

# CSR REPORT 2018

Corporate Social Responsibility Report 2018





## Management Policy

To be a company that is progressive and dynamic with a keen attitude towards the new changing tide  
 Creating a better future for the people of the world

## CONTENTS

- 03 Our Commitment
- 05 Value Share with Stakeholders
- 07 ADEKA in Our Lifestyles
- 09 ADEKA Group Network
- 11 ADEKA Group—Creating Value for Society
- 13 Mid-term Management Plan, BEYOND 300
- 15 | Feature 1 |  
**Safe chemicals for people and the environment**  
 Our primary concern as a material maker
- 17 | Feature 2 |  
**Unwavering deliciousness and security**  
 Supply chain management handled in our Foods Division
- 19 Governance
- 23 With Customers
- 26 With Shareholders and Investors
- 27 With Business Partners
- 29 With Employees
- 34 With the Environment
- 38 With Communities
- 40 Third Party Opinion/Response to Third Party Opinion

### ● Corporate Profile

Name: ADEKA CORPORATION  
 Established: January 27, 1917  
 Chairman and Chief Executive Officer: Akio Kohri  
 President and Chief Operating Officer: Hidetaka Shirozume  
 Head Office: 7-2-35 Higashi-ogu, Arakawa-ku, Tokyo  
 Capital Stock: 22.944 billion yen  
 Shares Issued: 103,651,442  
 Number of Employees: 3,551 (consolidated)  
 Business: Chemicals, Foods, and Other Business (as of March 31, 2018)

### ● Sustainable Development Goals (SDGs)

The SDGs were adopted in September 2015 at the United Nations (UN) summit on sustainable development. They were incorporated into “Agenda 2030” as 17 Goals and 169 Targets that should be attained by 2030. All UN member countries will strive to address these themes between 2016 and 2030 through public and private sector collaboration. Please see page 12 for the SDGs that are relevant to ADEKA Group operations.



### ● Editorial Policy

We publish the ADEKA Group CSR Report every year to communicate information to our diverse group of stakeholders about our corporate activities and future direction, as we strive toward a sustainable future hand in hand with society. The ADEKA Group CSR Report 2018 focuses on matters of particular significance from the numerous initiatives undertaken in fiscal 2017. Details about our initiatives are also available on the CSR section of our website. Going forward, in order to draw up reports that are easy to understand for all our stakeholders, we welcome your candid feedback and opinions using the questionnaire enclosed at the end of this report.

### Scope of this Report

This report covers the whole ADEKA Group. Where necessary, “ADEKA Group” and “the Group” refer to the entire ADEKA Group, while “ADEKA” and “the Company” refer to ADEKA Corporation.

### Period Covered by this Report

Fiscal 2017 (April 1, 2017 to March 31, 2018)  
 Some parts of this report refer to recent activities taking place in fiscal 2018.

### Reference Guidelines

Environmental Reporting Guidelines (Fiscal Year 2012 Version) of the Japan Ministry of the Environment  
 Japanese Standards Association ISO 26000:2010 Guidance on social responsibility GRI Sustainability Reporting Standard 2016

### Published Date

September 2018 (next publication date: September 2019)  
 For more information about the ADEKA Group, please visit the following websites.

CSR: <https://www.adeka.co.jp/csr/en/index.html>  
 IR: <https://www.adeka.co.jp/en/ir/index.html>

### ● Whole Picture of Disclosure of CSR-Related Information

#### CSR Report (Booklet, PDF)

This comprehensively reports chiefly on the ADEKA Group’s annual CSR activities.

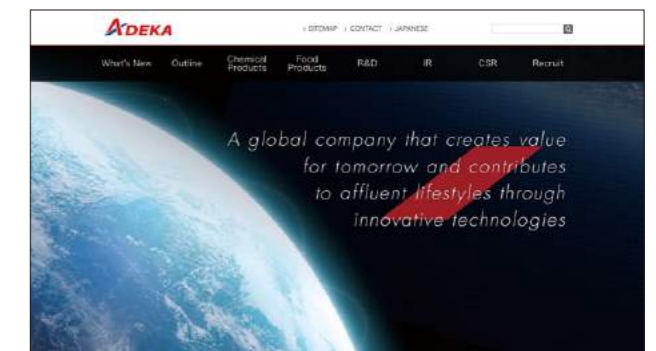


#### ESG Data Book (PDF)

This discloses more detailed ESG data to supplement the CSR Report.

#### Website

The site discloses more detailed information chiefly for experts.



#### Main Content

- Site reports (in Japanese only)
- CSR-related policy, etc., and supplementary information
- GRI Guideline Balance Sheet
- Back number of CSR Reports
- Chronological Table of CSR activities



Akio Kohri  
Chairman and Chief  
Executive Officer

Hidetaka Shirozume  
President and Chief  
Operating Officer

**Our Commitment**

**We are making every contribute to creating a more affluent and sustainable society with our renewed approach to CSR.**

**Implementation of the Mid-term Management Plan**

In April 2018, ADEKA launched its mid-term management plan, BEYOND 300, for fiscal years 2018 to 2020. This is the second stage toward realizing the ADEKA VISION 2025, in which the ADEKA Group's future aspirations are described.

We intend to become an excellent company with net sales exceeding 300 billion yen through these strategies: expanding the global sales of strategic products in our three core businesses, polymer additives, chemicals and food products; developing new businesses in the fields of life sciences, the environment and energy; and improving our management base to support these businesses.

**Corporate DNA and CSR Activities**

A company is a public entity able to achieve sustainable growth along with society by being useful to society and recognized as an essential component of society through technologies and services unique to the organization.

Even 100 years after the company's founding, our commitment to contribute to society has been inherited without interruption as our DNA, or what we would now refer to as CSR. However, it is true that internal recognition of the significance of ADEKA's DNA as a contribution to society and of the intrinsic relationship between the business itself and the CSR activities is not yet sufficient.

In order for the ADEKA Group to work as a team toward achieving BEYOND 300, we must successfully accomplish our numerical goals and reconfirm that every employee understands the value of the company from the CSR perspective while also carrying out their duties based on this understanding.

**Building a Sustainable Society through Business Activities**

Quickly discerning the trends of the time, ADEKA consistently takes on the challenges of addressing social issues and meeting customer needs. For example, when smartphones appeared, we successfully developed a product that was

indispensable for creating new semiconductors. In the 1980s, we also launched a series of lubricant additives for engine oil, ADEKA SAKURA-LUBE, to contribute to automobile fuel efficiency (and CO<sub>2</sub> reduction) during that time. The series has continued to evolve and now commands the top share of the global market. Additionally, we are developing products required for EV conversion.

**Creating New Value and Promoting the Diversity of Human Resources**

As a corporate group operating in 12 countries and regions around the world, the ADEKA Group must accelerate its efforts to achieve its SDGs. In Japan, where the population is expected to decline further, the active participation of women in the workforce is critical as well as promoting the utilization of human resources beyond the boundaries of races and ethnicities. To contribute to creating new value, we will continue to appreciate the enthusiasm and willingness of each individual. This will enable them to take on new challenges, which will lead to significant progress in business and open up a brighter future, with human resources that are capable of realizing successful outcomes.

**Promoting CSR to Strengthen the Management Base**

ADEKA has been working to contribute to society through its businesses by emphasizing these two fundamental statements in its CSR policy: "Gentle harmony between people and technology" and "Harmony with society." To further strengthen our management base, we have identified the promotion of CSR as the basic policy of our mid-term management plan.

Looking ahead, we will continue our efforts to become a global company that creates value for tomorrow and contributes to affluent lifestyles through innovative technologies. We will do this by strengthening all of our management systems, including organizational reviews.

# Value Share with Stakeholders

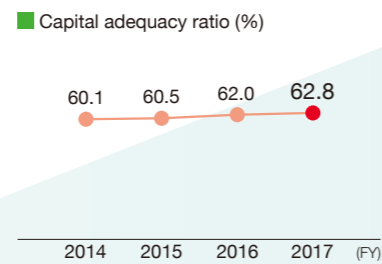
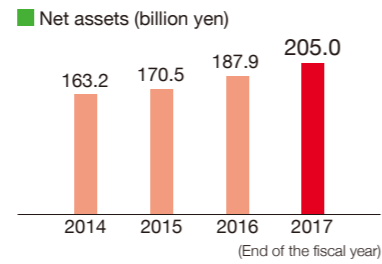
ADEKA shares value with stakeholders through the investment of its management resources.

Scope indicated by color:  
■ ADEKA ■ ADEKA Group (consolidated)  
■ ADEKA and 11 ADEKA Group companies

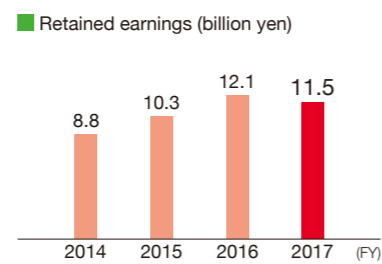
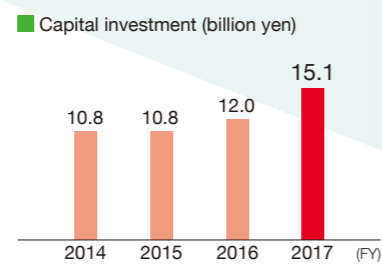
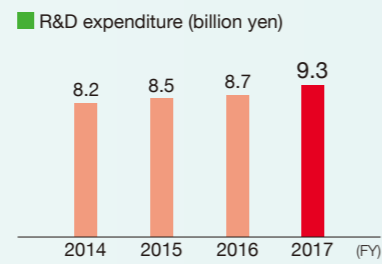
Please refer to pages 9 and 10 for consolidated companies.



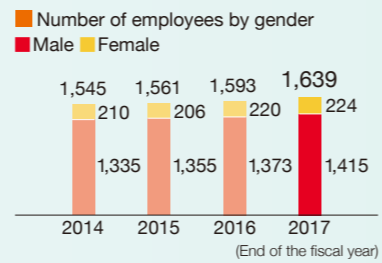
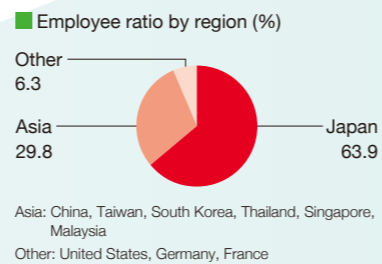
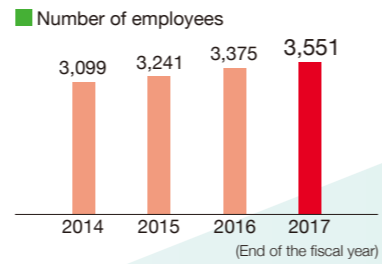
## Capital



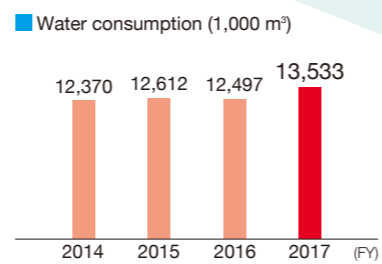
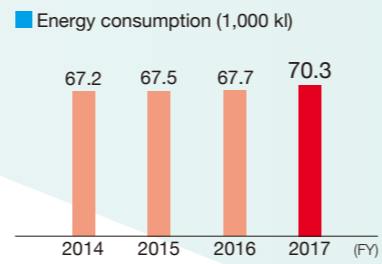
## Business Activities



## Human Resources

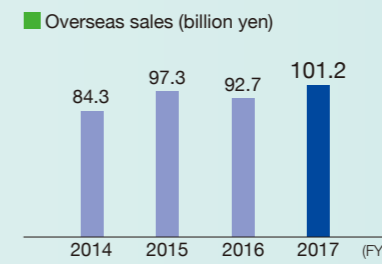
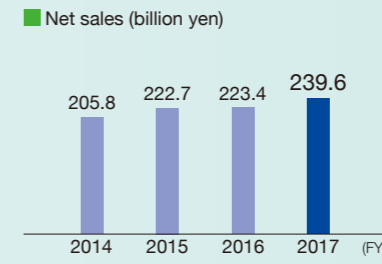


## Resources

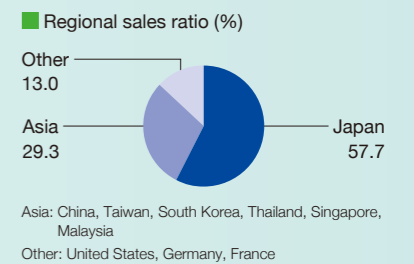
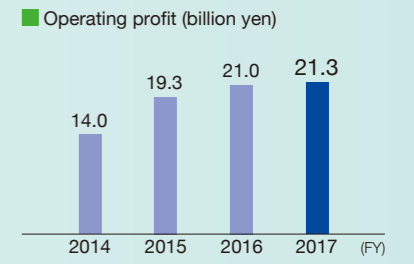
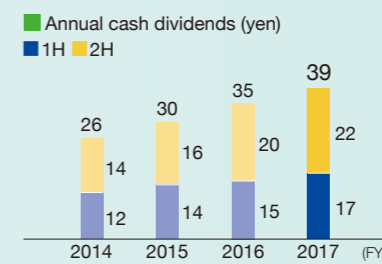
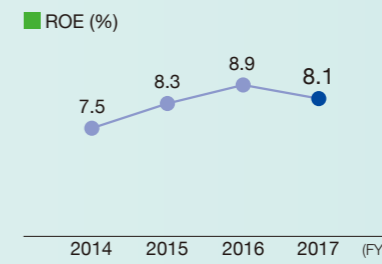
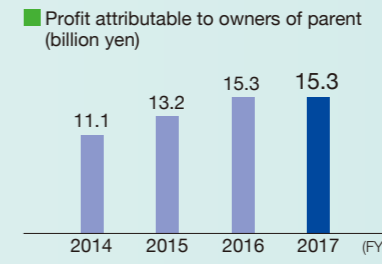


## OUTPUT Creation of Value

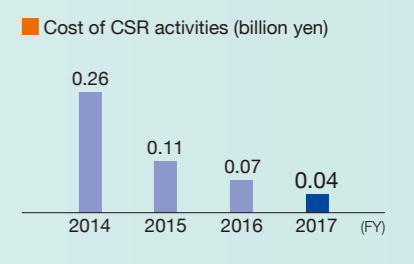
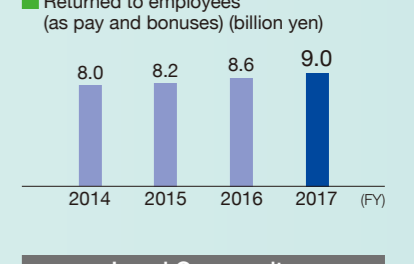
## Shareholders and Investors/Business Partners/Customers and Consumers



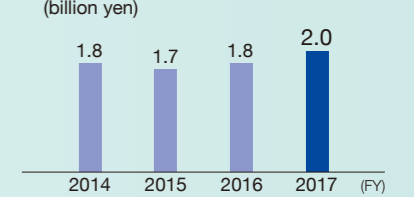
## Shareholders and Investors



## Employees



## Environment



# ADEKA in Our Lifestyles

Starting from the production of caustic soda and by-products and then moving on to oil and fat products, organic chemicals, fine chemicals and life sciences, we remain committed to creating a more affluent society with cutting-edge technologies. We continue to support the lifestyles of people by creating products that have a low environmental impact and are easy to use. This commitment has remained unchanged since our founding.

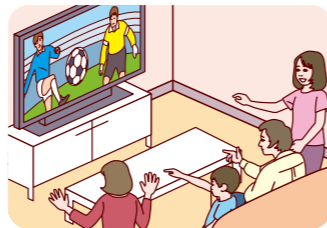
- Chemical business
- Food business



## Protecting Infrastructure

Materials that prevent water from penetrating concrete structures and reinforce the ground at construction and civil engineering worksites

Water swelling sealing and soil injection materials



## For a More Comfortable Living Environment

Materials for addressing sick-house syndrome, high-definition displays and manufacturing plastic products used in daily life that are less likely to catch fire, and thereby contribute to safer, more secure and affluent lifestyles

Water-based resins, photoinitiator and polymer additives (flame retardants, etc.)



## Delivering More Delicious Foods to Your Table

Fat and oil products that create what we refer to as "deliciousness," such as fluffy, moist bread that is crispy on the outside

Margarine, shortenings, fillings, etc.



## Supporting Urban Development

Materials that prevent rust and dust build-up in metals and concrete used in bridges and other infrastructures for improving durability and preserving the appearance of buildings and infrastructure

Epoxy resins and urethane resins



## Building an Advanced IT Society

Materials essential for advancing the digital age, such as IoT and AI, used in IT equipment and displays

Semiconductor materials, circuit materials, photo(light)/thermal curing resin, high-purity etching gas/chemicals, polymer additives, etc.



## Safer and More Energy-Efficient Cars

Materials that contribute to reducing vehicle weight and CO<sub>2</sub> emissions for improving safety and fuel efficiency and reducing environmental impact

Polymer additives (nucleating agents, plasticizers, etc.), lubricant additives and water-based coating agents



## Staying Beautiful and Healthy

Materials indispensable for cosmetics, toiletry products, pharmaceuticals and products that offer various functions, which ensure safety

Cosmetic ingredients (thickening and moisturizing agents, etc.), propylene glycols and health foods



## On Your Favorite Sweets

Products, including those that are soft and melt in your mouth, such as whipping cream, as well as fats and oils that enhance the crispiness of cookies, which are perfect for all types of sweets, from those enjoyed casually to cakes for special occasions

Whipping cream, fats and oils, etc.



## In All Corners of Your Office

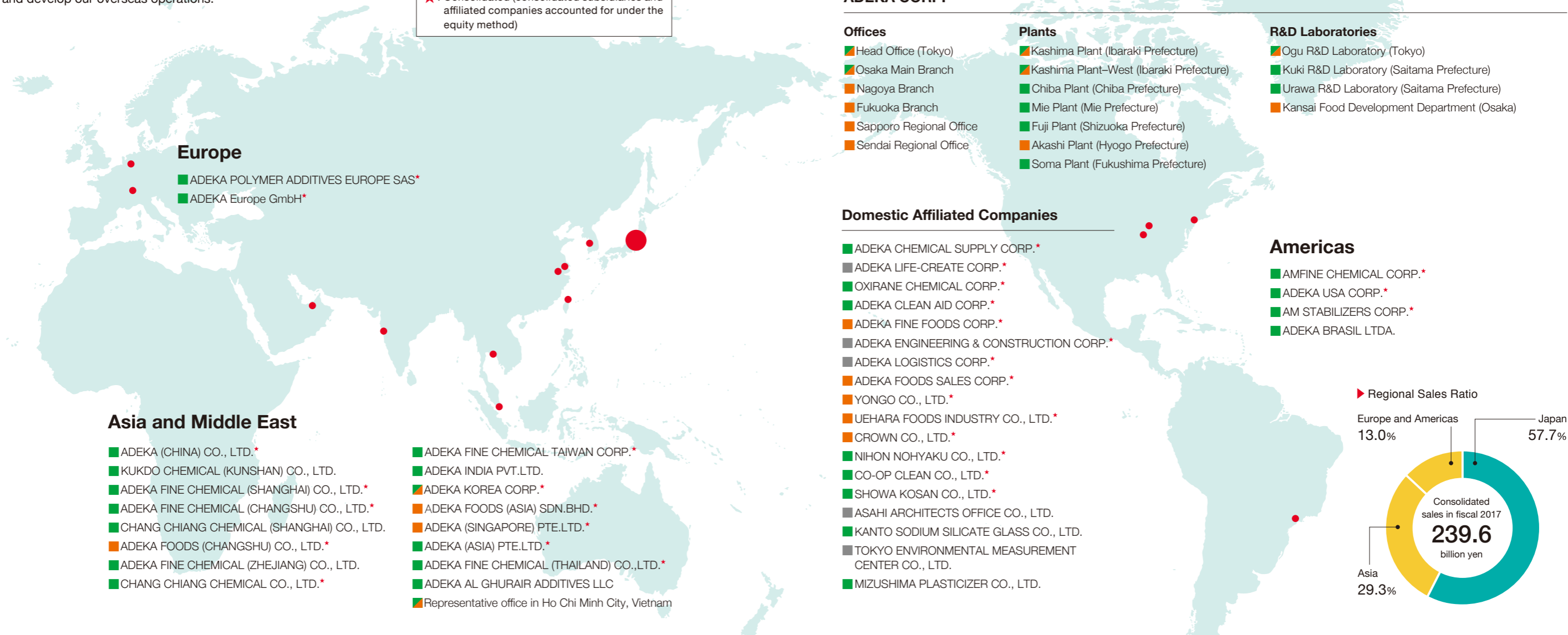
Materials used in various daily office supplies such as paper, stationery, computers and desks

Hydrogen peroxide, polymer additives, etc.

# ADEKA Group Network

As a company that coexists in harmony with the global community, we work together with our domestic and overseas networks to expand the scope of our business and develop our overseas operations.

■ Chemicals business ■ Food business ■ Other business  
★: Consolidated (consolidated subsidiaries and affiliated companies accounted for under the equity method)



**Europe**

- ADEKA POLYMER ADDITIVES EUROPE SAS\*
- ADEKA Europe GmbH\*

**Asia and Middle East**

- ADEKA (CHINA) CO., LTD.\*
- KUKDO CHEMICAL (KUNSHAN) CO., LTD.
- ADEKA FINE CHEMICAL (SHANGHAI) CO., LTD.\*
- ADEKA FINE CHEMICAL (CHANGSHU) CO., LTD.\*
- CHANG CHIANG CHEMICAL (SHANGHAI) CO., LTD.
- ADEKA FOODS (CHANGSHU) CO., LTD.\*
- ADEKA FINE CHEMICAL (ZHEJIANG) CO., LTD.
- CHANG CHIANG CHEMICAL CO., LTD.\*
- ADEKA FINE CHEMICAL TAIWAN CORP.\*
- ADEKA INDIA PVT.LTD.
- ADEKA KOREA CORP.\*
- ADEKA FOODS (ASIA) SDN.BHD.\*
- ADEKA (SINGAPORE) PTE.LTD.\*
- ADEKA (ASIA) PTE.LTD.\*
- ADEKA FINE CHEMICAL (THAILAND) CO.,LTD.\*
- ADEKA AL GHURAIR ADDITIVES LLC
- Representative office in Ho Chi Minh City, Vietnam

## Japan

### ADEKA CORP.

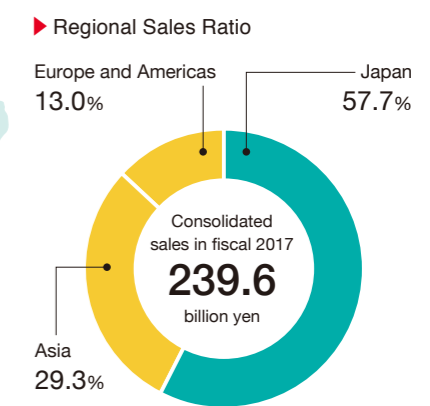
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|--|--|--|
| <b>Offices</b><br>Head Office (Tokyo)<br>Osaka Main Branch<br>Nagoya Branch<br>Fukuoka Branch<br>Sapporo Regional Office<br>Sendai Regional Office | <b>Plants</b><br>Kashima Plant (Ibaraki Prefecture)<br>Kashima Plant-West (Ibaraki Prefecture)<br>Chiba Plant (Chiba Prefecture)<br>Mie Plant (Mie Prefecture)<br>Fuji Plant (Shizuoka Prefecture)<br>Akashi Plant (Hyogo Prefecture)<br>Soma Plant (Fukushima Prefecture) | <b>R&amp;D Laboratories</b><br>Ogu R&D Laboratory (Tokyo)<br>Kuki R&D Laboratory (Saitama Prefecture)<br>Urawa R&D Laboratory (Saitama Prefecture)<br>Kansai Food Development Department (Osaka) |
|--|--|--|

### Domestic Affiliated Companies

- ADEKA CHEMICAL SUPPLY CORP.\*
- ADEKA LIFE-CREATE CORP.\*
- OXIRANE CHEMICAL CORP.\*
- ADEKA CLEAN AID CORP.\*
- ADEKA FINE FOODS CORP.\*
- ADEKA ENGINEERING & CONSTRUCTION CORP.\*
- ADEKA LOGISTICS CORP.\*
- ADEKA FOODS SALES CORP.\*
- YONGO CO., LTD.\*
- UEHARA FOODS INDUSTRY CO., LTD.\*
- CROWN CO., LTD.\*
- NIHON NOHYAKU CO., LTD.\*
- CO-OP CLEAN CO., LTD.\*
- SHOWA KOSAN CO., LTD.\*
- ASAHI ARCHITECTS OFFICE CO., LTD.
- KANTO SODIUM SILICATE GLASS CO., LTD.
- TOKYO ENVIRONMENTAL MEASUREMENT CENTER CO., LTD.
- MIZUSHIMA PLASTICIZER CO., LTD.

## Americas

- AMFINE CHEMICAL CORP.\*
- ADEKA USA CORP.\*
- AM STABILIZERS CORP.\*
- ADEKA BRASIL LTDA.



## Chemicals Business

### Polymer Additives

Polymer additives are essential for highly functional plastic. ADEKA contributes to customer manufacturing by offering polymer additives with optimal compositions for specific applications such as automobiles, building materials and other goods, capitalizing on its extensive product lines.

- Additives for polyolefins
- Plasticizers/PVC stabilizers
- Flame retardants and others

### IT Related Chemicals

The ADEKA Group provides products for various electronic devices such as LCD TVs, PCs and smartphones using cutting-edge technologies. In particular, its semiconductor materials are at the highest level of quality in the world.

- Semiconductor materials
- Photo (light)/thermal curing resin
- Display materials
- Circuit materials and others

### Functional Chemicals

From daily goods such as cosmetics and toiletries to automobiles, paints, IT and electronics, the ADEKA Group provides functional polymers, surface specialties and other products for a wide range of industries.

- Water borne resins
- Lubricant additives
- Cosmetic ingredients
- Propylene glycol and others

## Food Business

Guided by our brand slogan, "The Delicious Taste You Can Rely On," ADEKA develops food ingredients that are constantly at the forefront of the industry. We provide processed oil and fats as well as processed foods to bread, confectionery and pastry manufacturers while at the same time contributing to the realization of a safe, reassuring dietary life.

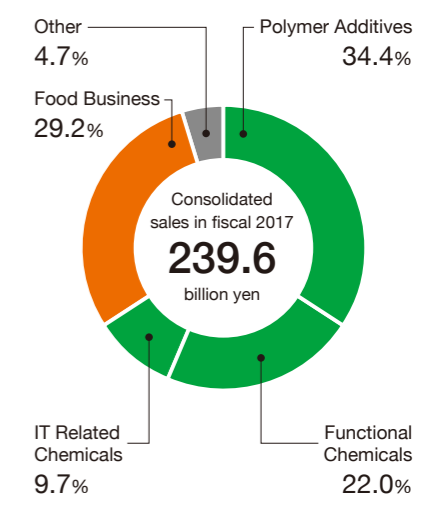
- Margarine and shortenings
- Fats and oils for chocolate
- Whipping cream
- Frozen pie crusts and others

## Other

Our other business primarily includes the maintenance of ADEKA Group plants and facilities, the design of various kinds of plants, logistics, and an insurance agent business. The Group provides services to customers in various fields and based on expertise related to those operations.

- Plant design and construction management
- Logistics
- Real estate
- Insurance agent and others

### Consolidated Sales by Business



# ADEKA Group – Creating Value for Society

The ADEKA Group has provided products and services that meet the needs of society, committing itself since its foundation to contributing to affluent lifestyles through its core business.

The environment surrounding us changes as interest in sustainability grows around the world, under such initiatives as the United Nation's Sustainable Development Goals (SDGs) and the Paris Agreement under COP21, and as the needs of stakeholders diversify. The ADEKA Group aims to achieve mutual prosperity with stakeholders by monitoring its impact across the supply chain. It will also fulfill its responsibilities as a manufacturer of materials by expanding

its business areas globally with its technologies developed so far and its proactive approach.

The ADEKA VISION 2025, our mid- to long-term vision formulated in 2015, calls for a global company that contributes to the prosperity of society by creating value for tomorrow through cutting-edge technologies.

We will remain keen as seek to detect new, changing trends. Also, we will create value for society through our business, and with the efforts of each ADEKA Group employee, as we move toward creating a sustainable society.

The ADEKA Group will meet stakeholder expectations through its CSR activities.



## Social Charity through Our Core Business

## Co-Existence and Co-Prosperity with Society

## Fundamental CSR Policy

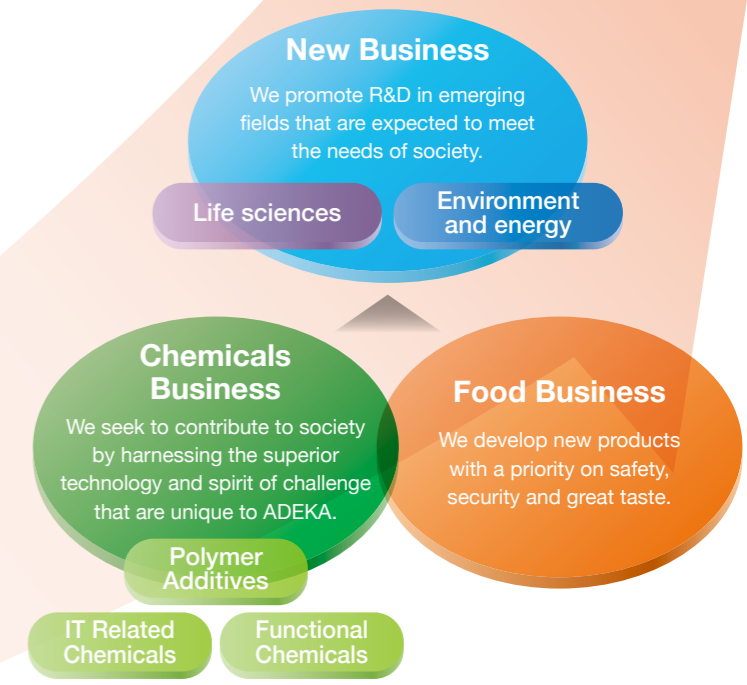
- Gentle Harmony between People and Technology
- Harmony with Society

## Mid-term Management Plan BEYOND 300

## Envisioned Ourselves for 2025 ADEKA VISION 2025

A global company that creates value for tomorrow and contributes to affluent lifestyles through innovative technologies

## Social Charity through Our Core Business



## Contribution to Society through CSR activities

	Stakeholders	Relevant SDGs	
<b>Thorough Supply Chain Management</b> We ensure thorough management, from material procurement to production, transportation and disposal in order to supply safe, high-quality products.	Business partners, customers, environment	9 RESPONSIBLE PROCUREMENT AND PRODUCTION, 12 RESPONSIBLE CONSUMPTION AND PRODUCTION	P. 17, 18, 23–25, 27, and 28
<b>Reducing Environmental Impact</b> We not only make efforts to reduce the environmental impact of our manufacturing processes but also promote R&D of environment-responsive products.	All stakeholders	7 AFFORDABLE AND CLEAN ENERGY, 9 RESPONSIBLE PROCUREMENT AND PRODUCTION, 12 RESPONSIBLE CONSUMPTION AND PRODUCTION, 13 CLIMATE ACTION	P. 34–37 (ESG Data Book)
<b>Pleasant Working Environment/ Occupational Safety</b> We nurture human resources, a vital Group asset, and provide a working environment in which employees can work free of risk to their health and safety.	Employees, business partners	3 GOOD HEALTH AND WELL-BEING, 5 GENDER EQUALITY, 8 DECENT WORK AND ECONOMIC GROWTH	P. 28–32 (ESG Data Book)
<b>Governance</b> We realize transparent Group management by strengthening corporate governance and promoting legal compliance.			P. 19–22

## ADEKA Group Code of Conduct

- Abide by laws and regulations in all corporate activities and conduct fair business in an ethical manner
- Provide safe and high-quality products and services
- Be serious about preserving the environment
- Engage in open and friendly communication and activities to serve the interest of society and to maintain its trust
- Foster corporate transparency by truthfully and accurately disclosing information regarding our business activities
- Maintain a safe and healthy working environment for our employees
- Do not tolerate antisocial forces or behavior
- Strive to achieve sustainable growth and success for the benefit of society

## Compliance

ADEKA Group Code of Conduct  
<https://www.adeka.co.jp/company/action.html> (in Japanese only)

# Mid-term Management Plan, BEYOND 300

Under the ADEKA VISION 2025, which expresses the ADEKA Group's aspirations, we intend to become a company that creates value for tomorrow and contributes to affluent lifestyles through innovative technologies. In April 2018, we launched the mid-term management plan, BEYOND 300, as the second stage toward realizing the ADEKA VISION 2025. Building on the achievements of STEP 3000-II, the previous mid-term management plan, as a foundation, we will carry out our efforts toward becoming an excellent company with net sales exceeding 300 billion yen.

## Basic Policies

### Become an excellent company with sales exceeding 300 billion yen.

- The second stage toward realizing the ADEKA VISION 2025
- Three years with net sales exceeding 300 billion yen due to organic grow. Promote M&A separately.



Viewpoint from the ideal future

## Management Targets (Fiscal 2020)

Consolidated sales	Over 300 billion yen (via organic growth)
Operating profit ratio	10%
ROE	10%
Investment and finance	100 billion yen (three-year total) Breakdown: capital investment: 50 billion yen (three-year total) M&A funds: prepared with 50 billion yen as the limit (three-year total)
Dividend	Dividend payout ratio: 30% (target for the final year of the mid-term plan after incremental increases) Appropriate shareholder returns are determined after comprehensive consideration

## Basic Strategies

### Global Expansion of Three Main Businesses

Globally expand sales of strategic products defined for each of our three main businesses; polymer additives, chemical products, and food products.

### Entering New Domains

Build business models and promote commercialization in the target domains of life sciences, the environment and energy.

### Enhancing Our Management Foundation

Promote CSR to strengthen our contribution to society and trust from society. Enhance mutual cooperation within the ADEKA Group to leverage our comprehensive abilities.

## Five Measures



### Corporate Management

#### Enhancing Group corporate management

Cultivate common values for the ADEKA Group, establish systems and structures and enhance Group corporate management.

### Technology

#### Creating innovation and enhancing competitiveness

In order to perpetually create products required by society, enhance R&D, promote new business development and intensify or inherit production technologies.

### Human resources

#### Expanding global human resources and leaders

Continuously invest in human resources as a corporate asset to expand global human resources and leaders.

### Global Business Development

#### Expanding globalization and accelerating localization

Further expand globalization of procurement, production and sales while accelerating the growth of individual overseas subsidiaries.

### Corporate value

#### Promoting CSR and mutually developing with society

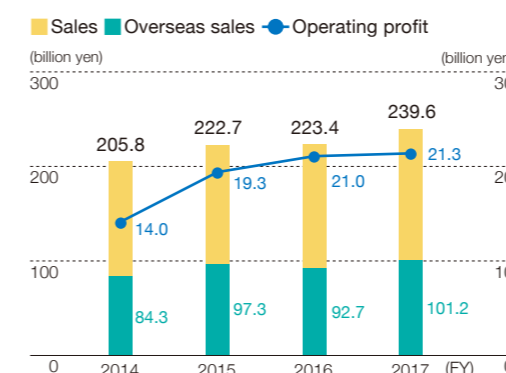
Improve our CSR promotion system, contribute to the solving of problems in society through our business and utilize these efforts to achieve continuous growth.

## Recap of the Mid-term Management Plan for FY2015–FY2017, STEP 3000-II

Positioning the mid-term management plan for the period of fiscal 2015 to fiscal 2017, STEP 3000-II, as the first three years toward realizing the ADEKA VISION 2025 and a period to realize an excellent company with sales exceeding 300 billion yen; various measures including active equipment investment have been taken to achieve growth.

Although our initial management targets, 300 billion yen in sales and 24 billion in operating profit, have not been achieved, we were able to maintain the rising trends in both revenue and earnings and achieved record-high sales and profits over three consecutive years, thereby building momentum for the current mid-term management plan.

### Financial Performance



### Management Indexes

#### Targets

8% of operating profit margin  
Cumulative investment of roughly 70 billion yen (capital investment planned at 40 billion yen total for the three years of the mid-term plan and 30 billion yen prepared for M&A funds as the limit)

#### Results

- Achieved operating profit margin (8.9%)
- Cumulative capital investment of 38 billion yen (95% of plan)
- Consolidated CROWN CO., LTD., a food wholesaler operating in Kansai area, as a subsidiary through the acquisition of additional stock and made SHOWA KOSAN CO., LTD., a specialized trading company handling chemicals, an equity-method affiliate



# Safe chemicals for people and the environment

## Our primary concern as a materials manufacturer

ADEKA seeks to contribute to the sustainable growth of society by focusing on the development of chemical material products that increase convenience and enrich daily life while remaining friendly to the environment.

Let us offer you our stabilizer free from harmful heavy metal compounds and water-borne epoxy resin, two chemical products with known environmental impacts and potential harm to human health.



### 01

#### Polymer additives

Among the first to comply with worldwide regulations on chemical substances

## “ADK STAB Series” Free from Hazardous Heavy Metals

### More Security and Safety for PVC Resin Products

Stabilizers, an additive for enhancing the durability and molding workability of polyvinyl chloride (PVC) resins, are made of various metallic salts. In recent years, control over stabilizers containing lead, tin and other environmentally harmful heavy metals has been strengthened worldwide. Stabilizers containing harmful heavy metal compounds have long been used since they are affordable while also excelling in performance. However, such harmful heavy metal compounds can leak into rivers, soil or air when a

product is disposed of through landfilling or burning, and they can negatively affect human health if they accumulate to certain level in the body.

### Global Presence of ADK STAB series Broadening

ADEKA launched its stabilizers business in 1962 amid Japan's high growth period. The business has since engaged in research and development for higher performing and safer PVC products under the slogan, “being harmless to the human health and friendly to the environment.” ADEKA's stabilizer technology is highly recognized today across the world, and its stabilizers are sold in 12 countries and regions under the ADK STAB brand. For the conservation of the Earth, we will intensify our pursuit of eco-conscious stabilizers and seek to popularize the use of non-hazardous, heavy-metal-free stabilizers.

#### ► Uses of PVC resins

<b>Rigid</b>	pipes, window frames, building materials, etc.
<b>Flexible</b>	hoses, film sheets, wires, plastic wraps, etc.

### » VOICE

## Making Daily Life in Southeast Asia Free of Harmful Heavy Metals

Here in Southeast Asia, stabilizers free of harmful heavy metal compounds are used in many products, including automotive wire harnesses. And strong product sales are expanding our customer network within and around Thailand.

Meanwhile, many lead-based stabilizers are still used for rigid PVC materials for buildings and water pipes in the countries of that region. Thailand and some other Southeast Asian countries, however, are

considering a legal ban on lead-based stabilizers. Therefore, we are expecting demand for stabilizers free of harmful heavy metal compounds to rise, and so we reinforced our production capacity last year by enhancing our intermediate material production facilities. We will also optimize the use of our customization capability and high mobility, based on the ADEKA Group's global network, to meet customer demand, increase sales and further expand our business.



**Hiroshi Kimura**  
President  
ADEKA FINE CHEMICAL  
(THAILAND) CO., LTD.

### 02

#### Functional polymers

Eco-clean products containing few organic solvents

## Water-Borne Epoxy Resin “ADEKA RESIN Series”

### Responding to Global VOC Emission Control

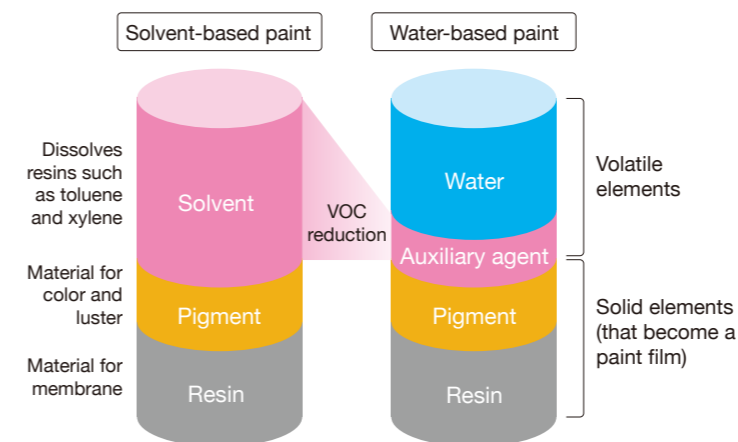
Water-borne epoxy resins, produced by dispersing an epoxy resin in water, are mainly used in paints and adhesives. Paints are roughly categorized into water-based products or those made of organic solvents, such as toluene and xylene. Since our water-based paints using water-borne epoxy resins only release water vapor, they do not have the pungent odor particular to solvent-based paints. Water-based paints, which do not emit significant amounts of volatile organic compounds (VOC) associated with sick building syndrome, are also environmentally

sound and therefore becoming a popular alternative to solvent-based paints.

### Toward a Clean Society with Water-Borne Epoxy Resins

ADEKA started developing water-borne epoxy resins in the 1980s. The technical challenge then was to evenly disperse a resin in water. We successfully applied our proven epoxy denaturing and emulsifying techniques to develop water-borne epoxy resins that exhibited the positive characteristics of organic solvents while also excelling in rust prevention, flexibility and weatherability. Our water-borne epoxy resins have since been widely adopted by paint and adhesive makers inside and outside Japan. We will continue to advance our technology and technical service to contribute further to the reduction of VOC emissions and better address customer needs while reducing environmental impact.

#### ► Differences between solvent-based and water-based paints



#### ► Comparisons between water-based and solvent-based paints

	Water-based paint	Solvent-based paint
<b>Advantages</b>	<ul style="list-style-type: none"> <li>Very little odor</li> <li>Low environmental impact</li> </ul>	<ul style="list-style-type: none"> <li>Affordable cost</li> <li>High performance including high durability</li> <li>Short drying time</li> </ul>
<b>Disadvantages</b>	<ul style="list-style-type: none"> <li>Requires particular technology for production with high performance</li> <li>Lengthy drying time</li> </ul>	<ul style="list-style-type: none"> <li>Pungent odor</li> <li>Emits significant amounts of volatile organic components associated with sick building syndrome</li> <li>Ignition risk</li> </ul>

# Unwavering deliciousness and security

Supply chain management handled in our Foods Division

Since we started producing margarines in 1929, ADEKA has been popularly recognized as the food ingredient maker with the squirrel logo. With our supply chain partners, we continue to produce safe, secure and delicious food products that live up to “The Taste You Can Rely on,” slogan for the “RISU BRAND”.



## 01 Sustainable procurement of palm oil



We inspect farms with a trading company.

**Procurement**  
PP. 27, 28  
With Business Partners

Palm oil is used as the main ingredient for most of our food products. To ensure the sustainable procurement of raw material, we joined the RSPO (Roundtable of Sustainable Palm Oil) and obtained its Supply Chain Certification in April 2018. Palm oil plantations are often associated with haphazard deforestation and other environmental issues as well as human rights concerns. As a palm oil purchaser, we strive to support ethical palm oil production as part of our commitment to the creation of a sustainable society.

## 03 Accurate product inspections incorporating high-level product analysis



Exterior observation and determination of constituent elements using an analyzer

**Quality and Safety Initiatives**  
PP. 23, 24  
With Customers

Prior to shipping, our products undergo final inspection by the Quality Assurance Section at each plant to confirm quality. Moreover, an additional check to ensure the accuracy of those inspection results is also performed regularly. Equipped with sophisticated analyzers, the Kashima Plant, the main plant in Japan, serves as a food analysis hub for the Group’s food production sites. This plant carries out highly technical analyses, checks and guidance on the analytical skills of other food production sites.

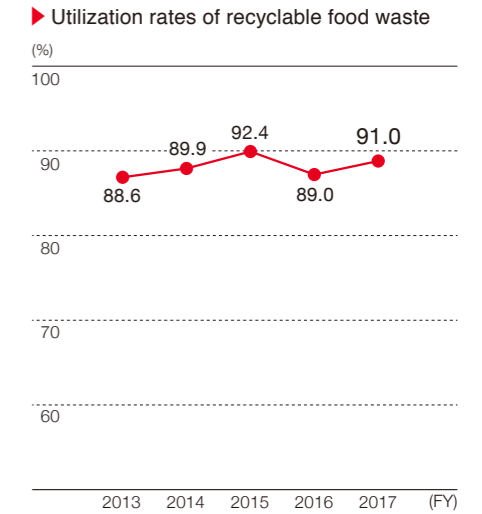
## 05 Toward a higher food recycling rate



Food product recycling (Akashi Plant)

**Waste Reduction Initiatives**  
PP. 34–37  
With the Environment

We collect slow-moving inventory food products and transport them using post-shipping cargo containers to the Akashi Plant. Processed oil and fat are separated into oil and water to recycle the separated oil into soap or fuel tablets and, when not separated, into fertilizers and other products. The Kashima Plant also sells oil collected through oil/water separation to a trading company for recycling.



### Procurement of Raw Materials

### Manufacturing

### Logistics

### Customers and Consumers

### Disposal and Recycling

## Supply chain



Thorough traceability in place

## 02 Production of safe and secure products



Monitor cameras are installed at ingredient input ports.

**Production**  
PP. 27, 28  
With Business Partners



Monitored 24/7.



Hygiene is ensured by providing particular routes to toilets.

For customer safety and security, we thoroughly operate our plants in accordance with international standards concerning quality, food safety and hygiene. With 88 percent of the Group’s food production sites certified under FSSC 22000, an international food safety system established by the Global Food Safety Initiative (GFSI), we are pursuing complete food safety, hygiene control and management.

## 04 Collaboration with logistics companies



Logistics Safety Meeting

**Logistical Initiatives**  
PP. 27, 28  
With Business Partners

We hold quarterly safety conferences to bring together ADEKA LOGISTICS CORP. and all logistics partners in order to discuss the physicality of our products as well as optimal temperatures and transportation toward preventing the recurrence of problems, addressing the remaining issues and ensuring the stable delivery of products. By following the same PDCA cycle across the entire logistics network beyond the Group, we are striving for the safe and secure delivery of products to our customers and their customers.

## 06 Thorough control of traceability



A QR code is attached to every raw material for control

We place high priority on traceability. At every stage from procurement to sales, our Foods division centrally controls its data, including supplier information and production methods. In the event of a quality problem, the plant’s quality assurance section tracks back production and logistics operations to detect the cause, identify the possible range of influence and promptly issue the necessary reports to customers. The information is shared by all production sites, and the Group’s Food and Sanitation Committee monitors remedial actions taken.



# Governance

The ADEKA Group, under its management policies of “Contributing to society through our business” and “Realizing harmony and co-prosperity with society,” strives to meet public expectations and demand. At the same time ADEKA Group is consistently enhancing its brand and corporate value by reinforcing its corporate governance and rigorously managing compliance.

## Corporate Governance

### •Basic Stance on Corporate Governance

The ADEKA Group places a top priority on the strengthening of corporate governance in order to realize its mission and management policies as well as achieve sustainable growth and enhance its mid- to long-term corporate value. Based on the audit and supervisory board system adopted under its management system, the company is strengthening its governance systems through efforts such as the appointment of independent external directors, introduction of the executive officer system and establishment of Management Committee.

[Management Policy/Code of Conduct](https://www.adeka.co.jp/en/company/philosophy.html)  
<https://www.adeka.co.jp/en/company/philosophy.html>

### •Compliance with Corporate Governance Code

In accordance with the ADEKA Group Corporate Governance Guidelines, the ADEKA Group is constructing a highly effective system of corporate governance that allows each organizational entity, including the board of directors and the audit and supervisory board, as well as executives and employees, to fulfill their respective roles.

[ADEKA Group Corporate Governance Guidelines](https://www.adeka.co.p/ir/library/pdf/cgg.pdf)  
<https://www.adeka.co.p/ir/library/pdf/cgg.pdf> (in Japanese only)

### •Assessment of the Effectiveness of the Board of Directors

ADEKA conducts an analysis and assessment of the effectiveness of the board of directors at the end of each fiscal year and discloses a summary of the results.

All directors and auditors are asked to complete a self-assessment questionnaire on the level of active discussions and strategic decision making/supervision functions of the board of directors. An assessment/analysis is made at a meeting attended only by the external directors and external audit & supervisory board members (collectively “External Officers”) based on the aggregated results from the questionnaire.

#### FY2017 Assessment Result

- The board of directors is adequately and efficiently managed.
- Stronger supervision is needed over corporate governance and compliance of Group companies, including those of overseas, to regularly monitor the progress and results of the mid-term management plan and large-scale investment projects and deepen the discussions on issues that need to be addressed.

### •Incentive Compensation for Directors

ADEKA's incentive compensation for directors is composed of remuneration paid as compensation for performing their duties, bonuses linked to performance of the company and individuals and “restricted stock compensation” introduced as a medium- to long-term incentive in June 2017.

### •System for Providing Information and Support to External Officers

The ADEKA Group continues striving to improve its support system for external officers so that they can deepen their understanding of the Group's business activities and make sound decisions. Soon after external officers are appointed, the Group holds an orientation session on the Group's businesses and financial conditions and organizes facility tours as needed. Reference materials for meetings of the board of directors are distributed. Also, important issues are explained by the secretariat in advance to ensure that external officers are fully briefed and can engage in constructive discussion.

### •Internal Control System

ADEKA has established an internal control system that allows management to properly manage company operations and assets. The Internal Control Promotion Committee is in charge of developing, operating and overseeing the internal control system based on the Companies Act and adequate financial reporting procedures based on the Financial Instruments and Exchange Act.

## Compliance

### •Basic Stance on Compliance

The management policies of the ADEKA Group support the effective response to changes in the social and managerial environment. They are intended to realize sound management and harmony with international society by sufficiently protecting stakeholders' interests. The Group's compliance management is intended to fulfill public expectations and demand through the provision of new value that is useful for addressing social issues by providing high-quality products and services created using ADEKA's unique technologies and through actively communicating with stakeholders as well as engaging in social contribution activities.

### •System for Promoting Group Compliance

The Compliance Promotion Committee meets quarterly to manage and monitor compliance at ADEKA. A system for instilling the Basic Compliance Policy across the company and swiftly collecting information has been established by appointing Compliance Leaders in each section. In addition, representatives and compliance officers of major Group companies meet twice a year for the Group Compliance Conference. Also, the company conducts a

survey on compliance awareness biannually, targeting all executives and employees of major Group companies. Survey results are used to improve activities in a united Group effort to enforce compliance rigorously.

### •Strengthening Group Compliance

In fiscal 2017, ADEKA also included executives and employees of the domestic affiliates of the ADEKA Group as subjects of the biennial survey on compliance awareness. The results were published on our intranet and individual interviews were held with the Group Compliance Council and representatives/compliance managers of each affiliate to provide feedback. We will use these surveys and their results to improve the quality of our activities for promotion and to ensure compliance is achieved throughout the Group.

### •Preventing Bribery

ADEKA is committed to combatting bribery through employee training and risk assessment based on the ADEKA Group Anti-Bribery Guidelines and related regulations.

[ADEKA Group Anti-Bribery Guidelines](https://www.adeka.co.jp/csr/en/anti-bribery.html)  
<https://www.adeka.co.jp/csr/en/anti-bribery.html>

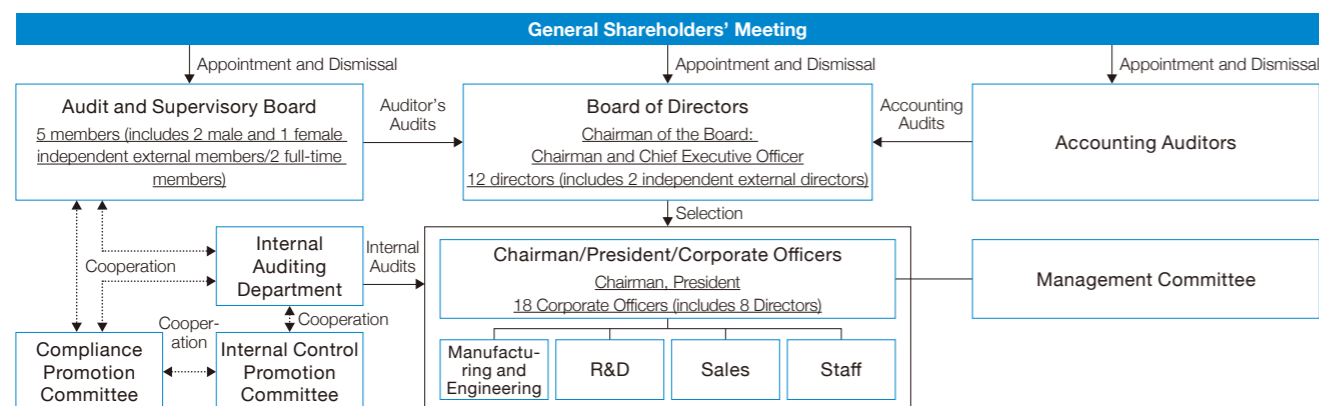
### •Operational Status of System for Reporting Compliance Issues

The ADEKA Group has maintained an internal reporting system since 2003. We received nine reports in fiscal 2017 from ADEKA Hot-line including, an external web-based service “D-Quest Helpline” that is now more widely known, with a new employment/labor hotline that opened in July 2017. The details of the reports and correspondence were also shared with auditors and external lawyers as required and reported to the board of directors. Moreover, we give careful consideration to ensure that individuals who use the systems are not placed at any disadvantage and are able to use the systems without undue concern.

## Respect for Human Rights

The ADEKA Group intends to create a society that respects the rights and diverse values of all stakeholders involved in our business activities. We are making every

### ► Overview of Corporate Governance as of June 30, 2018



effort to promote respect for the basic human rights of all stakeholders, including customers, business partners, local communities and employees. In order to eliminate any violations of human rights, such as child and forced labor, in the Group or by the domestic and overseas supply chain.

## Risk Management

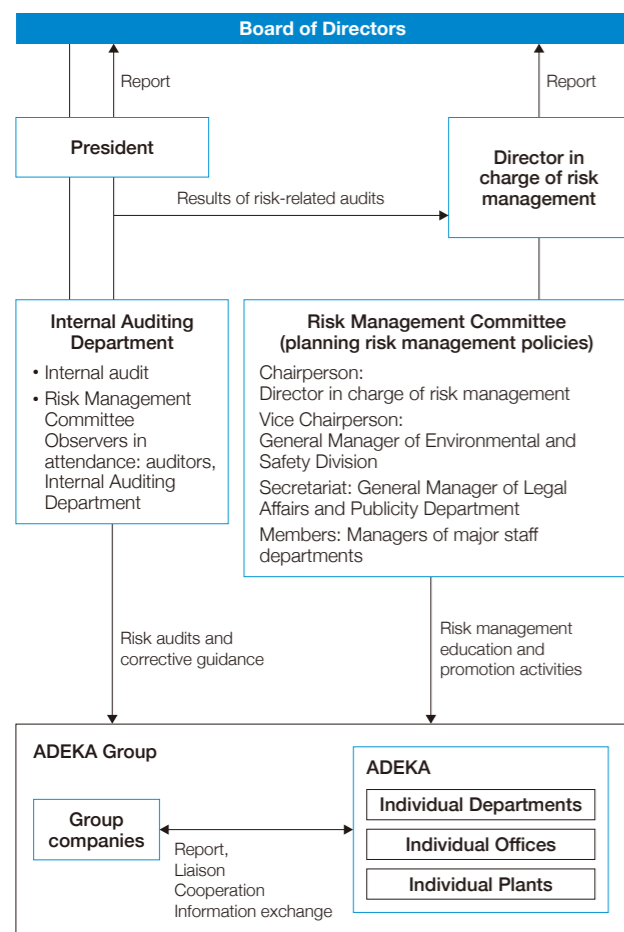
### Basic Stance on Risk Management

As business risks increase in the management environment, the ADEKA Group has been seeking prevention of the incidents and minimization of the damage thereof. This has been done by outlining a system for managing risks in the ADEKA Group Risk Management Manual focusing on prevention and countermeasure effort.

### Risk Management System

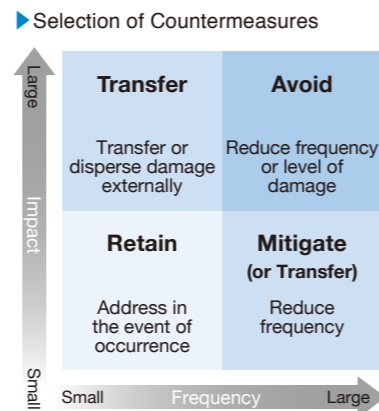
The Risk Management Committee, led by managers of the staff departments in the head office, regularly meets to formulate and manage the Basic Risk Management Policy.

#### Overview of Risk Management



### Risk Identification

We conduct risk assessment surveys of all department and office managers concerning the frequency and impact of risks. Risks associated with information management, security and business identified by risk mapping and countermeasures, are discussed by the Risk Management Committee.



### Theme Selection Method

A risk matrix is created using the survey, and the area in which the level of damage and impact is higher than 3 and level of frequency is above 2 is designated as a high-risk zone. Themes that should be addressed by the Risk Management Committee are selected from the priority issues.

### Crisis Management

The ADEKA Group Risk Management Manual also sets the framework and workflow for enabling each section and Group company to work in concert for quick and effective emergency response. In addition, ADEKA has published and distributed an Emergency Public Relation Manual with the aim of minimizing the loss of credibility in the event of any scandal, including incidents and accidents within the ADEKA Group.

### Business Continuity Management

The BCMS Committee takes the initiative on business continuity management for minimizing any damage to business assets and enabling the continuation or early recovery of business activities in the event of an emergency.

### Strengthening Information Security

In September 2017, an external lecturer, invited by the Information Management Subcommittee, conducted a seminar on information security to improve employee knowledge and awareness of information security, and 588 employees attended. To strengthen information security, the Information Security Policy and related regulations were also formulated and have been in effect since May 2018.

## CSR Management

We are developing a CSR promotion structure to contribute to society through our businesses under the fundamental CSR policy of the ADEKA Group, "Gentle harmony between people and technology" and "Harmony with society."

### CSR Management System

As stakeholder demand regarding our CSR practices grows along with rising public interest in CSR, we recognize that we need to embody the viewpoints and approaches of the ADEKA Group toward CSR.

In 2007, we established the CSR Promotion Committee under the Compliance Promotion Committee and have since been working to meet the demands of stakeholders, formulating measures to promote CSR activities and reviewing information disclosure practices through CSR reports. Identifying our commitment to "promote CSR and grow together with society" as one basic policy of the mid-term management plan launched in fiscal 2018, we plan to establish a CSR committee chaired by the president and supported by Group-wide efforts.

#### CSR Promotion Committee (as of the end of March 2018)

Constituent members	Executives and managers (total of 10)
Secretariat	Legal Affairs and Publicity Department
Number of meetings in fiscal 2017	2

### Spreading CSR Awareness Among Employees

For the purpose of deepening employee understanding concerning the interests expressed by stakeholders and our CSR activities, we invited an external lecturer to hold a CSR seminar in October 2017, and 453 employees attended, including those watching via a television broadcast.

The seminar followed an interactive format in which all attendees brought their CSR reports and studied the types of information that stakeholders are interested in while



CSR seminar

sharing reports from the standpoint of various stakeholders. A post-seminar survey confirmed that the seminar helped employees deepen their understanding of the importance of Group-wide efforts to promote CSR activities. In order to help all employees incorporate CSR efforts into their own frame of reference, we will continue our efforts to deepen the understanding of CSR among employees.

### Deepening the Understanding Towards SDGs

In March 2018, the CSR Promotion Committee held a study meeting on the SDGs with 15 members at the executive/manager levels in attendance. In relation to trends and examples of SDGs

initiatives, the members discussed the initiatives highly relevant to our business activities and matters that we need to address in the future.



SDGs study meeting

## Opinions Expressed at the Study Meeting

### SDGs that are highly relevant to ADEKA

- 5 Gender equality**  
Achieve gender equality in all positions throughout the Group
- 7 Affordable and clean energy**  
Improve production efficiency and achieve sustainable industrialization
- 8 Decent work and economic growth**  
Promote a healthy work-life balance and reduce long working hours
- 9 Industry, innovation and infrastructure**  
Enhance the quality of commodities by providing high-value added products
- 12 Responsible consumption and production**  
Ensure product safety and reliability and reduce impacts on human health and the environment
- 13 Climate action**  
Reduce CO<sub>2</sub> emissions related to our businesses
- 17 Partnerships for the goal**  
Develop partnerships (safety, human rights and environment) across the entire supply chain and promote joint research

### Initiatives that ADEKA Can Take in the Future

Strengthen communication beyond the boundaries of domestic and overseas companies, utilize AI and IoT technologies, promote environmentally friendly products and efforts to eradicate food crises, develop materials to achieve zero waste, improve employee work styles and so on.



# With Customers

As a materials manufacturer for chemical and food products, the ADEKA Group provides safe, high-quality products that live up to customer expectations. We strive to develop systems and products as we work together with customers to identify and tackle the issues they face.

## Product Safety Initiatives

### Quality and Safety Policy for Fiscal 2017

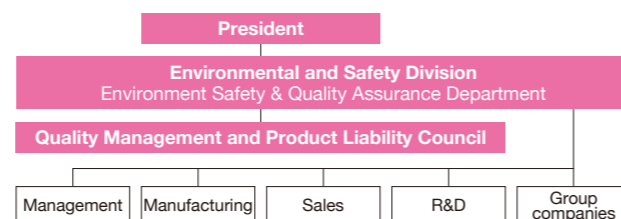
1. Ensuring legal and regulatory compliance (chemical substance management and food labeling)
2. Implementing measures to prevent reoccurrence of claims/complaints and horizontal deployment of measures within and between plants. Implementation of appropriate measures, particularly for contamination of foreign matter, by identifying the origin of occurrence and contamination route
3. Providing accurate product information based on strengthened management of information about raw materials and products

### Quality Management System

ADEKA's Quality and Safety Policy guides its sales, manufacturing, R&D and staff departments in their quality and safety initiatives. The company conducts quality and PL inspections\*1 to ensure the effective implementation

of initiatives. The results are shared at the Quality Management and Product Liability Council as part of a PDCA cycle.

### Overview of Quality Management System



### Reassessment of Quality Inspection Practices

In response to Keidanren's call on companies in Japan to examine and take the necessary actions for any incident of inappropriate quality control, the ADEKA Group conducted a quality control survey of all business departments and domestic and overseas Group companies. Analyzing the survey results, we found that there were no incidents of non-certified workers performing the work, including testing, which is limited to certified workers, nor of intentional tampering with test and other data.

### Targets and Actual Results for Fiscal 2017 and Targets for Fiscal 2018

Item	Targets for FY2017	Results for FY2017	Targets for FY2018
Full compliance with the Product Liability Act	• Develop country-specific SDS using the automatic SDS <sup>2</sup> creation system that complies with overseas regulations	• Developed part of country-specific SDS using the automatic SDS creation system	• Continue developing country-specific SDS using the automatic SDS creation system • Standardize a series of work from the acquisition of test data to the input of test values to the management system and thoroughly manage test values
	• Operate a system capable of reinforcing the management of product information	• Developed a system capable of reinforcing the management of product information	• Operate a system capable of reinforcing the management of product information
Management of chemicals	• Maintain appropriate compliance with domestic and international regulations • Survey and address the latest trends in Korea REACH <sup>3</sup> , the USA (TSCA), and Thailand (Chemical Substance Control Law) • Achieve compliance in countries introducing GHS <sup>4</sup> , including Canada (June 2017)	• Achieved compliance with the Japan CSCL priority assessment chemical substances (addition) • Submitted the performance report based on the revised TSCA <sup>5</sup> in the USA (February 2018) • Compliance with Canada's GHS is planned to be achieved in fiscal 2018 due to the delayed GHS implementation (June 2018)	• Maintain appropriate compliance with domestic and international regulations • Survey and address the latest trends in Japan (CSCL), South Korea REACH, the USA (revised TSCA), Thailand and Vietnam (new CSCL) • Achieve compliance in countries introducing GHS (Canada: June 2018, Mexico: October 2018, etc.)
	• Continue providing reliable product information to customers including product standard documentation	• Continued to provide customers with reliable product information based on product standard documentation and quality management	• Continue providing customers with reliable product information based on product standard documentation and quality management
Safety and assurance for food products	• Continue gathering all regulatory information related to food labeling standards and maintain reliable responsiveness	• Established in-house rules and operational plans	• Continue gathering all regulatory information related to food labeling standards and maintain reliable responsiveness

\*1 An initiative unique to ADEKA to check for the thorough deployment of quality and safety measures.  
 \*2 Safety Data Sheets containing information such as the name of the chemical substance, its properties, hazards and necessary handling precautions.  
 \*3 The Act on Registration and Evaluation of Chemicals of South Korea.  
 \*4 Globally Harmonized System of Classification and Labeling of Chemicals.  
 \*5 Toxic Substances Control Act.

### Promoting Quality Improvement Efforts

The ADEKA Group promotes voluntary activities to improve quality and safety by ensuring four areas of safety (occupational, quality, equipment and environmental safety). Our 22 production bases in and outside of Japan have obtained certification under ISO 9001 for quality management and FSSC 22000 for food safety. They are also working to obtain additional certifications for products and countries/regions as necessary to ensure customer

safety and satisfaction. In fiscal 2017, the high quality and safety of our products were further acknowledged through, for example, the receiving the first UL Verified Mark<sup>\*6</sup> of functional material for our intumescent-type flame retardant and acquisition of kosher<sup>\*7</sup> certification for some of the shortening products of our subsidiary in Malaysia.

\*6 Certification provided by UL LLC. for product performance and safety.  
 \*7 Certification for the safety of foods in accordance with the doctrine of Judaism granted after strict inspections of the raw materials and manufacturing processes.

## Joint Development with Companies in Different Industries

ADEKA and GH Craft Ltd., a Teijin Limited unit, have jointly developed the world's first fiber-to-composite molding process to laminate fiber-reinforced plastics (FRP) in open molds. We listened to a lecture on advanced technologies from Mr. Gaku Kimura, the late founder and president of GH Craft Ltd., combined our rapid curing technology using infrared radiation, and realized a molding process that is better than the conventional process in speed, manufacturing cost and strength. We expect to use the new process for producing windmill blades, transport equipment and infrastructure products. The two companies will create a market for composite materials made through the new process.

### VOICE

### FRP Joins Different Industries to Form Effective Partnerships



Masayoshi Gouke  
President, GH Craft Ltd.

When I was sounded out about the joint development project, my attention was caught by the concept of rapid curing resin described in the provided documents. As FRP's strength highly depends on fiber orientation, it was frequently molded manually. And the resulting FRP was delicate and something like a craft product, with a quality that largely relied on the skills of the molding workers. So, I believed that the rapid curing resin and automatic laminating technology would become a solution for achieving the intended strength of FRP with little variation in quality.

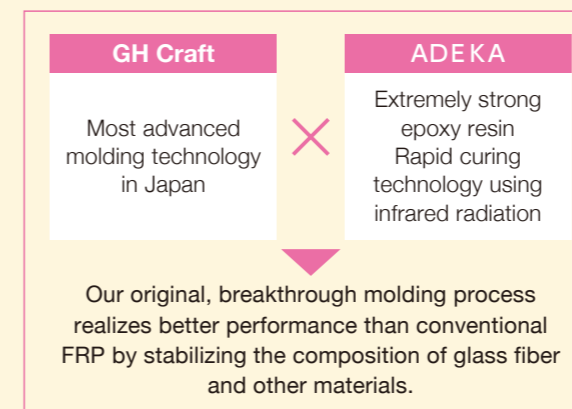
GH Craft has long engaged in the production of structures for various sectors using CFRP (carbon fiber-reinforced plastics). In the process, I learned about many new technologies as a result of working with people in different industries and trying production methods for various materials. Completely different materials supplement each other, reinforce their strengths and lead to the development of even greater strengths toward creating composite materials. I find it interesting to see more excellent products created through the interaction between cultures and industries.

We are a team that came together to develop a new FRP technology. Although we face a lot of difficult problems, I hope we remain good partners by continuing to develop interesting technologies, sometimes arguing and at other times laughing, or suffering and being delighted together.

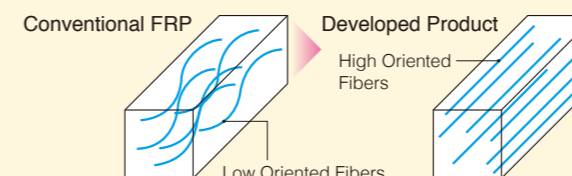


### What is FRP?

The combination of materials such as glass fiber and carbon fiber with resin makes FRP a light, strong material with the elasticity of resin and hardness and strength of fiber. It is expected to become a next-generation structural material in place of metal.



### Technical Concept

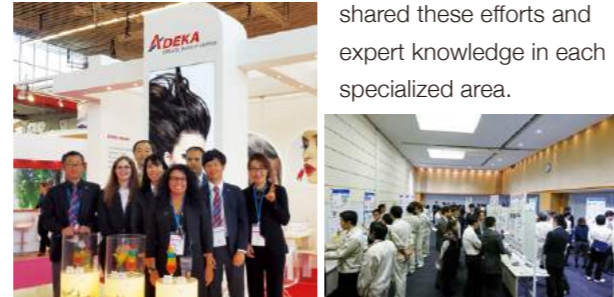


## Communication with Customers

The ADEKA Group plans to develop products that are beneficial to society through active communication with customers. Our full-time sales and other technical service staff are stationed at each site, and the emerging needs and issues collected through communication with customers are shared and reviewed across the Group, leading to the development of new products. As a materials manufacturer, we strive to provide more meaningful and valuable services to our customers, for example, by comprehensively introducing compounding and formulations that include products of other companies.

In addition, efforts are underway to create value

beyond the research laboratories. In fiscal 2017, we held discussion sessions on five themes: synthesis technology, emulsification/dispersion/powderization technology, high-purification/analysis technology, polymer technology and compounding/processing technology. And we conducted poster presentations that reported on our progress in research and development. Moreover, we



Cosmetics trade show in the Netherlands In-house technology poster session

shared these efforts and expert knowledge in each specialized area.

## Kaizen Assuring Four Areas of Safety



To ensure the sustainable development of the ADEKA Group, personnel in Japan and abroad are well aware of their mission to continue to guarantee security for customers in four basic areas of safety: occupational, quality, equipment and environmental. An increasing number of overseas Group companies participate in our semiannual workshops on *kaizen* initiatives, with a record six of them joining in fiscal 2017.

### Four Areas of Safety

#### Occupational Safety

We eliminate potential risks through risk prediction activities for the complete prevention of occupational accidents. Young and relocated employees are taught by experienced personnel who pass on their knowledge of technology and safety principles so that we can consistently maintain *kaizen* awareness. Continuous *kaizen* in the workplace environment is indispensable for employees to work in a healthy and safe manner.

#### Quality Safety

We identify the root cause of potential quality problems, implement *kaizen* and entirely prevent our own actions from causing problems. In addition, we maintain the sound management of the entire supply chain and exercise extra vigilance over chemical material management and food safety.

#### Equipment Safety

We prevent major accidents and ensure business continuity by assessing disaster risks and periodically taking steps to deal with aged equipment. We understand and brush up on our emergency response procedures and increase our security capabilities so that everyone can make an appropriate decision at any place and time.

#### Environmental Safety

We review and minimize the impact of the entire supply chain on the global environment and biodiversity. In addition, we reduce emissions and the generation of all materials that impact the environment and human health, such as greenhouse gasses and volatile chemicals.

### VOICE

#### Automatic Forklifts Lead to Occupational Safety

Ludovic Fleury  
ADEKA POLYMER ADDITIVES  
EUROPE SAS



Forklifts, while indispensable for factories, are associated with significant hazards. Our company has consistently strived to strengthen security through a number of preventive measures, such as separating lanes for pedestrians and forklifts, increasing forklift visibility and providing video-based safety training. As a further *kaizen* measure, we have introduced a revolutionary automatic forklift system, which decelerates a forklift when it detects a danger zone or person, further eliminating potential risk. This *kaizen* was the first of its kind at a production plant in southern France and has been taken up as a safety model by the labor security authorities.



## With Shareholders and Investors

Placing high priority on communication with shareholders and investors, who expect continued growth and profitability, the ADEKA Group strives to disclose corporate information in a timely and appropriate manner and maximize corporate value through business activities.

### Dialogue with Shareholders and Investors

#### • Proper Disclosure of Information

ADEKA strives to disclose accurate corporate information in a fair and timely manner to all stakeholders under its disclosure policy. Moreover, the Group actively discloses important information pertaining to company management, including business plans, to enhance understanding of ADEKA. The company observes a silent period preceding the announcement of its financial results to refrain from commenting on specific topics and from disclosing any unconfirmed information prior to the announcement. However, it will disclose information should it determine that the content of its financial results could significantly impact shareholders and investors.

Disclosure Policy  
<https://www.adeka.co.jp/en/ir/disclosure/>

#### • General Shareholders Meeting

We put great effort into maintaining an environment in which all our shareholders can properly exercise their rights. This includes early disclosure on the company's website and avoidance of holding our shareholder meeting on the same day as many other Japanese companies hold theirs, which facilitates productive dialogue with shareholders. To make easier the review of the agenda by overseas shareholders, we posted an English notice of invitation to the shareholders meeting to be held in June 2018.



The 156th Ordinary General Shareholders Meeting

#### • IR Activities

We actively conduct IR activities such as briefings and issuing materials on our financial results for institutional investors and analysts. In fiscal 2017, we held 134 IR meetings in addition to financial results briefing sessions, which are held semiannually.

#### • Listed in the SRI Index

ADEKA is included in the SRI (Socially Responsible Investment) index, which is used for making investment decisions based on CSR initiatives, and similar considerations.

- MSCI Japan Empowering Women Index (WIN)
- SNAM Sustainability Index

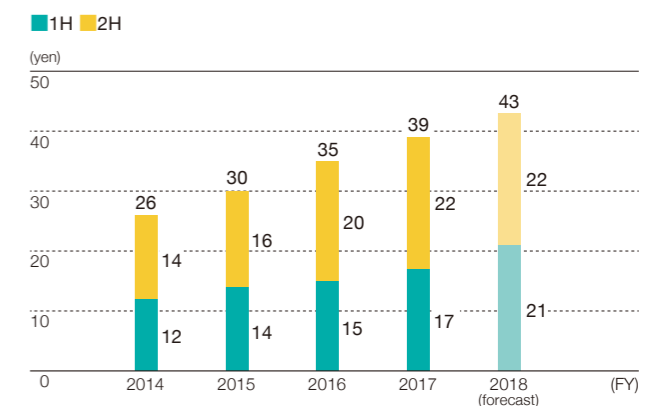
MSCI 2018 Constituent  
MSCI Japan Empowering  
Women Index (WIN)



#### • Returning Profits to Shareholders

ADEKA redistributes its profits to shareholders based on an overall consideration of the management environment, business performance and financial condition. With the understanding of its shareholders, ADEKA applies its internal reserves by placing priority on strengthening its management base and investing in growth businesses from a mid- to long-term perspective.

#### ▶ Annual Cash dividends





# With Business Partners

The ADEKA Group pursues coexistence and co-prosperity by building and maintaining just and fair relationships with its partners, recognizing that contributing to affluent lifestyles through products is what customers value and a shared purpose across the entire supply chain, including business partners.

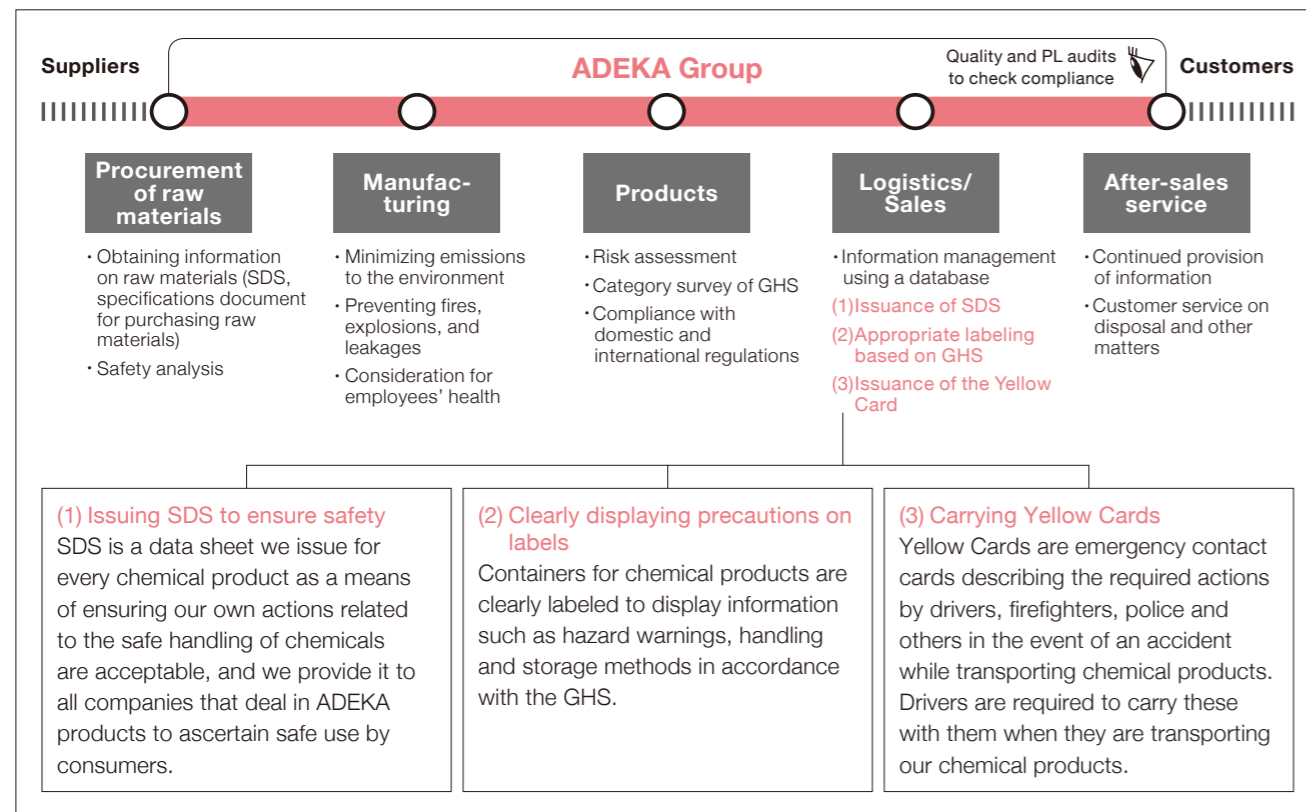
## Development of the Supply Chain System

### Stable Procurement of Raw Materials

Under its Procurement Management Standards, ADEKA conducts procurement activities based on trust and cooperation with its partners. In fiscal 2018, we plan

to revise the standards and formulate and release a purchasing policy to further stabilize procurement and establish a sustainable supply chain based on CSR. We will further strengthen our efforts to ensure that the inventory management for the stable supply of products is properly executed and that our suppliers and multiple procurement channels effectively safeguard the security of the inventory of raw materials used in our products.

### Supply Chain Diagram



### Targets and Actual Results for Fiscal 2017 and Targets for Fiscal 2018

Self-evaluation: ● Exceeded target ○ In line with target △ Below target

Item	Targets for FY2017	Results for FY2017	Self-evaluation	Targets for FY2018
Strengthen supplier management	<ul style="list-style-type: none"> <li>Strengthen BCP</li> <li>Continue conducting supplier surveys</li> </ul>	<ul style="list-style-type: none"> <li>Reduced risks by using multiple procurement channels</li> <li>Conducted a compliance questionnaire survey for new suppliers</li> <li>Conducted biennial audits of existing suppliers</li> </ul>	○	<ul style="list-style-type: none"> <li>Develop the Basic Purchasing Policy/Guidelines</li> </ul>
Strengthen global procurement system	<ul style="list-style-type: none"> <li>Develop a global purchasing system</li> </ul>	<ul style="list-style-type: none"> <li>Operated the Global Management System (GMS) throughout the Group</li> </ul>	○	<ul style="list-style-type: none"> <li>Develop a centralized data sharing system for purchase data (utilization of GMS)</li> </ul>
Sustainable palm oil procurement	<ul style="list-style-type: none"> <li>Strengthen measures to address the issues related to palm oil procurement</li> </ul>	<ul style="list-style-type: none"> <li>Conducted audits to obtain RSPO* supply chain certification</li> </ul>	○	<ul style="list-style-type: none"> <li>Obtained RSPO supply chain certification</li> </ul>

\*Roundtable on Sustainable Palm Oil: Established with the objective of promoting the growth and use of sustainable palm oil products.

## Thorough Supply Chain Management

### Control of Chemical Substances

In accordance with the Strategic Approach to International Chemicals Management (SAICM), the ADEKA Group intends to control and use sustainable chemical substances that are safer for humans and the environment. We promptly respond to stringent regulations introduced in the EU, USA and Asian countries and provide detailed information on chemical substances and their raw materials used in our products so that customers can use them confidently.

### Food Safety and Hygiene

As a manufacturer handling food-grade materials, the ADEKA Group pursues initiatives that ensure product safety and security while also effectively managing hygiene and complying with related laws and regulations. Of the Group's food production sites, 88% of them have obtained FSSC 22000 certification and are reinforcing quality management from the dual standpoints of food safety and food defense in order to prevent internal and external contamination as well as cross-contamination. In particular, we strictly control raw materials that contain allergens and manage information through a traceability system.

### Eliminating Conflict Minerals

As a company that seeks coexistence and co-prosperity with society, ADEKA does not purchase raw materials that contain conflict minerals. To prevent such use, we ask suppliers to respond to the Environmentally Hazardous Substance Survey when concluding a quality warranty agreement.

### Ensuring the Compliance of Suppliers

ADEKA ensures that suppliers understand its procurement policy by distributing its Risk Management Standards among food material suppliers and asking new suppliers to respond to the Compliance Survey.

### Safety Conference for Logistics Companies

To ensure that the ADEKA Group logistics system is capable of securely and safely delivering products to customers, we hold several safety conferences every year, bringing together ADEKA LOGISTICS CORP. and all logistics partners. Conference attendees report on accidents that have occurred, pursue the root cause by using the 5-Why analysis and discuss the validity and effectiveness of measures. At the safety conference for

lorry transport, efforts are being made to improve the emergency response capabilities of lorry drivers, such as offering attendees simulated training for handling leakage accidents.

### Initiatives for Developing a Global Logistics System

The ADEKA Group makes various efforts to achieve optimal global procurement. Our Global Management System (GMS) facilitates the sharing of purchase data at each global site. Furthermore, our regional purchasing staff cooperate with each other to integrate the procurement of common raw materials and share supplier information. We have also started dispatching our chemical purchasing staff to overseas bases. And we will further strengthen cooperative relationships with overseas bases through such opportunities as providing guidance, training local purchasing staff and conducting staff exchanges.



Procurement conference with the Singapore and Malaysia bases

### Forging Stronger Partnerships

The ADEKA Group will evolve in step with distributors who deliver products to our customers. Placing top priority on customers, we promote initiatives that transcend corporate boundaries, such as holding regular meetings for special agents, in which we explain our business policies and plans. Also, we organize intensive seminars for new employees in the chemicals and food businesses, both at ADEKA and at our distributors, where participants learn negotiation skills and acquire knowledge about products and technologies.



# With Employees

Our employees are the driving force for advancing the ADEKA Group's business into the global domain. We have a number of initiatives in place to ensure that our employees have a safe and pleasant work environment, where human rights and fair treatment are respected, and which cultivates a vigorous company that values the individuality and intrinsic character of each employee.

## Human Resources Principles

- Respect the human and personal qualities of employees
- Support self-realization by employees
- Develop human capital who have a positive social impact
- Develop employees with initiative

Support plan for nurturing the next generation/Plan on promoting the active roles of women in the workplace  
<https://www.adeka.co.jp/csr/ngns.html> (in Japanese only)

## Promoting Diversity

### • Human Rights in the Workplace

The ADEKA Group's Code of Conduct clearly emphasizes respect for fundamental human rights, and all employees are in compliance. Furthermore, throughout the processes of recruitment, hiring, and promotions, we respect the value of diverse human resources, regardless of nationality, age, gender, race or disability, and we have developed a level playing field where each individual can exert his or her personality and take on an active role. Work regulations were also laid down to respect the diversity and individuality of people and prohibit any form of harassment.

### ► Targets and Results for Fiscal 2017 and Targets for Fiscal 2018 (Employees)

Item	Mid-term target	Ultimate target	Targets for FY2017	Results for FY2017	Targets for FY2018
Work-life balance	Support plan for nurturing the next generation (April 2015–March 2018)	Target utilization of childcare leave: more than 2 male employees and more than 80% utilization rate for female employees	Continue disseminating the system by using internal bulletin board, etc., to raise awareness of childcare leave	5 male employees took childcare leave; for female employees, the targeted rate was fully achieved	Target utilization of childcare leave: more than 2 male employees and more than 80% utilization rate for female employees (action plan for FY2018–FY2020)
		Continue initiative to reduce overtime working hours	As part of work-style reforms, promote flexible work styles and reduce long working hours	Conducted personnel assignments to level the amount of work	Continue initiative to reduce overtime working hours
Promotion of women's participation and advancement in the workplace	Plan on promoting the active roles of women in the workplace (April 2016–March 2021)	Achieve a ratio of 5% female managers by 2021		Ratio of female managers in FY2017: 2.6%	Achieve a ratio of 5% female managers by 2021

### ► Targets and Results for Fiscal 2017 and Targets for Fiscal 2018 (Occupational Health and Safety)

Item	Targets for FY2017	Results for FY2017	Targets for FY2018
Workplace safety and security reinforcement	<ul style="list-style-type: none"> <li>• Continue information-sharing toward achieving zero-accident workplaces</li> <li>• Enrich the content of the safety awareness video</li> <li>• Ensure that employees understand basic rules on safety; strengthen onsite inspections</li> </ul>	<ul style="list-style-type: none"> <li>• Made repeated and persistent calls to be attentive at workplaces</li> <li>• Produced and distributed a safety awareness video to the Group's production sites and laboratories</li> <li>• Inspected worksites where accidents resulting in lost workdays had occurred. Distributed a safety action book to worksites in Japan and overseas, which has been used as training material.</li> </ul>	<ul style="list-style-type: none"> <li>• Eliminate unsafe activities (inadvertent actions and shortcuts) and unsafe conditions</li> <li>• Firmly implement measures to prevent recurrence of problems and promote horizontal implementation within each office and between offices</li> </ul>
	<ul style="list-style-type: none"> <li>• Repeatedly drill young employees and transferees and continue "know-why" training</li> <li>• Have all employees join emergency exercises</li> </ul>	<ul style="list-style-type: none"> <li>• Conducted "know-why" training at all plants and laboratories on an ongoing basis and confirmed the effectiveness of these educational activities through an audit</li> <li>• Had all employees engage in emergency exercises and reviewed procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Repeatedly drill young employees and transferees and continue "know-why" training</li> </ul>
	<ul style="list-style-type: none"> <li>• ADEKA Mother Plant and Environment Safety &amp; Quality Assurance Department will cooperate to continue providing safety support and guidance to overseas Group production bases</li> </ul>	<ul style="list-style-type: none"> <li>• Continued providing safety support and guidance through the ADEKA Mother Plant by sharing information on safety inspections conducted overseas</li> </ul>	<ul style="list-style-type: none"> <li>• Support activities for four areas of safety at bases in Japan and overseas and conduct safety audits</li> </ul>

### • Active Roles of Women in the Workplace

The ADEKA Group practices fair recruitment as well as performance assessment for promotions that are not influenced by gender bias. Also, we are taking steps to raise female employee business skills through efforts such as personnel rotation for career development, and we are creating a pleasant work climate that encourages their active participation.

In our recruitment activities, we hosted seminars to provide female science students with an opportunity to interact with female employees representing various generations. As a result, 18 women were among the 91 new graduates who joined the company in April 2018.



Seminar on promoting the active roles of women held for female science students

## VOICE

### Supporting R&D and Taking on New Challenges

Ren Shimizu  
 Photo Chemical Materials Department  
 Information Media Materials  
 Development Laboratory



While wondering if I should take a job in which I could use what I'd learned in vocational school, or a job that would be a completely new experience, I got interested in becoming a supporter of research, and this would allow me to take on the challenge of exploring a new field at the same time. And then I applied for the research support position at ADEKA.

I evaluate and analyze products, and I was initially concerned because I had never seen most of these instruments or agents before. But today, I can efficiently conduct evaluations and analyses. I find meaning in the job when data I have retrieved has been included in reference materials for customers or used for R&D. From now on, I hope to acquire more chemical knowledge and use it to support R&D.

### • Employment of Retirees

ADEKA has established a re-employment system for retirees up to 65 years of age who wish to continue working, with the exception of special circumstances. The re-employed retirees are a valuable presence in passing down traditions to the next generation and play an active role as experts equipped with the knowledge, experience, and skills that they have built up over their careers. The system supports various working styles, such as full-time work or three-day work weeks. In fiscal 2017, the rate of employment of retirees was 67% (of the three eligible retirees, two were re-employed).

### • Employment of Persons with Disabilities

The ADEKA Group continually strives to improve the work environment and expand job categories toward enabling disabled persons to exercise their capabilities and achieve self-realization. We will continue promoting the active employment of persons with disabilities. In fiscal 2017, the rate of employment of persons with disabilities was 1.81%.

### ► Human Resources Data

Item	Unit	FY2015	FY2016	FY2017
(1) Number of consolidated employees	Employees	3,241	3,375	3,551
(2) Number of non-consolidated employees	Male	1,355	1,373	1,415
	Female	206	220	224
(3) Ratio of female employees	%	13.2	13.8	13.7
(4) Employee average age	Male	39.1	39.0	39.0
	Female	37.7	37.5	37.6
(5) Average length of employment	Male	16.1	15.9	15.9
	Female	14.7	14.5	14.6
(6) Employee turnover rate	Male	2.8	2.6	2.7
	Female	2.8	2.2	3.4
(7) Ratio of female managers	%	2.7	2.9	2.6
(8) Number of new graduates hired	Male	46	59	62
	Female	3	16	13
	Total	49	75	75

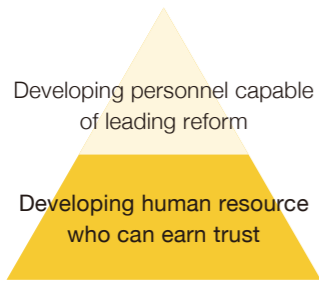
(1): ADEKA Group, (2)–(8): ADEKA



## Cultivating Human Resources

The ADEKA Group recognizes employees as key company resources. We therefore view employees as assets and respect the aspirations of each individual while striving to cultivate human resources that will lead the next generation.

### ▶ ADEKA's Philosophy of Human Resources Development



### • Cultivating Global Human Resources

We envision ourselves in the year 2025 as a global company that creates value for tomorrow and contributes to affluent lifestyles through innovative technologies. To become the company we envision, we are focusing on cultivating human resources with the ability to play active roles across countries and regions.



Weekly English classes held at the company (ADEKA)



Overseas training program (ADEKA)

### • New Employee Training Program and Mentoring System

To develop new employees into key company assets at an early stage and improve the leadership and training skills of mid-level employees, we maintain a mentoring system that assigns a senior employee to advise a new employee by offering guidance and ongoing support and communication.

### • Employee Career Development

We conduct training programs to facilitate the development of employee skills in such areas as management, general business competencies, and job specific skills. These are designed to contribute to the acquisition of a wide range of knowledge and to upgrade employee skills in accordance with positions. We have also adopted a program through which motivated employees can attend courses for working students at external organizations such as business schools to study marketing theory or to foster critical thinking. In fiscal 2017, 50 employees took part in the program.

### VOICE

#### Drawing on the Fruits of Training in Work in China

Koji Tomita  
ADEKA (CHINA) CO., LTD.



In the company's global human resource training, I developed my language skills and learned about the cultures and systems of the countries where the ADEKA Group has bases, in addition to accounting, labor policy and other knowledge needed to serve as a local representative. Dispatched to a Chinese location, I am now promoting global purchases, drawing on what I have learned during the training.

In China, has recently tightened environmental regulations, and material procurement sometimes faces difficulties. I am focusing on overcoming these challenges through teamwork with local staff and senior employees.

I draw on my experience in Japan, look to the social situation in China, which differs from that of Japan, and enlist the cooperation of ADEKA Group companies. Then I think through what I should do before taking action. As I do this, I hope to realize personal growth and contribute to the company.

## Promoting a Work-Life Balance

The ADEKA Group emphasizes the importance of a work-life balance, which encourages each employee to demonstrate their capabilities fully. Also, it is introducing a system to support flexible and diverse working styles and foster awareness.

### • Optimizing Working Hours

ADEKA ensures that the working hours of its employees are kept within reasonable limits by operating a card reader-type time management system to prevent unpaid overtime work and designating a "no overtime" day once a week. The labor-management committee and industrial doctors list employees who work overtime hours and hold individual consultations concerning their work as necessary. Through these efforts, we are working to reduce excessive working hours and improve the health and wellbeing of our employees.

### ▶ Childcare and Nursing Care Support Programs

Program	Details	Number of employees who used the program
Maternity leave	6 weeks before birth (14 weeks in the case of twins) 8 weeks after birth	7
Spousal maternity leave	3 days or less in cases where the spouse has given birth or less in cases where the spouse has given birth	61
Childcare leave	Until the child reaches 1 year of age, in principle an extension of up to 1 year may be approved under special circumstances (Calculated from the 1st day of childcare leave, special accumulated leave may be approved for up to 5 consecutive days. The period of special accumulated leave will be regarded as paid leave.)	9 (including 5 male employees) (percentage of employees who returned to work: 100%)
Childcare nursing leave	For employees raising children below grade 4 of elementary school, it is possible to take up to 10 days of leave per year, regardless of the number of children, for situations in which they have to take care of an injured or sick child (including vaccinations and health screenings for the child, as well as suspension of classes.)	50
Nursing care leave of absence	A total of up to 365 days for each person requiring care	0
Nursing care leave	A total of up to 20 days per year for each person needing care	5
Shortened working hours	Childcare: Until the end of the child's 4th year in elementary school Nursing care: A total of up to 365 days, combined with nursing care leave of absence (Both may be reduced up to a maximum of 2 hours in 15-minute units.)	26

The conditions underlined above are statutory levels.

### • Maintaining a Balance Between Work with Childcare or Nursing Care

ADEKA has introduced programs to support employees in balancing their work with childcare or nursing care and provide employees with benefits more favorable than those legally required. We also offer employees skill improvement training during childcare leave to prevent their leave from negatively affecting their performance evaluation and career development.

## Occupational Health and Safety

The ADEKA Group considers safety and security to be the most important issues for companies, and as such strives to establish a safe workplace by enhancing the awareness of all employees through the operation of OHSAS 18001, an occupational health and safety management system, the establishment of health and safety committees at every workplace, and the activities of the Zero Accident Committee.

### • Safety Achievements and Issues for Fiscal 2017

In fiscal 2017, the number of work accidents that occurred at the ADEKA Group was 21, an increase of 7 accidents compared to the previous fiscal year. Specifically, ADEKA and the domestic Group companies experienced fewer accidents resulting in lost workdays and more accidents resulting without lost workdays, while the overseas Group companies had more accidents resulting in lost workdays. In response, as in the previous year, we conducted onsite inspections at the overseas sites where accidents had occurred in order to review the results of corrective measures. And details on safety patrols at construction sites were shared among the sites, the ADEKA Mother Plant and the Environment Safety & Quality Assurance Department.

### ▶ Number of Accidents by Year

FY	2013	2014	2015	2016	2017
Accidents with lost workdays	6 (0)	8 (3)	8 (6)	9 (4)	11 (3)
Accidents without lost workdays	11 (8)	13 (9)	8 (5)	5 (4)	10 (9)

Figures in parentheses indicate data for ADEKA and domestic Group companies. Scope: ADEKA and subcontractors and the ADEKA Group's 13 production sites

**• Initiatives to Prevent Workplace Accidents and Injuries**

At each ADEKA plant, occupational health and safety activities are generally reviewed by an audit conducted by the president and the Environmental and Safety Division in the first and second half of the year, respectively. The necessary action plans are then formulated for the issues identified by the audits and implemented through the PDCA cycle of the management system. We have been conducting onsite inspections of our overseas production bases where accidents had occurred in order to provide corrective feedback and guidance. As part of our preventive measures, we plan to conduct audits once every few years, starting in fiscal 2018.

To prevent accidents resulting from the lack of experience of young employees and newly transferred workers, we created a new basic safe practices manual (in Japanese, English and Chinese in fiscal 2017) and distributed it to all Group locations. In fiscal 2016, we continued adding to the contents of the safety awareness video, through which employees review serious accidents.

Furthermore, all our new employees in the R&D and production areas are required to participate in training at the safety experience training facility, set up in the Urawa R&D Laboratory. A total of 60 employees have taken part in the training.



Basic safe practices manual (ADEKA Group)

Safety experience training

**Employee Health Management**

**• Strengthening Employee Health Management**

The ADEKA Group is strengthening the management of the health and wellbeing of employees.

We offer periodic medical checkups for our employees twice a year, with an employee attendance rate of 100%. Also, follow-up checkups are performed by industrial doctors and public health nurses based on the initial results. The ADEKA Health Insurance Association, in which the domestic companies and subcontractors of the

Group are enrolled, promotes the “second phase health plan,” which was focused on diabetes in fiscal 2018. The plan is intended to prevent the onset of a disease or progression to more severe conditions by identifying subjects at risk based on analyzing medical expense data and medical examination information of the policyholders as well as the advice of industrial doctors and holding periodic consultations to improve lifestyle habits. We will use this data and the results of health guidance to better understand the health risks of our employees and apply a PDCA cycle to continue to improve the health services.

**• Mental Health**

The ADEKA Group promotes mental health in the workplace through efforts such as implementing improvement activities in each office according to the results of an annual stress test. In fiscal 2017, mental health training for general staff was conducted to help managers better understand their roles and prevent mental illness among employees, and 370 people took part. To help employees suffering from mental illness return to work, we have introduced the ADEKA Return to Work Program, which is applied under a short-time work system. Moreover, we offer an appropriate return to work program based on a second opinion and the contents of periodic consultations with industrial doctors.



Mental health self-care training

**• Preventing Impaired Health from Chemical Substance**

New findings have been recently announced on the hazardous properties of chemical substances, such as related to the rising occurrence of bladder cancer. Information on such hazardous properties and revisions to the Industrial Safety and Health Law are immediately distributed to plants and laboratories as soon as they are available. This is followed by actions, such as confirming the use of such substances and their control status, in order to prevent employee impairment resulting from chemical substances.



**With the Environment**

The ADEKA Group, which uses chemical substances and palm oil as raw materials, cares about the environment throughout the process of procurement and from production to disposal. Toward realizing a sustainable society, we are developing products with less environmental impact and engaging in energy-saving initiatives.

**Basic Environmental Policy**

1. Strive to conserve resources and energy, recycle resources, and reduce the generation of waste, in order to prevent environmental pollution
2. Comply with domestic and foreign laws and regulations related to the environment, and at the same time strive to strengthen voluntary management and achieve further environmental conservation
3. Be aware that corporate activities are dependent upon the blessings produced through biodiversity, and seek to protect biodiversity
4. Take a proactive stance in procuring raw materials that impose a low burden on the environment, and contribute to the realization of a recycling-oriented society
5. Disclose the results of environmental conservation activities to society
6. Communicate with stakeholders and provide support to society and local communities in environmental conservation activities

**Environmental Initiative System**

Under the annual policy determined by the Environmental and Safety Division, each office of the ADEKA Group formulates an execution plan and follows a PDCA cycle to implement environmental management activities that meet local needs. The Environmental and Safety Division conducts an audit every year at our offices and affiliate plants inside Japan. In and after fiscal 2018, the division plans to expand the scope of its auditees to include our overseas operation sites and audit them once every a few years. Among the Group's manufacturing sites, the rate of environmental management system ISO14001 certification is 73 percent.

**► Environmental Initiatives System**



**► Targets and Results for Fiscal 2017 and Targets for Fiscal 2018**

Self-evaluation: ● Exceeded target ○ In line with target △ Below target  
((1): ADEKA; (2) & (3): ADEKA and eleven domestic Group companies)

Item	Targets for FY2017	Results for FY2017	Self-evaluation	Targets for FY2018
(1) Promote energy conservation	<ul style="list-style-type: none"> <li>Reduce energy intensity by 1.0% or more year on year</li> <li>Reduce CO<sub>2</sub> emission intensity by 1.0% or more year on year</li> </ul>	<ul style="list-style-type: none"> <li>Energy intensity at 0.1777 kl/t (1.0% reduction year on year)</li> <li>CO<sub>2</sub> emission intensity at 0.401 t-CO<sub>2</sub>/t (1.1% reduction year on year)</li> </ul>	○	<ul style="list-style-type: none"> <li>Reduce energy intensity by 1.0% or more year on year (seek a 3% reduction by FY2020 from the FY2017 level)</li> <li>Reduce CO<sub>2</sub> emission intensity by 1.0% or more year on year (seek a 3.0% reduction by FY2020 from the FY2017 level)</li> </ul>
(2) Reduce industrial waste	<ul style="list-style-type: none"> <li>Promote and maintain zero emissions*1 through recycling</li> <li>Promote appropriate disposal of industrial waste (reviewing contracts, inspecting subcontractors, preventing resale of food waste, and other actions)</li> </ul>	<ul style="list-style-type: none"> <li>Landfill disposal volume at 55.6 tonnes (0.11%*2 of industrial waste generated)</li> <li>Food waste management was added as a new audit item for the Food Division, and the regular audit confirmed that a proper control to prevent resale was in place</li> </ul>	○*2	<ul style="list-style-type: none"> <li>Promote and maintain zero emissions through recycling</li> <li>Promote appropriate disposal of industrial waste (reviewing contracts, inspecting subcontractors, preventing resale of food waste, and other actions)</li> <li>Attain the food recycling rate of 95% in FY2020 (target percentage for food manufacturers)</li> </ul>
(3) Promote green purchasing	<ul style="list-style-type: none"> <li>Achieve a green purchasing rate of 80% or more for 43 designated stationery items</li> </ul>	<ul style="list-style-type: none"> <li>77.3% (10,415 items among 13,469 items purchased)</li> </ul>	△	<ul style="list-style-type: none"> <li>Achieve a green purchasing rate of 80% or more for 43 designated stationery items or heighten the rate by 1.0%</li> </ul>

\*1 ADEKA defines "complete elimination" as landfill waste that amounts to less than 0.1% of the total volume of industrial waste output.  
\*2 Self-evaluated as "○" because the emission rate for business activities was 0.08%, although the rate exceeded 0.1% temporarily due to an increase in landfill disposal arising from construction.

## Initiatives on Global Warming Prevention

### •Initiatives for Reducing CO<sub>2</sub> Emissions

The ADEKA Group seeks to reduce its emissions of CO<sub>2</sub>, a greenhouse gas that wreaks havoc on a global scale.

Each of our operation sites has its own reduction target and is engaged in higher production efficiency or other improvement activities. Progress of those activities is checked through plant audits conducted by the president and the Environmental and Safety Division. In addition, before any renewal or investment is made for equipment, the Environment Safety & Quality Assurance Department examines whether the renewal or investment will contribute to the Group's energy conservation effort, bringing further energy saving.

In fiscal 2017, the ADEKA Group's CO<sub>2</sub> emission volume increased by 4.2 percent on the year as its production volume increased by 5.3 percent, although the CO<sub>2</sub> emission intensity was reduced by 1.1 percent. In addition, an inspection tour by the Energy Conservation Promotion Committee was conducted at the Kashima Plant during the year in an effort to share information about energy saving activities across the Group.

### •Energy Saving Activities

In fiscal 2017, six of the Group's seven production sites in Japan attained their energy intensity targets.

#### ►Initiatives by Major Sites in Fiscal 2017

Sites	Initiatives
Kashima Plant	<ul style="list-style-type: none"> <li>Reduced steam usage through steam pressure reduction</li> <li>Reduced electricity consumption by replacing lighting with LEDs</li> </ul>
Chiba Plant	<ul style="list-style-type: none"> <li>Installed steam flow meters to analyze steam usage volume</li> <li>Repaired steam trap failures</li> </ul>
Akashi Plant	<ul style="list-style-type: none"> <li>Replaced all lighting in the manufacturing building with LEDs (All lighting at the plant will be replaced with LEDs by the end of fiscal 2019.)</li> <li>Enhanced the management for steam traps to reduce their failure rate</li> <li>Reduced the volume of steam to heat raw oil tanks</li> </ul>

### •CO<sub>2</sub> Reduction through our Products

The ADEKA Group develops highly eco-efficient products as well as those that protect the environment. ADEKA SAKURA-LUBE is an automotive lubricant additive used in engine oil and grease that excels in raising fuel efficiency when added to engine oils. It indirectly contributed to the CO<sub>2</sub> reduction of approximately 1.32 million tonnes during fiscal 2017, a volume equivalent to six times the volume of CO<sub>2</sub> emitted by ADEKA's plants that year.

## Reduction of Environmental Impact

### •Preventing Water Pollution

The ADEKA Group seeks to preserve water resources that are essential for creating a recycling-oriented society. It prevents water pollution by collecting and recycling wastewater from its manufacturing processes and by complying with relevant laws and regulations to reduce the environmental impact. In fiscal 2017, our regular self-inspection detected water discharge that slightly exceeded the sewage discharge standard at R&D laboratory, but no water-quality abnormality was observed in the final inspection by the sewage bureau. The cause was determined and measures to prevent recurrence were introduced. Also, the laboratory staff were reminded of the standards and now must promptly notify the control section if an abnormal water solution is mistakenly discharged in a drain.

### •Preventing Air Pollution

The ADEKA Group's production and R&D divisions have strived to protect the environment by consistently working to prevent air pollution by reducing their emissions of SO<sub>x</sub>, NO<sub>x</sub>, dust and soot.

### •Properly Managing the Disposal of Industrial Waste

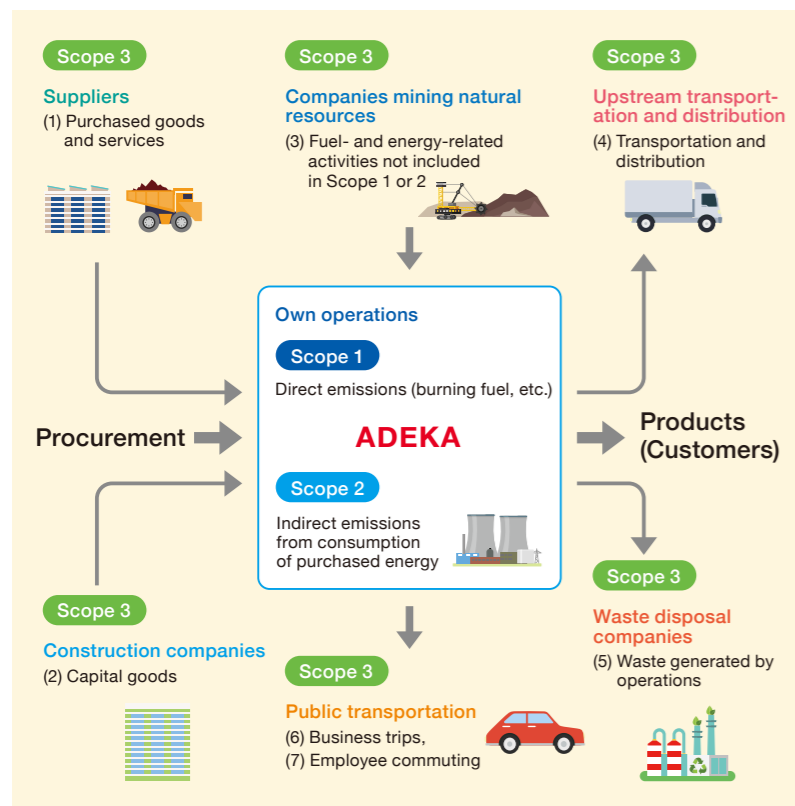
ADEKA and its domestic Group companies inspect their industrial waste disposal contractors on a regular basis to ensure that outsourced disposal of industrial waste is being conducted properly. Disposal management at our operation sites is audited by the Environmental and Safety Division, which also inspects waste disposal at contractors.

The Mie Plant reduced its environmental impact by switching the disposal of 1,790 tonnes of waste alkali from outsourcing to self-disposal.

### •Reducing VOCs through our Products

Since fiscal 1997, the ADEKA Group has quantitatively calculated the amounts of PRTR\*<sup>1</sup> substances used for and emitted from its manufacturing processes in order to manage them properly. Moreover, the Group is engaged in the research and development of products that contribute to the reduction of VOCs (volatile organic compounds) emissions. In particular, our water-borne coating material is widely used as a painting additive for buildings, contributing to the reduction of some 50 thousand tonnes of VOCs during fiscal 2017.

#### ►Flow Chart of ADEKA's Scope 3 Emissions



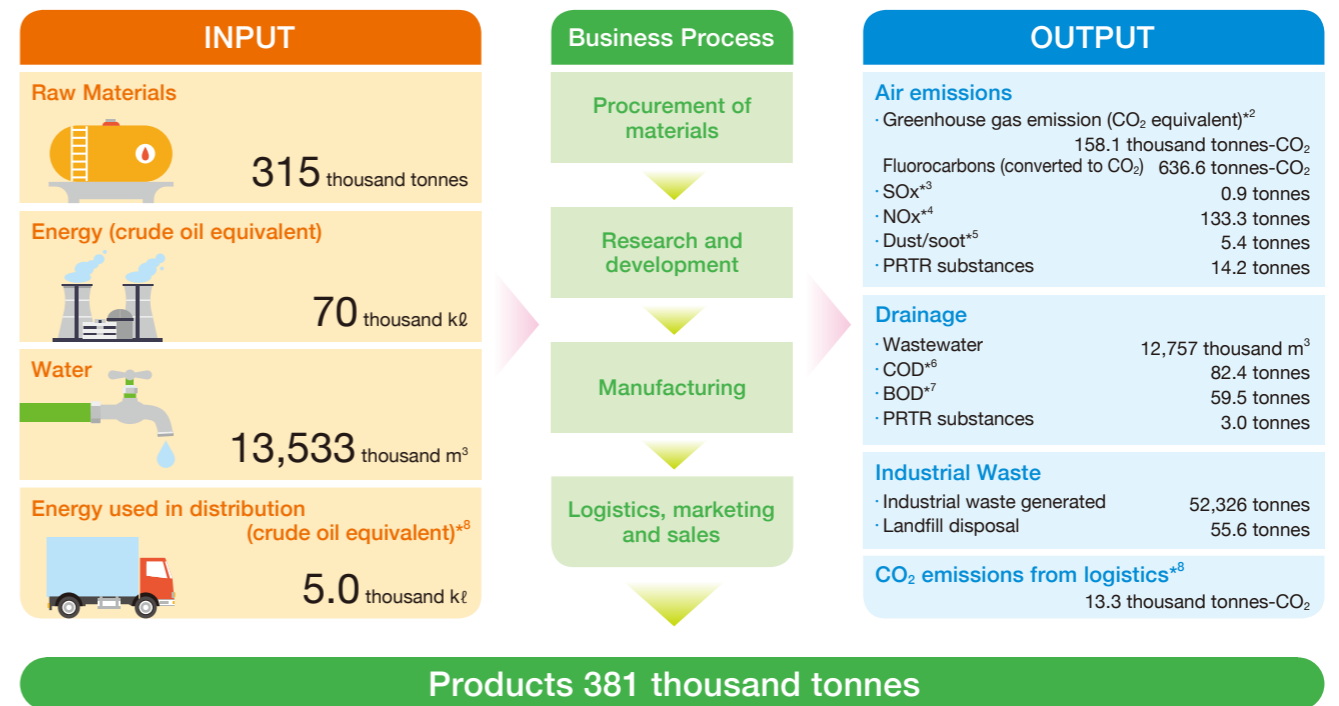
#### ►CO<sub>2</sub> Emissions and Scope 3 Breakdown (scope: ADEKA)

(Unit: thousand tonnes-CO<sub>2</sub>)

Scope category	Emissions
<b>Scope 1</b>	63.3
<b>Scope 2</b>	88.7
<b>Scope 3</b>	865.4
Category 1 Purchased goods and services	768.3
Category 2 Capital goods	59.4
Category 3 Fuel- and energy-related activities not included in Scope 1 or 2	12.5
Category 4 Transportation and distribution	13.3
Category 5 Waste generated by operations	11.1
Category 6 Business trips	0.2
Category 7 Employee commuting	0.6

**Total: 1,016.4 thousand tonnes-CO<sub>2</sub>**

#### ►Environmental Initiatives System (scope: ADEKA and 11 Group companies in Japan)



\*<sup>1</sup> The PRTR Regulation is a law to encourage companies, etc. to be aware of their emissions of certain chemical substances and improve their management thereof. \*<sup>2</sup> Total emissions arising from energy sources, non-energy sources, and processes. \*<sup>3</sup> Sulfur oxides generated during the use of fuels that contain sulfur. \*<sup>4</sup> Nitrogen oxide generated during combustion in plant boilers and incinerators. \*<sup>5</sup> Fine particles generated during the combustion of fuels and other materials. \*<sup>6</sup> Amount of oxygen consumed during the oxidation of organic substances. \*<sup>7</sup> Amount of oxygen required during the mineralization and gasification of contaminants in river water and industrial wastewater by microorganisms. \*<sup>8</sup> Scope: ADEKA

●Promoting Biodiversity

In accordance with the ADEKA Group Biodiversity Policy, the Group will implement initiatives to promote the preservation of biodiversity and its sustainable use.

The Fuji Plant has been maintaining a biotope within its grounds since fiscal 2014. The biotope is naturally inhabited by 68 species of plants, including the Asian lizard's tail.

ADEKA Group Biodiversity Policy

1. Consider biodiversity when procuring naturally derived raw materials
2. Promote activities for conserving biodiversity at our business premises
3. Strive to develop biodiversity-oriented products
4. Work in collaboration with local communities

Promoting the Modal Shift toward Logistics with Higher Efficiency

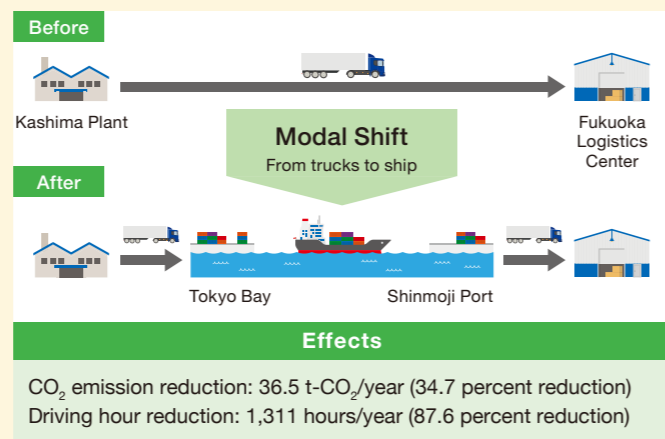
Since 2003, ADEKA and ADEKA LOGISTICS CORP. have promoted the Modal Shift (a government initiative to switch the modes of transportation from trucks to ships or railway) for the purposes of reducing impact on the environment and truck drivers and ensuring safe transportation.

In fiscal 2017, ADEKA in a joint effort with ADEKA LOGISTICS CORP. and SENKO Co., Ltd., switched the transport mode for food products manufactured at the Kashima Plant to ships equipped with refrigerators. As a result, 36.5 tonnes of CO<sub>2</sub> emissions and 1,311 hours of driving time were eliminated. This was recognized as a successful case based on the Act on Advancement of Integration and Streamlining of Distribution Business and won the Environmental Logistics Special Award of the Japan Association for Logistics and Transport.

ADEKA's modal shift rate\* is 7.5% as of the end of fiscal 2017, and we are working toward the target rate of 10%.

\*Proportion of goods transported by rail or sea among those transported for a distance of 500 kilometers or more.

▶ ADEKA's Modal Shift Outline

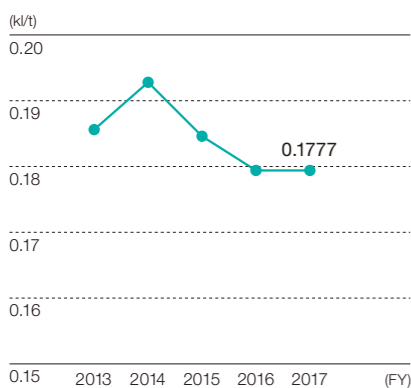


Environmental Logistics Special Award

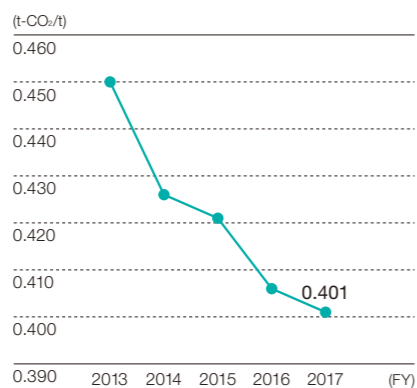
Environmental Data

Scope: (1) ADEKA (the manufacturing division alone)  
(2) ADEKA and 11 Group companies in Japan

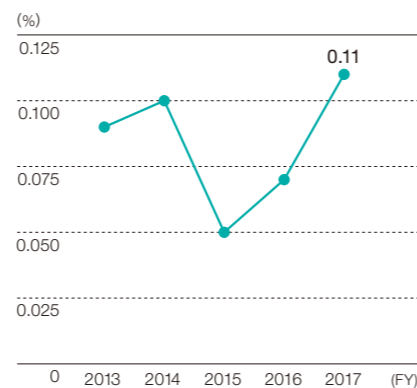
▶ (1) Energy Intensity Index



▶ (2) CO<sub>2</sub> emission Intensity Index (from energy consumption)



▶ (3) Zero Emissions Rate for Landfill Disposal of Industrial Waste



With Local Society



The ADEKA Group owes its existence to the local communities that have provided the company with a sense of understanding as well as cooperation. To be a good corporate citizen, the Group respects the culture and social environment of the countries or regions in and outside of Japan where it operates. Moreover, it seeks coexistence and co-prosperity with society by working alongside of and engaging in dialogue with it.

Activities for Local Communities

●Dialogue with Local Communities

At the ADEKA Group, we actively participate in social events because we believe that interacting with people in the communities results in valuable opportunities for dialogue.



Supporting a local NGO through a fund (AMFINE CHEMICAL CORP., U.S.A.)



Donating to a welfare organization (Kashima Plant)



A Christmas cake, made using our products, is given to a welfare organization (Akashi Plant)

Dialogue with Overseas Governments

Aiming to globalize further, the ADEKA Group has joined hands with its overseas Group companies in 12 countries or regions and pursues coexistence and co-prosperity with each of the communities in which those organizations are based.

ADEKA AL GHURAIR ADDITIVES LLC is the only Japanese manufacturer operating in Abu Dhabi, capital of the United Arab Emirates, and its plant and warehouse are equipped with cutting-edge technologies. By actively sharing information and knowhow with the UAE government, the Company is seeking to expand its business in the Middle East and contribute to the UAE's development under the guidance of the Japanese Embassy and amid ongoing negotiations between the two countries over bilateral investment treaties.

VOICE

From the UAE to the rest of the world, we are seeking prosperous coexistence with the UAE government



Mohamed Sayed  
Mohamed ElGouhari  
ADEKA AL GHURAIR ADDITIVES LLC

At the Company, we are receiving many people from the UAE government, and they have shown great interest in our 5S and other management systems as well as our state-of-the-art production lines and warehouse. Our sharing of information with them is highly recognized by the country's labor ministry, which raised our grade from C2 to B2. The B2 grade is the highest rank that can be granted to a company having fewer than 100 employees and whose parent company is located outside the UAE. We also had the honor of receiving visits from high-ranking officers of the executive office, including the president, who evaluated the Company with a high regard and great interest, and we were more than honored and delighted with that response.

We make our best efforts to improve our business quality and contribute to society.

## Security and Disaster Prevention

Security and disaster prevention are the most important responsibilities of ADEKA Group production sites that handle hazardous and toxic materials. To gain the trust of the local community, we not only comply with relevant laws and regulations but also rigorously manage processes, facility maintenance and voluntary safety.

### ▶ Drills conducted at major sites in fiscal 2017

Sites	Drill themes
Kashima Plant	Response to intrusion by suspicious people, night-time disaster, fire
Chiba Plant	Earthquake, chemical substance leakage, blackout
Mie Plant	Earthquake, fire
Fuji Plant	Response to the potential occurrence of the Tokai Earthquake
Akashi Plant	Blackout, fire-fighting
Soma Plant	Emergency evaluation, fire-fighting



Drill against a vapor explosion (ADEKA FOODS (SHANGHAI) CO., LTD., China)



Extinguisher-handling procedure contest (Mie Plant)

## For Children Who Carry the Future on Their Shoulders

The ADEKA Group engages in a broad range of activities in the hope of contributing to the healthy development of children as they head into the future. Also, in fiscal 2017 we actively supported students, who share in our quest for science, through a donation of 20.7 million yen.



Receiving neighborhood high school students as interns (AMFINE CHEMICAL CORP., U.S.A.)



Baking class with Japanese students (ADEKA (FOODS) ASIA SDN. BHD., Malaysia)

## Support for Areas Affected by Heavy Rains in July 2018

We donated 10 million yen through the Japanese Red Cross Society for the relief and reconstruction of areas damaged by heavy rains in July 2018.

We sincerely hope that these areas will see an early recovery.

## Third Party Opinion

Making Extraordinary Environmental and Social Considerations through Our Core Business

### Takeshi Mizuguchi

Professor, Faculty of Economics, Takasaki City University of Economics



Professor, Faculty of Economics, Takasaki City University of Economics  
Obtained a PhD from the School of Business Administration (Meiji University). Specializes in responsible investment and non-financial information disclosure. He assumed his current position in 2008 after becoming a lecturer in the Faculty of Economics at Takasaki City University of Economics in 1997, and then an Associate Professor in the same faculty. He worked in successive positions as Director of the Society for Environmental Economics and Policy Studies, Chair of the Green Bonds Working Group (Ministry of the Environment), and member of the ESG Financial Workshop (Ministry of the Environment). His publications include *ESG Investing—New Form of Capitalism* (Nikkei Publishing Inc.) and *Responsible Investment—Changing the Future through the Flow of Capital* (Iwanami Shoten, Publishers).

### Making a Positive Impact through Products

The most impressive part of the report was the Special Feature 1 “ADEKA’s chemicals are people and environment-oriented.” Volatile Organic Compounds (VOCs) used in paints and adhesives are often considered to be the cause of problems such as sick house syndrome. However, these risks can be reduced by using water-based epoxy resin paints and adhesives that do not include organic solvents. Heavy metals are used as stabilizers for PVC, which is not widely known among consumers. Nevertheless, replacing it with metal-free PVC can prevent the continued accumulation of metals in the environment.

These are excellent efforts to reduce various health risks and positively impact society through products. I hope to see ADEKA continue to broaden and expand these efforts. Organic solvents such as toluene and heavy metals are regulated under PRTR law, and I believe that ADEKA could work toward eliminating the use of all these substances in its products.

Companies often refer to CSR as their business itself; I believe this is not merely about contributing to society by providing products to the market. Obviously, companies will do well if they can make products that are helpful by meeting the needs of society. But what ADEKA is striving to further achieve is contributing to addressing environmental and social issues by minimizing the negative risks and impacts that the company might otherwise exert on them. I think this is what it means to practice CSR through the business, which is described with actual examples in the Special Feature of the report.

### Heightening Interest among ESG Investors

There has been a growing trend of ESG investing through which investors consider the environmental and social sustainability efforts of companies that are directly linked to business in their investment decision-making. In ESG investing, investors focus not only on the so-called social contributions outside of companies main business but also on the environmental and social impacts of their main businesses. This is because these impacts are linked to regulatory and reputational risks as well as

market risks, such as being screened out of the supply chain.

Therefore, it is important that companies engage in CSR at a deeper level that goes beyond merely preparing CSR reports as part of public or investor relations. This involves developing strategies and management plans that serve as the prerequisite for successful CSR implementation. And from this point of view, I think that ADEKA made the right decision to strengthen its organizational structure by identifying “promoting CSR and developing together with society” as one of the basic strategies of the current mid-term management plan. In future, I would like ADEKA to continue working toward achieving “integrated management” in which environmental and social considerations are linked to corporate value.

### Taking Action at a Global Level

Taking action to respond to global issues is indispensable from the viewpoint of ESG investing. For example, in the summer of 2018, a series of extreme weather events, including heavy rainfall and abnormally high temperatures, occurred in Japan and around the globe. Climate change is now the most serious global environmental threat. I understand that ADEKA has been working to achieve its energy saving goals and promote a modal shift in its logistics, which I heartily approve, but the severity of the problem is increasing to a level where steadily saving energy may no longer be enough. I think that it is time for ADEKA to consider participating in initiatives such as Science Based Target (SBT) and RE100, which I mentioned last year, and responding to the recommendations issued last year by the Task Force on Climate-related Financial Disclosures (TCFD), formed by the Financial Stability Board.

Deforestation linked to palm oil production is also a serious global issue. I think that becoming an RSPO member last year and being approved under the RSPO Supply Chain Certification System this year represented significant progress. Though, even including the RSPO, there is no one-size-fits-all solution to the problem. As other companies are extending their improvement activities to include the local primary refining companies under their procurement policy to achieve zero deforestation, I expect that ADEKA will also make further progress.

## Response to Third Party Opinion

Koji Tajima Director and Managing Operating Officer

I would like to express my gratitude for your valuable opinions on the ADEKA Group’s CSR activities. As a materials manufacturer, we are committed to creating sound products for all our customers and consumers and further promoting business activities that can be linked to the resolution of social issues through our products. To do so, we will make a Group-wide effort to disseminate the practice of “CSR through business” throughout the Group in order to raise the awareness of every employee.

Our stakeholders, including customers, have recently been

demanding specific measures to address social issues. We will clearly identify the issues that we need to address and establish “ADEKA’s CSR,” such as by considering participation in specific initiatives to become a company that can meet stakeholder expectations.

To address social issues at the global level, the ADEKA Group included “promotion of CSR” as a basic strategic measure of the mid-term management plan. In fiscal 2018, we will prioritize issues and develop measures and systems to raise corporate value.



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