] Mitsubishi Building, 2-5-2 Marunouchi, Chiyoda-ku, Tokyo	100-8324	81-3-3283-4733
	MIZUSHIMA PARAXYLENE CO., LTD.	Manufacturing and sales of petrochemistry product	 Aromatic Chemicals Company	[Head office] 2-6-3 Ote-machi, Chiyoda-ku, Tokyo	100-8161	81-3-6275-5109
	NISSHIN COLORING CO., LTD.	Coloration processing of plastic	 Specialty Chemicals Company	[Head office] 2500-6 Ogohara, Komono-cho, Mie-gun, Mie	510-1222	81-593-94-3100
	NISSHIN UNYU CO., LTD.	Transportation/storage	 Natural Gas Chemicals	[Head office] 1383 Tayuhama, Kita-ku, Niigata-shi, Niigata	950-3112	81-25-259-3255
	OSHIKA FORMALIN CO., LTD.	Sales of formalin	 Natural Gas Chemicals Company	[Head office] Mitsubishi Building, 2-5-2 Marunouchi, Chiyoda-ku, Tokyo	100-8324	81-3-3283-4775
E	OTSUKA-MGC CHEMICAL CO., INC.	Manufacturing and sales of hydrazine hydrate	 Specialty Chemicals Company	[Head office] Nihon-seimei Yodoyabashi Building, 3-5-29 Kitahama, Chuo-ku, Osaka-shi, Osaka	541-0041	81-6-4706-7562
C	POLYOLS ASIA CO., INC.	Manufacturing and sales of polyhydric alcohols	 Natural Gas Chemicals Company	[Head office] Mitsubishi Building, 2-5-2 Marunouchi, Chiyoda-ku, Tokyo	100-8324	81-3-3283-4825
C	QOL Business Facility Inc.	Administration of QOL Innovation Center Shirakawa	 Information & Advanced Materials Company	[Head office] 1-8 Toyochianaigoya, Shirakawa-shi, Fukushima	961-0005	81-248-24-9001
E	RYODEN KASEI CO., LTD.	Manufacturing and sales of insulating materials	 Specialty Chemicals Company	[Head office/plant] 2-6-1 Miwa, Sanda-shi, Hyogo	669-1513	81-79-562-6801
C	RYOKO CHEMICAL CO., LTD.	Sale of chemicals for general industry use and packing materials	 Corporate	[Head office] PMO Nihonbashi-honcho Building, 4-12-20 Nihonbashi-honcho, Chuo-ku, Tokyo	103-0023	81-3-6861-0050
	RYOKO LOGISTICS CO., LTD.	Transportation/storage	 Specialty Chemicals Company	[Head office] 2-81 kamisu-cho, Toyonaka-shi, Osaka	561-0823	81-6-6331-2453
	RYOUTOU UNYU SOUKO CO., LTD.	Transportation/storage	 Information & Advanced Materials Company	[Head office] 5-13-3 Nijjuku, Katushika-ku, Tokyo	125-0051	81-3-3607-1205
C	RYOWA ENTERPRISE CO., LTD.	Property management, travel agency, business support	 Corporate	[Head office] Mitsubishi Building, 2-5-2 Marunouchi, Chiyoda-ku, Tokyo	100-8324	81-3-3283-4945

C=Consolidated subsidiary E=Equity method affiliate

MAJOR GROUP COMPANIES








 manufacturing/processing
  trading
  information/service
  distribution
  others

Classification	Company name	Business description	Company	Address	Zip Code	Telephone
C	RYOYO TRADING CO., LTD.	Sales of chemical products/insurance agent	 Corporate	[Head office] 7F, Hibiya Building, 1-1, Shimbashi 1-chome Minato-ku, Tokyo	105-0004	81-3-3506-3750
	RYOYU INDUSTRIAL CORP.	Manufacture of flat heaters	 Natural Gas Chemicals Company	[Head office] 192-5 Inamasu, Itakura-ku, Joetsu-shi, Niigata	944-0101	81-255-78-2945
	SHINSANSO KAGAKU CO.	Manufacturing of hydrogen peroxide	 Specialty Chemicals Company	[Head office/plant] 148-58 Yufutsu, Tomakomai-shi, Hokkaido	059-1372	81-144-55-7337
E	TOHO EARTHTECH, INC.	Manufacturing and sales of natural gas and iodine, Seismic reinforcement work	 Natural Gas Chemicals Company	[Head office] 1450 Kurotori, Nishi-ku, Niigata-shi, Niigata	950-1123	81-25-377-7131
C	TOKYO SHOKAI, LTD.	Sales of synthetic resins and electronic materials	 Corporate	[Head office] Ryowa Building, 3-6-1 Kanda-surugadai, Chiyoda-ku, Tokyo	101-0062	81-3-3251-0171
C	TOYO KAGAKU CO., LTD.	Manufacturing and sales of plastic injection molding	 Specialty Chemicals Company	[Head office/plant] 51-497 Morowa-doudou, Togo-cho, Aichi-gun, Aichi	470-0151	81-561-39-0531
	YAMADA KASEI CO., LTD.	Manufacturing and sales of chemical products and synthetic resins	 Corporate	[Head office] Yamada Building, 2-8-4 Uchikanda, Chiyoda-ku, Tokyo	101-0047	81-3-3256-7861
C	YONEZAWA DIA ELECTRONICS CO., INC.	Manufacturing and sales of printed circuit boards	 Information & Advanced Materials Company	[Head office] 3-446-3 Hachimanbara, Yonezawa-shi, Yamagata	992-1128	81-238-28-1345
	YUTAKA CHEMICAL CORP.	Manufacturing and sales of formaline	 Natural Gas Chemicals Company	[Head office] St. Luke Tower, 8-1 Akashi-cho, Chuo-ku, Tokyo	104-0044	81-3-5148-7134
	YUZAWA GEOTHERMAL POWER CORP. K.K.	Development and provision of geothermal energy resources	 Natural Gas Chemicals Company	[Head office] 99-7, Yamagishi, Akinomiya Yuzawa-shi, Akita	019-0321	81-183-55-2555

C=Consolidated subsidiary E=Equity method affiliate

Overseas

 manufacturing/processing
  trading
  information/service
  distribution
  others

Classification	Company name	Business description	Company	Address	Zip Code	Country	Telephone
	AGELESS (THAILAND) CO., LTD.	Manufacturing and sales of oxygen absorbers	 Information & Advanced Materials Company	[Head office/plant] 700/323 Moo6, Amatanakorn Industrial Estate, Tumbol, Don Hua Lor Muang Chonburi District, Chonburi		Thailand	66-38-458-351
E	BRUNEI METHANOL COMPANY SDN. BHD.	Manufacturing and sales of methanol	 Natural Gas Chemicals Company	[Head office] Sungai Liang Industrial Park (SPARK) Kg. Sungai Liang Daerah Belait	KC1135	Negara Brunei Darussalam	673-322-9300
	CARIBBEAN GAS CHEMICAL LTD.	Manufacturing and sales of methanol	 Natural Gas Chemicals Company	[Head office] 63 Park Street, Port of Spain in the Island of Trinidad, Trinidad and Tobago		Trinidad and Tobago	1-868-665-5337
E	KOREA ENGINEERING PLASTICS CO., LTD.	Manufacturing and sales of polyacetal resins	 Specialty Chemicals Company	[Head office] 119 Mapo-daero, Mapo-gu, Seoul	4144	Korea	82-2-707-6840
C	JSP INTERNATIONAL GROUP LTD.	Manufacturing and sales of foam polypropylene beads, foam polyethylene beads and molding	 Aromatic Chemicals Company	[Head office] 1285 Drummers Lane, Suite 301, Wayne, PA	19087	U.S.A.	1-610-651-8600
E	METANOL DE ORIENTE, METOR, S.A.	Manufacturing and sales of methanol	 Natural Gas Chemicals Company	[Head office] Jose Petrochemical Complex, Jose-Estado, Anzoategui-Venezuela-Apdo, Postal 5077 P.L.C.-C.P.6023		Venezuela	58-281-420-8851
C	MGC ADVANCED POLYMERS, INC.	Manufacturing and sales of nylons	 Aromatic Chemicals Company	[Head office/plant] 1100 Port Walthall Drive, Colonial Heights, VA	VA 23834	U.S.A.	1-804-520-7800

C=Consolidated subsidiary E=Equity method affiliate

Classification	Company name	Business description	Company	Address	Zip Code	Country	Telephone
C	MGC ELECTROTECHNO (THAILAND) CO.,LTD.	Manufacturing of copper clad laminates	 Information & Advanced Materials Company	[Head office/plant] 500/128 Moo3, Tambol Tasit, Amphur Plaak Daeng, Rayong Province 21140		Thailand	66-38-950-470
C	MGC MONTNEY HOLDINGS LTD.	Investment on shale gas-LNG project	 others Corporate	[Head office] PO Box 49314, Suite 2600, Three Bentall Centre, 595 Burrard Street, Vancouver	BC V7X 1L3	Canada	—
C	MGC PURE CHEMICALS AMERICA, INC.	Manufacturing and sales of ultra-pure hydrogen peroxide	 Specialty Chemicals Company	[Head office] 6560 South Mountain Road, Mesa, AZ	AZ 85212-9716	U.S.A.	1-480-987-9100
C	MGC PURE CHEMICALS SINGAPORE PTE. LTD.	Manufacturing and sales of ultra-pure hydrogen peroxide/Super-pure ammonium hydroxide/ Chemical polishing agent	 Specialty Chemicals Company	[Head office/plant] 29 Tuas West Road	638428	Singapore	65-6897-8971
C	MGC PURE CHEMICALS TAIWAN, INC.	Manufacturing and sales of ultra-pure Hydrogen peroxide	 Specialty Chemicals Company	[Head office/plant] Chung Kang Economic Processing Zone, 12 Jing 1st Road, Wuchi District, Taichung 435		Taiwan	886-4-2658-4466
	MGC TRADING (THAILAND) LTD.	Sales of chemical products in Asia	 Corporate	[Head office] 18th Floor, Unit 1810, Empire Tower, No. 1 South Sathorn Rd, Yannawa, Sathorn, Bangkok 10120, Thailand	10120	Thailand	66-2-670-3417
C	MITSUBISHI GAS CHEMICAL AMERICA, INC.	Sales of chemical products/functional products in USA	 Corporate	[Head office] 24th Floor, 655 Third Avenue, New York, NY	NY10017	U.S.A.	1-212-687-9030
C	MITSUBISHI GAS CHEMICAL ENGINEERING-PLASTICS (SHANGHAI) CO., LTD.	Manufacturing and sales of polycarbonate resin	 Specialty Chemicals Company	[Head office] Shanghai Chemical industry Park , 55 Mu Hua Road, Shanghai	201507	China	86-21-3127-3366
	MITSUBISHI GAS CHEMICAL EUROPE GMBH	Sales of aromatic chemicals/ functional products in Europe	 Corporate	[Head office] 13 Immermannstr. Dusseldorf	40210	Germany	49-211-363080
	MITSUBISHI GAS CHEMICAL SHANGHAI COMMERCE LTD.	Sales of chemical products/functional products in China	 Corporate	[Head office] 2110A, Westgate Mall, 1038 Nanjing Road (W), Shanghai	200041	China	86-21-62184081
C	MITSUBISHI GAS CHEMICAL SINGAPORE PTE. LTD.	Sale of methanol and other chemicals in the Southeast Asia	 Corporate	[Head office] #16-01 Clifford Centre, 24 Raffles Place	048621	Singapore	65-6224-0059
C	PT PEROKSIDA INDONESIA PRATAMA	Manufacturing and sales of hydrogen peroxide	 Specialty Chemicals Company	[Head office] PO Box 53, Jl. Jend. A. Yani, Cikampek, Jawa Barat 41373		Indonesia	62-264-31-3383
	POLYXYLENOL SINGAPORE PTE LTD.	Manufacturing of polyphenylene ether resin	 Specialty Chemicals Company	[Head office] 20 Sakra Road, Jurong Island	627889	Singapore	65-6316-1777
	PTM ENGINEERING PLASTICS (NANTONG) CO., LTD.	Manufacturing and sales of polyacetal resin	 Specialty Chemicals Company	[Head office] NETDA, 171 Minxing Road, Jiangsu Province		China	86-513-8592-2000
C	SAMYOUNG PURE CHEMICALS CO., LTD.	Manufacturing and sales of ultra-pure hydrogen peroxide	 Specialty Chemicals Company	[Head office] 22, 1-ro, 5-sandan, Seongnam-myeon, Dongnam-gu, Cheonan-si, Chungcheongnam-do	32145	Korea	82-41-520-8000
	SAUDI METHANOL CO. (AR-RAZI)	Manufacturing and sales of methanol	 Natural Gas Chemicals Company	[Head office] PO Box 10065, Madinat Al-Jubail Al-Sinayah 31961		Kingdom of Saudi Arabia	966-3-357-7810
C	SUZHOU MGC SUHUA PEROXIDE CO., LTD.	Manufacturing and sales of hydrogen peroxide/ chemical polishing agent	 Specialty Chemicals Company	[Head office] Dongsha Chemical Area, Nanfeng Town, Zhangjiagang	215619	China	86-512-58635600-8882
E	TAI HONG CIRCUIT INDUSTRIAL CO., LTD.	Manufacturing and sales of printed circuit boards	 Information & Advanced Materials Company	[Head office/plant] 81 Guangfu Road, Fengshan Village, Hukou Township, Hsinchu County	303	Taiwan	886-3-5985-111
C	THAI POLYACETAL CO., LTD.	Manufacturing and sales of polyacetal resin	 Specialty Chemicals Company	[Head office] Floor 24/4-8, Emporium Tower, 622 Sukhumvit Road, Klongton Klongtoey, Bangkok	10110	Thailand	66-2-261-9260
E	THAI POLYCARBONATE CO., LTD.	Manufacturing and sales of polycarbonate resin	 Specialty Chemicals Company	[Head office] Emporium Tower, Floor 24/4-8, 622 Sukhumvit Road, Klongton Klongtoey, Bangkok	10110	Thailand	66-2-261-9260

C=Consolidated subsidiary E=Equity method affiliate

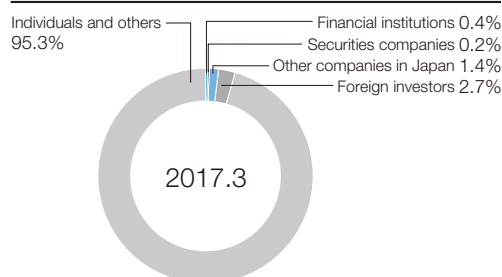
BUSINESS LOCATIONS

	Address	Telephone	Fax
Head Office			
Head Office	Mitsubishi Building, 5-2, Marunouchi 2-chome Chiyoda-ku, Tokyo 100-8324	81-3-3283-5000	81-3-3287-0833
Branch Offices			
Osaka Branch	23rd floor, Applause Tower, 19-19 Chaya-machi, Kita-ku, Osaka-shi, Osaka 530-0013	81-6-6372-1300	81-6-6376-1220
Shanghai Office	2110A, Westgate Mall, 1038 Nanjing Road (W), Shanghai 200041, China	86-21-62184081	86-21-62184092
Taiwan Office	14th Floor-13, No. 211, Sec. 1, Civic Building, Taipei 10351, Taiwan	886-2-2552-5335	886-2-2552-5367
Research Institutes			
Tokyo Techno Park (TTP)	6-1-1 Nijuku, Katsushika-ku, Tokyo 125-8601	81-3-3627-9411	81-3-3627-9711
Tokyo Research Laboratory	6-1-1 Nijuku, Katsushika-ku, Tokyo 125-8601	81-3-3627-9411	81-3-3627-9711
MGC Chemical Analysis Center	6-1-1 Nijuku, Katsushika-ku, Tokyo 125-8601	81-3-3627-9586	81-3-3627-9560
Information & Advanced Materials Company Planning & Development Division R&D Center	6-1-1 Nijuku, Katsushika-ku, Tokyo 125-8601	81-3-3627-9561	81-3-3608-7211
Niigata Research Laboratory	182 Tayuhama-shinwari, Kita-ku, Niigata-shi, Niigata 950-3112	81-25-259-8211	81-25-259-8218
Hiratsuka Research Laboratory	5-6-2 Higashiyawata, Hiratsuka-shi, Kanagawa 254-0016	81-463-21-8600	81-463-21-8630
Plants			
Niigata Plant	3500 Matsuhama-cho, Kita-ku, Niigata-shi, Niigata 950-3121	81-25-258-3474	81-25-259-6931
Mizushima Plant	3-10 Mizushima-kaigan-dori, Kurashiki-shi, Okayama 712-8525	81-86-446-3822	81-86-448-4723
Yokkaichi Plant	2-4-16 Hinagahigashi, Yokkaichi-shi, Mie 510-0886	81-59-345-8800	81-59-347-0799
Naniwa Plant	1-3-27 Funa-machi, Taisho-ku, Osaka-shi, Osaka 551-0022	81-6-6551-3371	81-6-6551-6165
Saga Plant	681-45 Kamikumakawa, Fuji-cho, Saga-shi, Saga 840-0512	81-952-64-2400	81-952-64-2402
Yamakita Plant	950 Kishi, Yamakita-machi, Ashigarakami-gun, Kanagawa 258-0112	81-465-75-1111	81-465-76-3424
Kashima Plant	35 Towada, Kamisu-shi, Ibaraki 314-0102	81-299-96-3121	81-299-96-5686
Other			
QOL Innovation Center Shirakawa	1-8 Toyochiyanaigoya, Shirakawa-shi, Fukushima 961-0005	81-248-24-9001	81-248-24-9051
Overseas Branch Offices			
Mitsubishi Gas Chemical America, Inc.	24th Floor, 655 Third Avenue, New York, NY 10017, U.S.A.	1-212-687-9030	1-212-687-2810
Mitsubishi Gas Chemical Singapore Pte. Ltd.	#16-01, Clifford Centre, 24 Raffles Place 048621, Singapore	65-6224-0059	65-6224-6079
MGC Trading (Thailand) Ltd.	18th Floor, Unit 1810, Empire Tower, 195 South Sathorn Road, Yannawa, Sathorn, Bangkok 10120, Thailand	66-2-670-3417	66-2-670-3419
Mitsubishi Gas Chemical Europe GmbH	13 Immermannstr., Dusseldorf D-40210, Germany	49-211-363080	49-211-354457
Mitsubishi Gas Chemical Shanghai Commerce Ltd.	2110A, Westgate Mall, 1038 Nanjing Road(W), Shanghai 200041, China	86-21-62184081	86-21-62184092

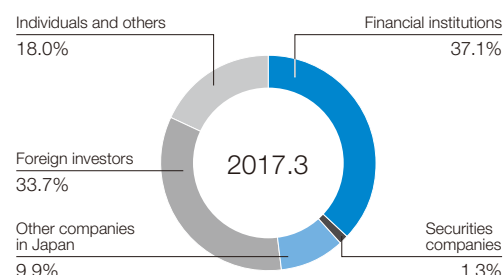
INVESTOR INFORMATION (as of March 31, 2017)

Listing	The first section of the Tokyo Stock Exchange
Ticker code	4182
Authorized shares	492,428,000
Outstanding shares	241,739,199
Stock transaction unit	100 - shares
Number of stockholders	19,843
Composition of stockholders	

Composition by holders



Composition by holdings



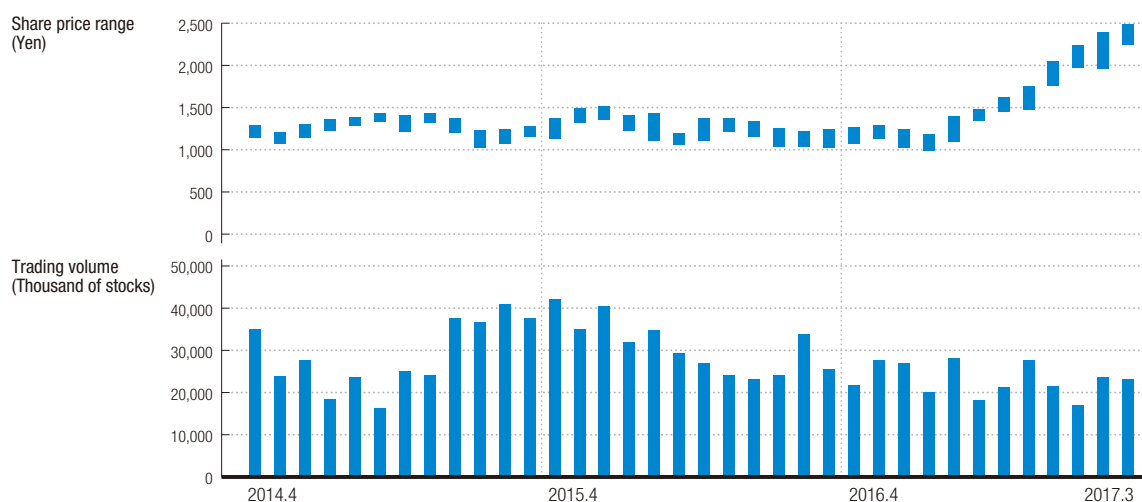
Principal stockholders (Top 10)

	Name	Number of shares held (Thousands)	Shareholding ratio (%)
1	Japan Trustee Services Bank, Ltd. (Trust Account)	9,242	4.3
2	Nippon Life Insurance Company	8,795	4.1
3	The Master Trust Bank of Japan, Ltd. (Trust Account)	8,646	4.0
4	Meiji Yasuda Life Insurance Company	8,397	3.9
5	The Bank of Tokyo-Mitsubishi UFJ, Ltd.	5,401	2.5
6	The Norinchukin Bank	5,026	2.3
7	Asahi Glass Co., Ltd.	4,835	2.2
8	THE BANK OF NEW YORK MELLON 140044	3,811	1.8
9	Japan Trustee Services Bank, Ltd. (Trust Account 5)	3,584	1.7
10	Mitsubishi UFJ Trust and Banking Corporation	3,506	1.6

Note: MGC holds 25,923 thousand shares of treasury stock, which is not included in the above list of principal stockholders or percentage calculations.

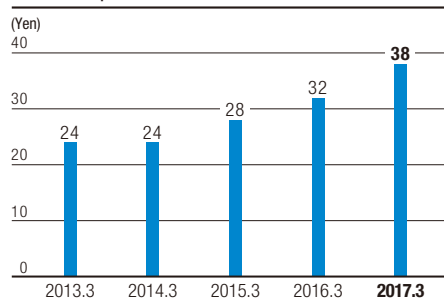
*With an effective date of October 1, 2016, MGC conducted a reverse stock split for MGC's ordinary shares on a 2:1 basis, while also changing the number of authorized shares from 984,856 thousand shares to 492,428 thousand shares. Additionally, on the same date, the trading unit was changed from 1,000 shares to 100 shares.

Monthly stock price range and trading volume



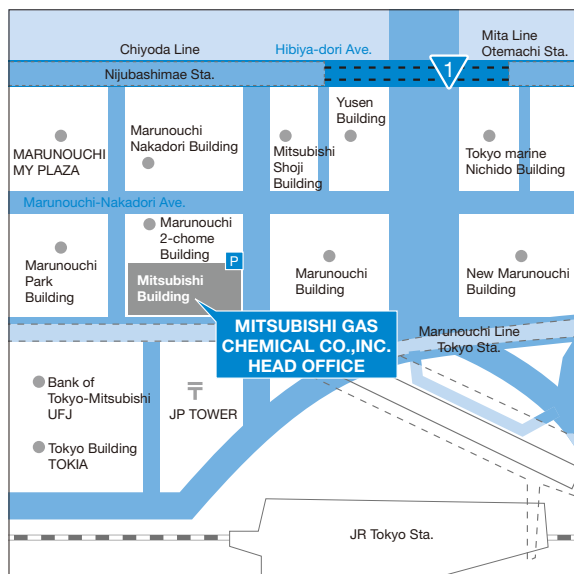
*With and effective date of October 1, 2016, MGC conducted a reverse stock split for MGC's ordinary shares on a 2:1 basis. As a result, the share price and market trading volume in the graph on the left are calculated assuming that the reverse stock split had been conducted at the beginning of April, 2014.

Dividend per share



*With and effective date of October 1, 2016, MGC conducted a reverse stock split for MGC's ordinary shares on a 2:1 basis. As a result, the dividend per share in the graph on the left is calculated assuming that the reverse stock split had been conducted at the beginning of FY2012.

Head office



Access

A two-minute walk from JR Tokyo Station
(Marunouchi South Exit)

A one-minute walk from Tokyo Station
(Tokyo Metro Marunouchi Line)

A two-minute walk from Nijubashimae Station
(Tokyo Metro Chiyoda Line, Exit 4)

MITSUBISHI GAS CHEMICAL COMPANY, INC.

Mitsubishi Building, 5-2, Marunouchi 2-chome Chiyoda-ku, Tokyo 100-8324

TEL : 81-3-3283-5000 FAX : 81-3-3287-0833

<http://www.mgc.co.jp/eng/> (English)

