Mitsubishi Chemical Holdings

KAITEKI Value for Tomorrow

COMPANY HANDBOOK

| 2020 |

Our Group at a glance
Message from the Top Management

Realizing
THE KAITEKI COMPANY
with a truly global recognition

In today’s society, we face a range of issues: climate change, water shortages, resource and energy issues, and increasing medical costs associated with aging populations, to name a few. Meanwhile, scientific and technological developments are occurring at ever-faster rates in areas such as information and communication technology (ICT), artificial intelligence (AI), robotics, mobility, medical and healthcare. These have the potential to bring about significant innovations.

Given this environment, we believe it is our mission to bring together the innovation capabilities possessed by our domestic and overseas group companies so that we can continuously offer solutions to the above social problems.

Designating “Sustainability, Health and Comfort” as our core values, we globally operate a wide range of businesses grouped under three domains: Performance Products, Industrial Materials and Health Care. We work together with some 70,000 fellow co-workers in over 40 countries and regions. Through these operations, we work to continue to merit the trust of society.

Our company slogan, “KAITEKI Value for Tomorrow,” encapsulates our strong will and determination to take the initiative to realize KAITEKI—that is, to achieve the sustainable well-being of people, society and our planet Earth.

In order to merit the trust of our stakeholders, we at Mitsubishi Chemical Holdings Corporation will bring together our Group’s diverse strengths and continue to actively accept the challenges it takes to maximize corporate value and realize KAITEKI.

We therefore ask for your continued support and encouragement.

Hitoshi Ochi
Representative Corporate Executive Officer, President & CEO
Through our three business domains, Performance Products, Industrial Materials, and Health Care, we offer a wide range of solutions, based on the values of sustainability, health, and comfort.

**Performance Products**
We contribute to realize a sustainable society by providing differentiated, high-performance solutions utilizing the Group’s wide range of products and technologies.

**Industrial Materials**
Our products and technologies support a variety of industries and societies. We are proceeding with the diversification of raw materials, including renewable resources and strengthening our business structures.

**Health Care**
Capitalizing on the Group’s comprehensive capabilities and network, we develop businesses for pharmaceuticals, active pharmaceutical ingredients and intermediates, pharmaceutical formulation materials, advanced medication.

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**Focus markets / businesses**

1. **Automobiles, Aircraft (Mobility)**
   - Lightweight composites
   - Environment-friendly materials

2. **IT, Electronics, Displays**
   - FPD materials
   - Semiconductor-related materials

3. **Medical, Food, Bio Products**
   - Food ingredients
   - Pharmaceutical materials
   - Medical-related products

4. **Healthcare**
   - Pharmaceuticals
   - Regenerative medicine

5. **Environment, Energy**
   - Battery materials
   - Water treatment systems and devices

6. **Packaging, Labels, Films**
   - Food packaging films
   - Industrial films

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**Fundamental Industrial Materials**
(MMA • Carbon chemicals • Carbon Products • Industrial Gases)
What We Do

Main Products

Performance Products

We contribute to realize a sustainable society by providing differentiated, high-performance solutions utilizing the Group’s wide range of products and technologies.

Films for optical and electronic materials
In addition to the global supply of PET films for FPDs, electric and electronic industries, general industrial materials, packaging, and a range of other uses, we also supply PVA films, which are essential for displaying images on liquid crystal displays.

Products for displays and semiconductors
We offer display components—such as clear adhesive sheets for touch panel displays—as well as cleaning agents and other high-purity materials for semiconductor manufacturing, on a global scale.

High performance films
Expand uses in medical & food packaging by high functional films, such as multilayer co-extruded and gas barrier films etc.

Water treatment system & services
Promoting broad ranging projects worldwide, from component sales to system solutions, as a global leading company in water treatment

Engineering plastic products & composite materials
We promote metal alternatives in a wide range of industries, and provide solutions for lighter weight, enhanced productivity, environmental efficiency, and other aims.

Carbon fibers
We offer PAN-based carbon fibers, pitch-based carbon fibers, and intermediate materials that use these carbon fibers for a variety of uses, including sports products, industrial materials, aircraft, automobiles, and environmental applications.

Alumina fibers
With excellent heat insulation, durability performance, and cushioning properties achieved by our world leading technologies, used globally in automotive exhaust gas treatment devices and heating furnaces in steel industry

Fibers
We provide a range of functional materials for ladieswear, sportswear, underwear, bedding, interior products, and industrial and other applications. These include materials that can absorb moisture or light and generate heat, reduce static electricity, absorb water, and dry rapidly.

Performance polymers
A broad array of products, such as olefin based thermoplastic elastomers, functional polyolefin, PVC compounds and high gas-barrier resins, which enable customer innovation in applications ranging from medical and industrial use to daily necessities.

Engineering polymers
With the increasing demand for various applications including automobiles and electronics, globally expanding the business by integrating our proprietary manufacturing process technologies with polymer design technologies and compound technologies
What We Do

Sustainable resources
Expanding the lineup of the biobased engineering plastic "DURABIO™" with properties such as excellent transparency, optical properties, and durability, the biodegradable polymer "BioPBS™" and "Nichigo G-Polymer™".

Performance chemicals
By combining performance polymers, coatings, adhesives, additives, chemicals, and other proprietary products with advanced core technologies such as polymer design, we provide a host of solutions that cater to diverse market needs and social issues.

Main Products

Industrial Materials

Our industrial materials and products support a variety of industries and communities. While diversifying the raw materials we use, including sustainable resources, we will continue to expand our operations based on a structure that always satisfies the needs of the times.

MMA/PMMA
We provide MMA derivatives, acrylic resin (PMMA), and processed products globally through an integrated chain that uses MMA monomer as the raw material. We possess global top-class MMA production capacity that utilizes the three major manufacturing methods.

Polyolefin
High-function, high-quality lineups of products based on proprietary catalyst and process technologies
Supply for variety of grades applying to automotive, medical, food packaging etc.

Coke
Crafted technologies supporting core industries
World-class production capacity as a merchant coke producer

Needle coke/Tar
World-class quality through integrated production

Industrial gases
As industrial gas professionals, we offer powerful support to various industries by providing industrial gases safely in the most appropriate way.

Others
• Ethylene oxide/Ethanol
• Octanol/Normal butanol
• 1,4-butanediol/γ-Butyrolactone
• Acrylonitrile/ Acrylonitrile derivative etc.
What We Do

Main Products

Health Care

Capitalizing on the Group's comprehensive capabilities and network, we develop businesses for pharmaceuticals, active pharmaceutical ingredients and intermediates, pharmaceutical formulation materials, advanced medication.

Pharmaceuticals
Helping improve quality of life for numerous patients worldwide by developing pharmaceuticals that address unmet medical needs

<Immuno-inflammation>
Remicade  anti-TNFα monoclonal antibody
Simponi  human anti-TNFα monoclonal antibody
Stelara  anti-IL-12/23p40 monoclonal antibody

<Diabetes and kidney>
Tenelia  agent for treatment of type II diabetes mellitus
Canaglu  agent for treatment of type II diabetes mellitus
Canalia  agent for treatment of type II diabetes mellitus
Kremezin  agent for treatment of chronic renal failure

<Central nervous system>
Lexapro  anti-depressant agent

<Allergy>
Rupatin  agent for treatment of allergic disorders

<Vaccines>
Periodic vaccines for children and preventive vaccines for influenza and other infectious diseases

OTC products
Contributing to the promotion of proper use and self-medication through the sale of OTC drugs and the provision of appropriate information.

<Main Products>
Tanabe Ichoyaku Urso  It acts on the liver and is effective for heavy stomach and indigestion caused by fat.
FLUCORT f  An external drug that suppresses inflammation, and cures dermatitis and irritation

Capsules and pharmaceutical equipment
Providing high-quality, high-function hard capsules along with designing, developing and manufacturing pharmaceutical equipment and offering related technical services

Active pharmaceutical ingredients and intermediates
Providing health care products, including pharmaceutical ingredients and intermediates for cost-competitive, highly safe pharmaceutical products
Global Network

Number of Subsidiaries and Affiliates
Broad geographical coverage

- Mitsubishi Polyester Film, Inc. (South Carolina, USA)
- Mitsubishi Chemical Advanced Materials AG (Zurich, Switzerland)
- Mitsubishi Tanabe Pharma Korea Co., Ltd. (Seoul, Korea)
- Leeden National Oxygen Ltd. (Singapore)
- Matheson Tri-Gas, Inc. (Texas, USA)
- Lucite International UK Limited (Cassel, UK)
- Qualicaps, Inc. (North Carolina, USA)
- Tianjin Tanabe Selyaku Co., Ltd. (Tianjin, China)
- Huizhou MMA Co., Ltd. (Guangdong, China)
- Mitsubishi Chemical Corporation Ibaraki Plant (Ibaraki, Japan)
- Mitsubishi Chemical Holdings Corporation, Head Office (Tokyo, Japan)

Number of Subsidiaries and Affiliates:
Total 698
- Europe 135
- North America 62
- Japan 281
- Africa 1
- Central-South America 9
- Asia Pacific 210

Sales by area:
- Overseas 42.9%
- Japan 57.1%

*Year ended March 2020

(As of March 31, 2020)
To achieve early commercialization of next-generation businesses in our focus markets, the Mitsubishi Chemical Holdings Corporation (MCHC) Group takes a multi-dimensional approach to innovation. For current and adjacent technology and business areas, the wide-ranging R&D efforts of our four main Business Companies take the lead. We increasingly leverage synergies between multiple MCHC Group companies to create value.

In addition, MCHC’s Emerging Technology and Business Development Office (ETBDO) is introducing new platform capabilities across the MCHC Group, notably in digital transformation, global venture engagement, and new market development.

Digital Transformation
In order to realize digital transformation, we leverage both digital technology and “digital way of thinking” to solve problems relevant to our business.

In collaboration with MCHC Group Business Companies, we exploit machine learning, text mining, and optimization techniques in order to improve plant stability, optimize energy usage, and improve product quality. We continuously introduce these capabilities to the operating groups of MCHC.

Corporate Venture Activity
We provide new growth opportunities across the entire MCHC Group through strategic partnership with promising startup companies worldwide. In July 2018, we established Diamond Edge Ventures, a new subsidiary company based in Silicon Valley (U.S.). We created streamlined processes allowing us to move at “startup speed”, while maintaining close collaboration between our Silicon Valley and Japan teams.
Management Philosophy

**Mission**
We create innovative solutions globally based on our core values of Sustainability, Health and Comfort, striving for the well-being of people, society and our planet Earth.

**Vision**
Realizing KAITEKI

**Value**
Sustainability, Health, Comfort

MOS Indices

Since FY2011, the MCHC Group has used the MOS Indices as the Group’s new management index for visualizing the degree to which our corporate activities contribute to the sustainability of people, society and the Earth.

We aim to achieve all targets of MOS indices by FY2020, the final year of our medium-term management plan.

Please see our website for details of our achievements regarding this matter.

Promotion of KAITEKI Management

To realize KAITEKI, we have adopted an approach called “KAITEKI Management”. It is a management approach to enhancing corporate value based on three types of management. Two of them, Management of Economics (MOE) and Management of Technology (MOT), have been traditionally emphasized. MOE promotes to optimize capital efficiency within our company, and MOT strives to create innovations for society. And the third management approach, Management of Sustainability (MOS), has a new perspective and aims to improve the sustainability of people, society and the Earth.

KAITEKI Management is unique, and we call the value created from the three kinds of management “KAITEKI Value”. We believe that enhancing KAITEKI Value will lead to the realization of KAITEKI. We promote this management approach aiming to generate revenue and develop ourselves sustainably while contributing to solving environmental and social issues as a company.

**MOS Indices**

<table>
<thead>
<tr>
<th>MOS Indices</th>
<th>Initiatives</th>
<th>Related SDGs</th>
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<tbody>
<tr>
<td><strong>Index that need to be achieved</strong></td>
<td><strong>Achieve zero occurrence of serious accidents and compliance violations</strong></td>
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<tr>
<td><strong>S Index</strong></td>
<td><strong>S-1</strong> Contribute to reducing the environmental impact</td>
<td><strong>3.12</strong></td>
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<tr>
<td></td>
<td><strong>S-2</strong> Efficient use of resources and energy</td>
<td><strong>3.12</strong></td>
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<td></td>
<td><strong>S-3</strong> Contribute to the sustainability of the environment and resources through products and services</td>
<td><strong>3.12</strong></td>
</tr>
<tr>
<td><strong>H Index</strong></td>
<td><strong>H-1</strong> Contribute to medical treatment</td>
<td><strong>3.12</strong></td>
</tr>
<tr>
<td></td>
<td><strong>H-2</strong> Contribute to the prevention and early detection of diseases</td>
<td><strong>3.12</strong></td>
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<tr>
<td></td>
<td><strong>H-3</strong> Contribute to achieving healthy and hygienic lives through products and services</td>
<td><strong>3.12</strong></td>
</tr>
<tr>
<td><strong>C Index</strong></td>
<td><strong>C-1</strong> Endeavor to earn greater recognition of corporate trust from society</td>
<td><strong>3.12</strong></td>
</tr>
<tr>
<td></td>
<td><strong>C-2</strong> Promote communication and work in concert with stakeholders</td>
<td><strong>3.12</strong></td>
</tr>
<tr>
<td></td>
<td><strong>C-3</strong> Contribute to achieving a more comfortable living environment and lifestyle</td>
<td><strong>3.12</strong></td>
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Approaching to KAITEKI

Communicating with customers

KAITEKI SQUARE
——The showroom of MCHC Group

KAITEKI SQUARE was established in October 2012 at the headquarters in Palace Building as a showroom for the MCHC Group. It is an important platform for communication with our customers and clients, a place where we can exchange ideas about a better future.

KAITEKI SQUARE is comprised of three zones. The first zone is the Special Exhibition Zone, which focuses on the role of science and technology in solving various challenges facing 21st century society. The second zone is the Permanent Exhibition Zone, which introduces the technological capabilities and collective strength of the MCHC Group by showcasing products and technologies that the group is working on to aim at realizing KAITEKI. The last is the KAITEKI THEATER, which introduces video contents that we think about what we can do now for children of the future.

We look forward to welcoming more and more people to our showroom, and having meaningful discussions on how to realize KAITEKI in the future together.

The Corporate Message

KAITEKI Value for Tomorrow

The sustainable well-being of people, society and our planet Earth – we call it KAITEKI.

Through our core values of Sustainability, Health and Comfort, we create innovative solutions globally realizing KAITEKI.

Creating KAITEKI Value today we ensure a bright future for tomorrow.

We are THE KAITEKI COMPANY.
Initiatives for realizing KAITEKI

The KAITEKI Institute, Inc.

The KAITEKI Institute, Inc. (TKI) was established on April 1, 2009, as a think tank and a global research organization. We focus on challenges that humankind faces in the 21st century and promote their solutions in the areas of “healthcare” and “society”. The words that drive the principle research activities at TKI are “Vita (Life)” and “Societas (Society)”. TKI have fixed our eyes on 20 to 30 years ahead to address some of the most difficult tasks that our future generation will meet. We advance research that provides means to solve the problems in the world and pioneer new business.

TKI partners with a global network of scientific and academic establishments, national laboratories, start-ups, and private research foundations to identify potential approaches, further research programs, and develop science-based solutions.

Initiatives with stakeholders

Contributing to society and earning public trust

Children’s Summer Vacation Science Experiment Event
(Mitsubishi Chemical Holdings)

Kids’ Science Class by Taiyo Nippon Sanso (TAIYO NIPPON SANSO)

Developing the next generation - visiting lectures at high schools
(Mitsubishi Tanabe Pharma)

Planet Earth KAITEKI Stadium at Kandu, a work experience theme park
(Mitsubishi Chemical Holdings)

Taiyo Nippon Sanso Soccer Class: Sergio Soccer Clinic
(TAIYO NIPPON SANSO)

“Tokyo Greenship Action”, environmental activity (to conserve and restore natural woodlands)
(Mitsubishi Tanabe Pharma)

MCC has signed an official partnership agreement with Japanese Para-Sports Association
(Mitsubishi Chemical)

Activities to clean up marine plastics litter
MCC employees at all business sites nationwide are engaged in volunteer activities to clean up nearby waterfronts
(Mitsubishi Chemical)

Learn more about the KAITEKI Institute, Inc. @
http://www.kaiteki-institute.com/english
Group Outline

Organization

(Function-sharing companies)

The KAITEKI Institute, Inc.
Mitsubishi Chemical Holdings America, Inc.
Mitsubishi Chemical Holdings (Beijing) Co., Ltd.
Mitsubishi Chemical Holdings Europe GmbH
Mitsubishi Chemical Holdings Corporate Staff, Inc.
Diamond Edge Ventures, Inc.

(Operating companies)

(Mitsubishi Chemical Holdings)

(MITSUBISHI CHEMICAL)

(Mitsubishi Tanabe Pharma)

(TAIYO NIPPON SANSO)

Operating Companies

Mitsubishi Chemical Corporation
(Established on April 1, 2017)
1-1 Marunouchi 1-chome,
Chiyoda-ku, Tokyo 100-8251, Japan
Performance products,
industrial materials, and others
JPY 2,338.0 billion
40,776

Life Science Institute, Inc.
THE KAITEKI Building, 13-4 Uchikanda
1-chome, Chiyoda-ku, Tokyo 101-0047,
Japan
Healthcare and Medical ICT, Next
Generation Healthcare, Drug Discovery
and Development solution
JPY 38.3 billion
1,817

Mitsubishi Tanabe Pharma Corporation
2-10 Dosho-machi, 3-chome, Chuo-ku,
Osaka 541-8505, Japan
Ethical pharmaceuticals and other
pharmaceuticals
JPY 379.8 billion
6,987

TAIYO NIPPON SANSO CORPORATION
1-3-26 Koyama, Shinagawa-ku, Tokyo
142-8588, Japan
Industrial gases and related equipment/
devices, others
JPY 850.2 billion
19,719

*IFRS base