

Water-Based Flexo Ink for High-Resolution Printing on Flexible Packaging (*Marine Flex LM-R*) Water-Based Water- and Oil-Resistant Coating Varnish for the Inner Surfaces of Paper and Paperboard Food Packaging (HYDRECT)

Special Feature Product Development Designed to Create New Value

The DIC Group is providing distinctive solutions that respond to evolving needs related to safety, peace of mind and the environment arising from social changes.

The realization of a sustainable society depends on our ability to respond to needs related to safety, peace of mind and the environment. The DIC Group is capitalizing on technologies honed over 111 years to develop distinctive solutions that directly address critical challenges, including the issue of marine plastics and the need to reduce use of substances harmful to the environment.

Packaging & Graphic

Water-Based Flexo Ink for High-Resolution Printing on Flexible Packaging (Marine Flex LM-R)

SDGs Goals 3, 12 and 13



Kenni



Realizing Gravure Ink–Level High-Resolution Printing and Significantly Lower VOCs and Emissions of CO²

Value Creation

Expanded use of environment-friendly water-based flexo inks in the area of food packaging

The market for packaging inks today is dominated by solvent-based products, which boast outstanding wettability on plastic film substrates and dry swiftly after printing. Nonetheless, demand for water-based, UV-curable and other environment-friendly alternatives is rising sharply, underpinned by the need to address key social imperatives, including the lowering of volatile organic compounds (VOCs), which pollute the air and impact working environments; the curbing of global CO₂ emissions; and the reduction of energy consumed in printing.

While printing on packaging films centers on gravure printing, an intaglio printing process, and flexographic printing, a type of letterpress printing, the latter is leading the global shift toward water-based inks. The principal reason for this is that flexographic printing uses less ink than gravure printing, meaning that even when water-based inks—which dry more slowly than solvent-based inks—are used, drying requires little energy, facilitating superior productivity, i.e., high-speed printing. However, the small volume of ink used makes high-density, high-precision printing difficult, as a result of which flexographic printing has traditionally been seen as inferior to gravure printing, spurring demand for improvements.

Against this backdrop, in fiscal year 2015 DIC and DIC Graphics created a project team to develop a water-based flexo ink for use on flexible packaging for food products, cosmetics and other items, which is made primarily with

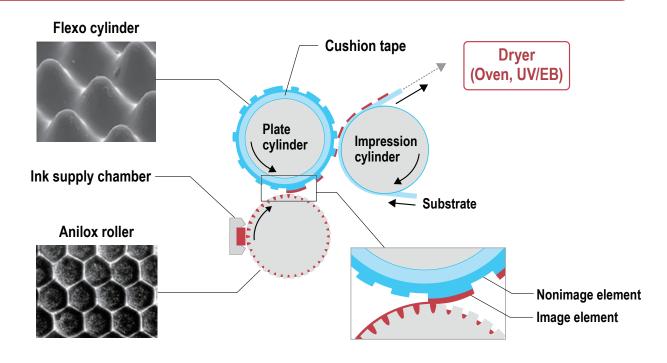
plastic film. Leveraging its proprietary mixing and dispersion technologies, DIC succeeded in developing an innovative ink that achieves a high optical density, lifting print quality to a level similar to that obtained with gravure printing. The Company also revamped the resin binder, beginning with its structure, to prevent the ink's high density from weakening adhesion during lamination and to increase the resolubility of ink remaining on the printing plate following transfer to the print substrate, thereby ensuring the stability of print quality. The new ink, *Marine Flex LM*, which was announced at a trade show in October 2016, upended many preconceived notions of flexo inks.



Material printed using Marine Flex LM

Flexographic Printing Process

- ① Ink is supplied to the anilox roller
- Ink is transferred from the anilox roller to the flexo cylinder
- ③ Ink is transferred from the flexo cylinder to the substrate
 ④ Ink dries (cures) on the substrate



A Distinctively DIC Response Securing the adoption of a new water-based flexo ink on the label for Suntory Tennensui

An innovative, environment-friendly offering, *Marine Flex LM* facilitated the DIC Group's entry into the market for packaging inks. However, sales volume fell short of expectations. One reason for this is the steep capital investment necessary for customers to switch from gravure printing to flexographic printing, as a result of which it is expected to take some time before the level of adoption in Japan catches up to that in Europe and the Americas. However, certain major beverage manufacturers have stepped up efforts to switch from oil-based gravure to water-based flexographic printing to reduce VOCs and CO₂ emissions and conserve energy used in printing on film for polyethylene terephthalate (PET) bottle wraparound labels and sought to expand the range of products for which such labels are used. Convinced by this trend that its instinct had not

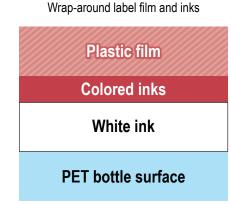
Ordinary multilayered flexible packaging film for food products



Ink is protected by being sandwiched between two layers of film.

been wrong, in July 2017 the project team steered its focus toward developing a new water-based flexo ink for wrap-around labels.

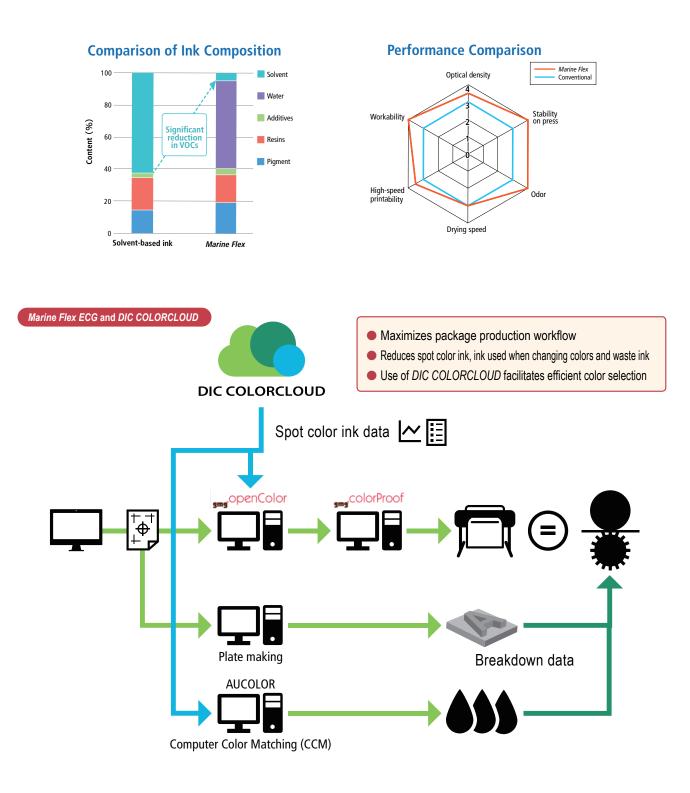
The way forward for the team remained challenging. While films for food packaging commonly consist of three film layers—a substrate and a top layer sandwiching an ink layer—that are laminated together, wrap-around labels comprise two laminated film layers, that is, an ultrathin substrate and a reverse-printed top layer. Moreover, PET bottles have ridges, which enhance strength, recyclability and other properties, so labels must also be able to withstand contact and vibration during transport from factory to warehouse or store and the integrity of inks and label designs must be maintained even if bottles become soaked when used outdoors.



The white ink printed on the side of the label that touches the PET bottle must deliver excellent resistance to moisture and abrasion.

To fulfill such challenging requirements, the project team leveraged the DIC Group's broad network, asking companies to which potential customers consign the manufacture of wrap-around labels to evaluate the physical properties of prototypes, repeatedly conducting rigorous tests and making continual improvements. The challenges here were many and included developing an exclusive white ink (for white underprinting, which creates opacity so that label design is not influenced by the color of the beverage), selecting a new curing agent, improving wet abrasion resistance during transport and ensuring stable large-lot print quality, i.e., by optimizing ink viscosity, plate surface drying speed and ph level.

The team resolved each of these challenges and in December 2018 achieved a water-based flexo ink that passed all material properties evaluation tests and boasted VOCs and CO₂ emissions (energy consumption) significantly lower than solvent-based gravure inks. The new ink and the *Marine Flex ECG* digital color management system, developed by DIC Graphics, together make it possible to use multicolor process printing instead of spot colors for printing on flexible packaging and thus to reduce wasted ink and improve operating rates for printing equipment. Soon afterward, the new ink—*Marine Flex LM-R*—was chosen by Suntory Beverage & Food Limited for use on the labels of the 2.0-liter bottles of its core *Suntory Tennensui* water. Shipments to Suntory began in May 2019.



Suntory: A Customer's Story

Sustainability Initiatives

Since its founding in 1899, the Suntory Group has sought to contribute to a sustainable society as a company committed to "*Mizu To Ikiru*" ("living with water"). To this end, we are committed to delivering products and services of the highest quality, as well as to promoting initiatives aimed at ensuring harmony with nature.

Based on its long-term Environmental Vision toward 2050, the Suntory Group has set targets for 2030 and has long been an industry leader in promoting efforts to reduce CO_2 emissions and its environmental impact. Having positioned issues related to water as its priority, the group is implementing a variety of next-generation initiatives in line with the Suntory Group Water Philosophy, including the Outdoor School of Forest and Water and the *Suntory Mizuiku* Natural Water Education program, with the aim of teaching people about the importance of water. Employees also contribute to society by taking part in tree thinning and planting activities at water sources.

The Suntory Group is also promoting the development and adoption of environment-friendly packaging through its "2R + B" (Reduce, Recycle + Bio) strategy, as well as through bottle-to-bottle recycling, and has introduced PET bottle caps made with 30% bio-derived materials. Such initiatives continue to earn high marks.

Reducing the Environmental Impact of Packaging

The Suntory Group is working to reduce the environmental impact of its packaging. The focus of these endeavors has shifted from making conventional materials lighter, thinner and more compact to modifying existing and developing new materials. With consumer awareness of sustainability and rising demand for recyclable packaging and easily removable labels rising, the environmental soundness of products is expected to directly affect end users' purchasing trends in the years ahead.

In addition to ensuring stable supplies, enhanced quality and cost competitiveness, the Suntory Group looks for materials that offer a lower environmental impact. This belief was behind its recent decision to adopt DIC's *Marine Flex LM-R* water-based flexo ink for printing wrap-around labels. The decision to print labels with water-based flexo inks presented several challenges, including developing technologies to ensure the same high definition and productivity as gravure inks, but the outstanding environmental performance of *Marine Flex LM-R* encouraged us to take the plunge. We thus became the first company in the beverage industry to adopt water-based flexo inks for this purpose.



Outdoor School of Forest and Water

The Suntory Group places a strong emphasis on environmental protection in all areas of its operations. In considering whether to adopt water-based flexo inks, we weighed up the risk of being the first company to do so against the risk of not taking this step. Recognizing the potential impact of environment-friendly water-based inks on the packaging industry as a whole, we became the first company to adopt DIC's *Marine Flex LM-R* waterbased flexo ink. By more quickly developing increasingly innovative environment-friendly packaging, we can help pass on a sustainable global environment to the next generation. Accordingly, our focus is on driving our industry forward, rather than on maintaining the status quo. We look forward to seeing DIC continue to actively disseminate information on the environmental benefits of water-based flexo inks and encourage their use, as well as to raise awareness of environmental issues. Environment-friendly materials will continue to be an important consideration for packaging manufacturers, so we also look forward to new ideas and suggestions from DIC in the years ahead.



General Manager, Packaging Material Department, Supply Chain Management Division, SUNTORY MONOZUKURI EXPERT LIMITED **Hiroyuki Iwai**



Packaging Material Department, Supply Chain Management Division, SUNTORY MONOZUKURI EXPERT LIMITED Fuyuko Wakaumi

KEY PERSON from DIC

We seek to build win-win relationships with new clients.

For this project, we secured the cooperation of companies to which customers consign label manufacturing and of printing companies—which together form the core of the wrap-around label supply chain—and thus benefited from their expertise in evaluating the physical properties and in flexographic printing with water-based inks. In this and other such efforts, we seek to build win–win relationships with new clients while at the same time deepening collaboration in both human and technological terms. This project also reinforced our belief that such an approach will be crucial to realizing the pledge to deliver packaging solutions that contribute to sustainability for the global environment outlined in DIC111.



Liquid Ink Product Group, Osaka Branch, DIC Graphics Corporation Toshiya Fuji

KEY PERSON from DIC

Packaging innovations aligned with Brand Owner's needs.

The Marketing Management Unit started to develop water-base flexo ink for flexible packaging for Suntory, one of the biggest beverage companies in Japan. The direct marketing toward brand owners was the key success for entering the new business for pet bottle's label ink. The road toward this achievement was not easy, but the marketing team was able to accurately grasp the needs of Suntory, streamline the overall supply chain by cooperating with DIC Graphics and the Logistics Materials Sales Group, as well as the sales and technical units. Therefore, by approaching and listening to Suntory, the team could select the specific target products and provide the appropriate solution to this brand owner.



Unit Leader, Next-Generation Packaging Material Business Unit, New Business Development Headquarters, DIC Corporation Yoshiaki Fukuda

KEY PERSON from DIC

Our task was to leverage the convenience of *DIC COLORCLOUD* in the area of water-based flexo inks.

Marine Flex ECG, which was developed to help expand the popularity of our water-based flexo ink, is a digital color management system that improves the efficiency of packaging production, reduces wasted ink and improves operating rates for printing equipment. Our existing *DIC COLORCLOUD*-based color management system, which was launched in fiscal year 2016, had already earned high marks from designers and printing floors for reducing time allotted to the process of trial and error and shortening time required for color print checks. The DIC Group's ability to provide superior digital solutions is one of its key strengths.



Sales Team 3, Tokyo Liquid Ink & Coatings Sales Group 3, Liquid Ink & Coatings Division, DIC Graphics Corporation Akihiro Tsuchiya

KEY PERSON from DIC We sought to maximize the DIC Group's extensive network.

In addition to printing inks, resins and packaging materials, the DIC Group's operations encompass the production and sale of plastic pallets and containers used in distribution. Such logistics materials are sold directly to a variety of customers, including beer brewers and large rental companies. Thanks to the extensive business contacts we have built up in these businesses, we enjoy direct access to the voices of brand owners, ensuring that we are aware of overall trends in the industry.

The distinctive, broad network that the DIC Group has built as an organization handling a wide range of products is one of the factors behind the success of this project. I look forward to continuing to propose solutions that brand owners seek from us, as we did in the case study involving the adoption of our water-based flexo ink presented in this special feature.

Manager, Logistics Materials Sales Group, Composite Material Products Division, DIC Corporation Hiroki Mitsuhashi

KEY PERSON from DIC Material properties evaluation tests posed a higher hurdle than we had expected.

For DIC's ink to be adopted for use on wrap-around labels, it absolutely must pass the material properties evaluation tests of the companies to which potential customers consign the manufacture of labels. These tests posed a higher hurdle than we had expected and we failed repeatedly. However, the evaluation process helped give us a solid understanding of just how harsh an environment PET bottles are placed in between shipment from the factory through to sale and use. Balancing print quality and environmental performance is a difficult challenge. I look forward to applying the experience I gained through this project to the development of new packaging inks.



Manager, Dispersion Technical Group 4, Dispersion Technical Division 1, Tokyo Plant, DIC Corporation Rikei Sasaka

Packaging & Graphic

Water-Based Water- and Oil-Resistant Coating Varnish for the Inner Surfaces of Paper and Paperboard Food Packaging(HYDRECT) SDGs Goals 13 and 14





Increasing the Recyclability of Food Packaging to Reduce Waste and Contribute to Environmental Conservation

Value Creation

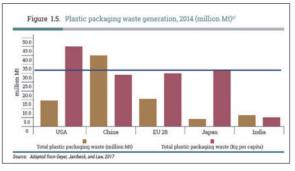
Packaging materials that bring safety and peace of mind

Paper and paperboard food packaging such as hamburger wrappers and take-out boxes for pizza and donuts are commonly coated with a thin layer of polyethylene to prevent grease from oozing out and creating a mess. However, because polyethylene is left behind when such packaging is chemically dissolved for recycling, it must be removed beforehand using a process called precipitation. In Japan, recovered paper and paperboard laminated with polyethylene is classified, based on its suitability for recycling, as rank B* and applications for the resulting recycled paper are limited.

* Classifications are determined by the Japanese Federation of Printing Industries and contained in its guidelines for recyclable printed matter.

Post-consumer plastic that finds its way into rivers and streams and eventually into the ocean as a consequence of improper disposal, among others, continues to increase sharply as the global population expands. Microplastics—tiny fragments of plastic created through degradation by waves, UV light and other processes that break down larger pieces of debris—have been identified as a particular concern because of the danger to people and ecosystems caused by their entry into the marine food chain. Accordingly, one target set forth in the Sustainable Development Goals (SDGs), adopted at the UN Sustainable Development Summit in 2015, is to "prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution" by 2025. This has since become a critical theme, with participants in the 2018 G7 Summit, held in Charlevoix, Quebec, Canada, agreeing to reinforce related initiatives.

Plastic Packaging Waste Generation per Capita (2014)



Source: Plastic Packaging in Japan and Overseas (Presentation materials), Ministry of the Environment, Japan (Published in Japanese only; English translation of title by DIC)

Having recognized this as an urgent challenge for the chemicals industry, DIC has begun developing products that will help address the issue of marine plastics by reducing waste from used food containers by increasing the recyclability of post-consumer food packaging and the materials therein. In October 2018, the Company announced the first of these, *HYDRECT*, a highly recyclable water-based coating varnish that boasts excellent resistance to water, oil and heat when coated on paper. In February 2019, DIC kicked off its new medium-term management plan, DIC111, to guide the Company from fiscal year 2019 through fiscal year 2021, that includes a pledge to deliver packaging solutions that contribute to sustainability for the global environment.

A Distinctively Developing HYDRECT, an FDA-compliant water-based coating varnish that is highly recyclable and boasts excellent resistance to water, oil and heat

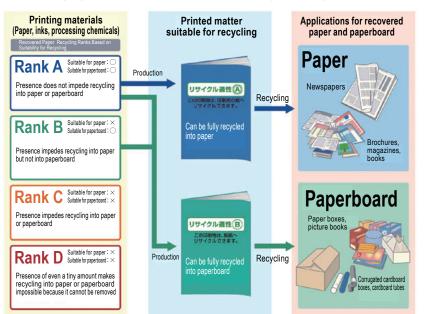
"With the Tokyo 2020 Olympics and Paralympics imminent, the improper disposal of waste plastic in Japan is an issue gaining considerable attention. Isn't there any way we can replace plastic films laminated on paper food containers with a coating that is less harmful to the environment?" DIC's efforts to develop a new coating varnish were inspired by a customer query addressed to DIC Graphics in 2017. This entreaty also underscored growing global calls for sustainable packaging. The development team began looking at ways to address this issue and soon discovered a promising candidate in a coating developed by DIC Group company Sun Chemical that boasts outstanding water and oil resistance, is compatible with both flexo and gravure printing, and can be recycled into paper. However, there was also a downside: Sun Chemical's coating contains a substance that violates Japan's Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. It was thus necessary to replace this substance and adjust the coating's composition.

selected and tested, a process of trial and error that eventually led to the successful commercialization of the product in autumn 2018.

Paper and paperboard food containers coated with the new varnish demonstrate revolutionary performance features. Resistant not only to liquid and oil but also heat, these containers can be used in both regular and microwave ovens. Moreover, the degree of oil- and heat-resistance is significantly higher than that of conventional water-based varnishes. The ingredients used comply with the standards stipulated in both Japan's Food Sanitation Act and the U.S. Food and Drug Administration (FDA) and there is no danger of VOCs being released during the coating process. Perhaps most important, because the varnish dissolves together with paper in a sodium hydroxide solution, post-consumer paper and paperboard containers coated with the varnish are classified as rank A, meaning that they can be recycled into paper or paperboard.



Recyclability of HYDRECT Paper coated with HYDRECT dissolves completely in chemicals (left), while that laminated with polyethylene does not (right)



Switch from polyethylene lamination to HYDRECT improves suitability for recycling from rank B to rank A

Source: Guidelines for Recyclable Printed Matter (September 2014 edition), Japanese Federation of Printing Industries (Published in Japanese only; English translation by DIC)

DIC's new coating varnish, *HYDRECT*, was one of the products on exhibit in DIC's booth at the Tokyo International Packaging Exhibition 2018 (Tokyo Pack 2018). Presentations were given in which donuts and *gyoza* (pot stickers) in prototype packages were heated in a microwave, prompting many booth visitors to pick up the packages and pepper booth staff with questions. Multiple inquiries were received from packaging-related companies, as well as from trading companies that do business with paper manufacturers and convenience stores, a strong indication of both the high level of interest in addressing the issue of plastic pollution and potential demand for *HYDRECT*. At present, a wide range of paper and paperboard food container manufacturers and processing companies are exploring the adoption of *HYDRECT*.



KEY PERSON from DIC

We will continue working to expand the areas where *HYDRECT* can be used instead of polyethylene.

Since the launch of *HYDRECT*, I have been particularly surprised by the number of inquiries for applications that we had not even imagined. Although the greatest advantage this varnish offers is that it is an alternative to polyethylene, it cannot currently be used on some types of containers because of their shape. We are thus promoting ongoing efforts to modify the product with the aim of expanding compatibility, not only for containers but also for other applications.



In April 2018, the Packaging Solution Center was established at the Tokyo Plant, where I currently work, to advance collaboration with customers in the development of packaging. Looking ahead, we will continue working closely with DIC Graphics, which operates the facility, as we take on the challenge of developing next-generation packaging materials like *HYDRECT*, taking inspiration from feedback received from visiting customers.

Manager, Dispersion Technical Group 3, Dispersion Technical Division 1, DIC Corporation Hiroshi Kikuchi

KEY PERSON from DIC

HYDRECT is a product that truly demonstrates the collective strength of the DIC Group.

The technical cooperation of Sun Chemical was a key factor in our success in developing a water-based varnish that can be coated onto paper, eliminating the need for polyethylene lamination, in what was really a very short time. Sun Chemical provides a broad range of packaging solutions, focusing on markets in Europe and the Americas, while we are doing the same in Japan, the PRC and the Asia–Pacific region. By pursuing collaborative product development and sales initiatives like this, we are confident that we will be able to provide our globally active customers with a wealth of options to resolve key issues. We very much look forward to developing new products like *HYDRECT* that truly demonstrate the collective strength of the DIC Group.



Manager, Team 5, Tokyo Liquid Ink & Coatings Sales Group 1, DIC Graphics Corporation Jun Naitou

KEY PERSON from DIC

Our goal is to capitalize on the Tokyo 2020 Olympics and Paralympics to uncover new demand.

The tremendous reaction to *HYDRECT* since its launch has given me a true sense of the magnitude of customers' expectations regarding sustainable packaging materials. One reason for this is the Tokyo 2020 Olympics and Paralympics, which will welcome visitors from around the world. The Games will provide an opportunity for companies in Japan to offer a wide range of packaging and packaging materials and to highlight the sustainability of their products. DIC is no exception. *HYDRECT* embodies one of the key propositions set forth in our new medium-term management plan, DIC111, which describes our commitment to providing "packaging solutions that contribute to environmental sustainability." Our goal is to capitalize on the Games to uncover new demand by offering products that reflect current trends and to further cultivate awareness of the DIC brand in the paper container market.



Supervisor, Team 2, Printing Inks & Supplies Sales Group 3, Offset Inks Division, DIC Graphics Corporation Takafumi Yamazaki

Topic

Sun Chemical developed *SunColorBox*, a unique set of tools and services that enable consistent and accurate digital color communication

Sun Chemical Promotes Initiatives Aimed at Addressing Important Social Imperatives

Sun Chemical, which oversees the DIC Group's operations in Europe and the Americas, is one of the world's leading manufacturers of printing inks. The company develops and supplies a broad range of products that address diverse social imperatives.

Social Imperative

Brand owners are under constant pressure to streamline processes, introduce efficiencies, manage cost by eliminating waste and reduce time to market. But the bedrock of brand identity is color. If the color isn't right, the integrity of the entire supply chain is compromised. This means that achieving consistent color

across substrates, print processes and national frontiers is essential to the efficiency of the whole packaging workflow. There are two major obstacles to this. The first is the number of variables that make true color consistency elusive, such as package types, substrates, inks and more. The second is the number of parties with input to the production and approval of color. The universe of brand owners, designers and converters is vast and geographically spread out.

While software and hardware tools for color management are available, they are often deployed inconsistently by the individual links in the supply chain. The result is a chain of disconnected islands of solutions, rather than a cohesive community working to an industry-standard reference, with every supplier providing its own solution working within its own environment, without the necessary integration needed for a highly efficient workflow. In practice, "color management" is often a mix of gut feel, operator experience and the inconsistent use of measurement tools and samples.

Try to map the color management process in many packaging supply chains and the picture can be chaotic, with communication between the different parties often going in loops of approval and re-approval. For brand owners, this is a recipe for error, inefficiency and unnecessary cost. It's no surprise that color that fails to meet brand owner expectations is the primary reason for rejects and reworks.

Sun Chemical's Response

Sun Chemical developed *SunColorBox*, a unique set of tools and services that enable consistent and accurate digital color communication throughout the entire packaging supply chain. *SunColorBox*, a set of integrated tools, allows customers to select the most suitable services based on the size of their

business and the investment required.

Since 2014, Sun Chemical has been implementing the *SunColorBox* solution at a large number of customer sites around the world using all major commercial printing technologies, including flexo, gravure and offset, and has achieved the following substantial savings for customers.



30–40% in substrate waste







VOICE Build a complete support system to achieve customers' sustainable goals

Customers who have taken advantage of the tools from *SunColorBox* have achieved many of their sustainability goals—all by achieving the right brand color the first time. The benefits are far reaching. While our central color management team manages digital color management projects globally, implementation and support are all provided by the local Sun Chemical technical personnel. We have over 300 highly trained *SunColorBox* specialists with support from our more than 20 color centers. This centrally managed but locally supported model provides customers that personal touch in helping them achieve both their color and sustainability goals and distinguishes Sun Chemical as the market leader in high-efficiency color management.



Business Leader, Color Management, Sun Chemical Corporation Patrice Aurenty

Corporate Governance

Basic Approach to Corporate Governance

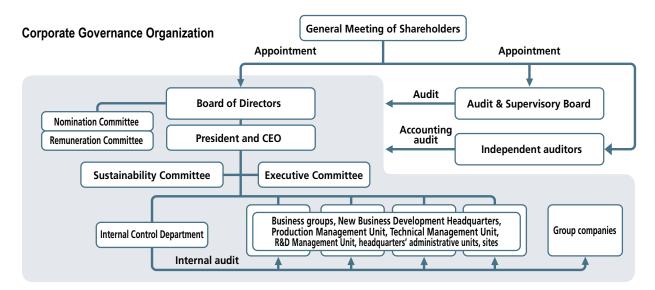
The DIC Group identifies the purpose of corporate governance as being to ensure effective decision making pertaining to its management policy of achieving sustainable corporate growth and expansion through sound and efficient management, while at the same time guaranteeing the appropriate monitoring and assessment of and motivation for management's execution of business activities. With the aim of achieving a higher level of trust on the part of shareholders, customers and other stakeholders and enhancing corporate value, the DIC Group also promotes ongoing measures to reinforce its management system and ensure effective monitoring thereof.

Policy on Corporate Governance

DIC has prepared a Policy on Corporate Governance, which it has published on its corporate website. Policy on Corporate Governance is http://www.dic-global.com/en/about/pdf/governance_en.pdf

Corporate Governance Organization

A company with internal auditors, DIC maintains a Board of Directors and an Audit & Supervisory Board. DIC has also instituted an executive officer system and has established a Nomination Committee, a Remuneration Committee, an Executive Committee and a Sustainability Committee.



Board of Directors

To accelerate decision making and reinforce corporate governance, nine directors have been elected to the Board of Directors. Of the nine, three are outside directors (one of whom is female). In principle, the Board meets once monthly. The Board of Directors is responsible for making decisions on matters stipulated in the Companies Act of Japan, and in DIC's own regulations, as requiring Board-level approval, as well as for monitoring the execution of business activities, as reported by the executive officers.

Nomination Committee

The Nomination Committee was established as an internal committee of the Board of Directors with the aim of ensuring objectivity in the nomination of candidates for the position of director, Audit & Supervisory Board member or executive officer, and the dismissal of serving directors, Audit & Supervisory Board members and executive officers. The committee, which submits proposals to the Board of Directors, meets as necessary. At present, three of the committee's five members are outside, while the position of committee chairman is filled by an outside director.

8 Remuneration Committee

The Remuneration Committee was established as an internal committee of the Board of Directors with the aim of enhancing the objectivity of procedures for determining executives' remuneration. The committee, which has been entrusted with responsibility for determining the salaries and bonuses of directors and executive officers, meets as necessary. At present, three of the committee's five members are outside, while the position of committee chairman is filled by an outside director.

Executive Committee

The Executive Committee deliberates and resolves issues related to the execution of business activities. In principle, the committee meets twice monthly. Committee members are directors and executive officers designated by the Board of Directors. Meetings are also attended by one Audit & Supervisory Board member as part of the auditing process. Details of deliberations and resolutions are reported to the Board of Directors.

Sustainability Committee

The Sustainability Committee, which functions as an advisory body, meets several times annually to formulate sustainability policies and activity plans, as well as to evaluate and promote initiatives. Committee members are directors and executive officers designated by the Board of Directors. As part of audit activities, one Audit & Supervisory Board member also attends Sustainability Committee meetings. The committee reports the matters upon which it deliberates and the results of its deliberations to the Board of Directors.

6 Audit & Supervisory Board

The Audit & Supervisory Board comprises four members, including two outside Audit & Supervisory Board members (one of whom is female). In principle, the Audit & Supervisory Board meets once monthly. Board activities include debating and determining auditing policies and auditing plans. Board members also report on the results of audits conducted, as well as attend important meetings, including those of the Board of Directors, the Executive Committee and the Sustainability Committee, meet with representative directors on a periodic basis to exchange information and opinions and collect business reports from directors, executive officers and employees. In addition, DIC has established an Audit & Supervisory Board Members' Office to which it assigns dedicated personnel to assist the members in their duties.

DIC's two outside Audit & Supervisory Board members have extensive experience in and knowledge of finance and accounting, which they are able to leverage in the performance of their duties as outside directors of DIC. Full-time Audit & Supervisory Board member Yoshiyuki Mase is a qualified certified public tax accountant and has overseen corporate accounting at DIC for many years. Outside Audit & Supervisory Board member Katsunori Takechi provides tax accounting services pursuant to Article 51 of the Certified Public Tax Accountant Act and has broad experience in the field of corporate law. Outside Audit & Supervisory Board member Michiko Chiba is a certified public accountant and has extensive experience in corporate auditing.

Internal Auditing Department

The internal auditing department is charged with internal auditing, which includes monitoring the effectiveness of internal controls at DIC and domestic DIC Group companies. For DIC Group companies in Asia, Oceania, the PRC, the Americas and Europe, internal auditing is the responsibility of local internal auditing teams.

E Accounting Auditors

DIC has engaged Deloitte Touche Tohmatsu LLC as its independent auditors. DIC strives to ensure an environment that facilitates the accurate disclosure of information and fair auditing. The members of the Audit & Supervisory Board, accounting auditors and the internal auditing department conduct audits from their respective independent positions, but also liaise periodically to facilitate close cooperation, thereby ensuring the effectiveness of auditing activities.

Rationale Behind Current Corporate Governance Organization

DIC has instituted an executive officer system, a move aimed at separating decision making and implementation and thereby accelerating business execution and clarifying responsibilities. As well as appointing three highly independent outside individuals to its Board of Directors, the Company has taken steps to reinforce its monitoring of business execution. DIC also has a Nomination Committee and a Remuneration Committee, which include the three outside directors, to ensure objectivity in the nomination of, and in determining remuneration for, directors and executive officers. The four-member Audit & Supervisory Board, which includes one attorney and one certified public accountant as outside members, liaises with the accounting auditors and the internal auditing department. This structure ensures the effective functioning of DIC's corporate governance system.

System of Internal Controls

1 Status of the System of Internal Controls

The DIC Group maintains a keen awareness of four key objectives, which are to ensure the effectiveness and efficiency of its businesses, uphold the reliability of its financial reporting, comply with laws and regulations relevant to its business activities, and safeguard its assets. To this end, DIC has prepared and operates a system of internal controls, key components of which are summarized below, based upon the Companies Act of Japan and the Financial Instruments and Exchange Act of Japan. The Board of Directors hears annual reports on the status of the system of internal controls, a synopsis of which is included in the Company's official report on its business activities. The following is summary of the synopsis:

- The Company shall work to set forth the DIC Group Code of Business Conduct as the standard regarding compliance, which directors and employees of the DIC Group shall comply with, and to disseminate the same.
- The Company shall establish an internal notification system as a channel available for the employees of the DIC Group and set up multiple notification channels for communication used in the conduct of business. The Company shall prepare a structure that can quickly respond to domestic and internal notifications.
- In order to ensure the duties of directors are performed properly and efficiently within the DIC Group, the Company shall establish regulations regarding company organization and authority.
- 4 The Company shall formulate medium-term management plans and the annual budget based on management policies and management strategies, and, through dissemination of the same, ensure common goals are shared within the DIC Group. The Company shall make progress reports to the Board of Directors.
- Information pertaining to the performance of duties by directors shall be recorded, retained and managed appropriately based on the regulations for document management. The Company shall establish regulations for systems of information management and shall prepare a system for preventing leakage of confidential information of the DIC Group.
- 6 The Company shall formulate a risk management policy and shall identify, assess, prioritize and address properly any risks that may have a significant impact on management of the DIC Group.
- The Company shall determine an administrative department for each subsidiary from the standpoints of the conduct of business and business management, and shall supervise business affairs by dispatching a director to each subsidiary.
- 8 The Company shall clarify important matters pertaining to subsidiaries that require reporting to the Company.

2 Basic Policy Toward Eliminating Demands by Antisocial Elements

DIC's basic policy, as outlined in the DIC Group Code of Business Conduct, is to stand firmly against antisocial elements and in no way to acquiesce to demands presented by such elements. The General Affairs and HR Department is responsible for coordinating efforts to respond to extortion or other demand presented by antisocial elements, while individuals have been put in charge of efforts at each site and within each Group company. These individuals work in close collaboration with lawyers and the police to ensure the Company's responses are resolute. DIC has also prepared and distributed a manual on appropriate responses to such demands, with the aim of raising awareness among employees.

Outside Directors and Outside Audit & Supervisory Board Members

1 Number and Role of Outside Directors and Outside Audit & Supervisory Board Members

DIC currently has three outside directors and two outside Audit & Supervisory Board members. In addition to attending meetings of the Board of Directors, the outside directors serve as members of the Nomination Committee and the Remuneration Committee, enabling them to provide supervision with an independent point of view, thereby helping to reinforce DIC's corporate governance. The two outside Audit & Supervisory Board members—one an attorney specializing in corporate law and the other a certified public accountant—advise management of the DIC Group from an expert, multifaceted and independent perspective, thereby helping to reinforce the auditing function.

2 Standards Used to Evaluate the Independence of Outside Directors and Outside Audit & Supervisory Board Members

DIC has established standards for evaluating the independence of individuals appointed to the position of outside director or outside Audit & Supervisory Board member, which are shown below. DIC's outside directors and outside Audit & Supervisory Board members are individuals who, based on these standards, are unlikely to have conflicts of interests with ordinary shareholders and who comply with criteria for the independence of directors/audit & supervisory board members set by the Tokyo Stock Exchange.

Independence Standards for Outside Officers

DIC does not recognize individuals with the connections listed below as being independent in the appointment of outside officers. 1. Individuals who are executive officers of DIC or of one of its consolidated subsidiaries at present or have been in the preceding 10 years.

- 2. Individuals to whom any of the following items have applied in the preceding three years:
- A principal business partner of the DIC Group (a business partner with which transactions in a single fiscal year exceed 3% of the DIC Group's consolidated net sales in that year) or an executive officer of a company to which this description applies
- An individual for which the DIC Group is a principal business partner (a company with which the DIC Group's transactions in a single fiscal year exceed 3% of the company's consolidated net sales in that year) or an executive officer of a company to which this description applies
- 8 A shareholder who holds 5% or more of voting rights in DIC or an executive officer of a company to which this description applies
- 4 A principal lender to the DIC Group (a lender from which loans in a single fiscal year exceeds 3% of the DIC Group's total loans in that year) or an executive officer of a company to which this description applies
- An individual who has received contributions in a single fiscal year that exceeds ¥10 million or belongs to a group to which this description applies
- 6 An accounting auditor, an accountant who has served as an accounting auditor for the DIC Group or an individual who is an employee, partner or associate of an audit firm to which this description applies
- An individual to whom ③ above does not apply but who has received remuneration from the DIC Group in excess of ¥10 million in a single fiscal year as a provider or professional services, such as consulting, accounting or legal services, or an individual who belongs to a group that has received remuneration in excess of 3% of its consolidated net sales in that year as compensation for professional services, such as consulting, accounting or legal services
- 8 A corporate executive of another company in the event that an executive officer of DIC is appointed to an outside officer position at that company
- 3. A spouse or relative within two degrees of kinship of individuals listed in section 1 or 2 above
- 4. An individual whose term in office as an outside officer of DIC has exceeded eight years

S Framework for Supporting the Efforts of Outside Directors and Outside Audit & Supervisory Board Members

Prior to meetings of the Board of Directors, relevant materials are distributed to all directors, full-time Audit & Supervisory Board members, outside directors and outside Audit & Supervisory Board members. In addition, directors bringing matters before the Board provide explanations in advance to outside directors, while full-time Audit & Supervisory Board members provide explanations as necessary to outside Audit & Supervisory Board members.

Other Initiatives to Enhance the Corporate Governance Organization

1 Composition of the Board of Directors

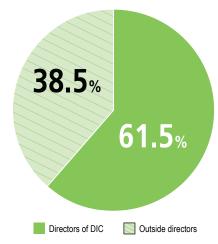
To enable the Board of Directors to resolve major operations-related issues, as well as to facilitate the effective oversight of management, the Board of Directors comprises outside directors, who maintain independence, and other individuals having a thorough knowledge of the businesses of the DIC Group, with consideration given to ensuring a balance among necessary knowledge, experience and capabilities. In light of the DIC Group's global operations, DIC also strives to ensure diversity in the Board's composition.

One member of the Board of Directors is female, as is one member of the Audit & Supervisory Board.

Composition of the Board of Directors and the Audit & Supervisory Board

	In-house	Outside	Total	Percentage of outside members
Directors	6	3	9	33.3%
Audit & Supervisory Board members	2	2	4	50.0%
Total	8	5	13	38.5%





2 Remuneration for Executives

Remuneration for directors is determined by the Remuneration Committee, which takes into account prevailing market rates, and consists of basic remuneration; bonuses, which are linked to consolidated operating results and the degree of achievement of individual targets; and stock compensation, which is based on medium- to long-term operating results. Directors who serve concurrently as executive officers are eligible for bonuses and stock compensation. Other directors and outside directors are eligible for basic remuneration only. Remuneration for Audit & Supervisory Board members consists of basic remuneration only and is determined through discussion involving all Audit & Supervisory Board members, in accordance with internal rules established by the Audit & Supervisory Board, with consideration given to ensuring a balance with remuneration for directors and to prevailing market rates.

	Total remuneration	Composition of remuneration (Millions of yen)			Number of directors and corporate auditors
	(Millions of yen)	Basic salary	Bonus	Stock compensation	
Directors (excluding outside directors)	277	215	46	16	7
Audit & Supervisory Board members (excluding outside Audit & Supervisory Board members)	60	60	_	_	2
Outside officers	60	60	_	_	6

Remuneration for Directors and Audit & Supervisory Board Members in Fiscal Year 2018

Note: The total amount of stock compensation is in accordance with the performance-based stock compensation plan that was approved at the 119th Annual General Meeting of Shareholders.

S Evaluation of the Board of Directors' Effectiveness

DIC conducts an analysis and evaluation of the effectiveness of the Board of Directors annually via a self-evaluation conducted by the directors and Audit & Supervisory Board members. In fiscal year 2018, the Company conducted a survey of all directors and Audit & Supervisory Board members regarding, among others, self-evaluation and Board administration, responses to which were analyzed and evaluated by the Board of Directors. As a result, the effectiveness of the Board of Directors was confirmed.

To further improve the Board's effectiveness, DIC recognizes the further enhancement of discussion regarding corporate strategy, including confirming the status of the medium-term management plan, as key challenges and will continue working to promote improvements.

Risk Management

Basic Approach to Risk Management

The DIC Group undertakes risk management initiatives with the aim of appropriately and flexibly addressing changes in its operating environment and the diversification of risks, and of swiftly mitigating damage. The Group recognizes risks in three principal categories: externally caused risks that are beyond its control, corporate risks that can be prevented and business risks that should be handled by the relevant divisions/departments. The Sustainability Working Group, which is a subordinate committee of the Sustainability Committee, oversees management of these risk responses.

Risk Management Policy and Framework for Promotion

The DIC Group first introduced risk management initiatives in 2001 by creating the Compliance Committee and setting up whistle-blowing hotlines. Following the inauguration of the Risk Management Subcommittee in May 2012, the Group undertook initiatives aimed at responding to serious natural disasters and promoting business continuity management (BCM). Beginning in fiscal year 2014, the Risk Management Subcommittee focused on establishing a risk management system. In a bid to ensure the effective and sustainable implementation of initiatives, in January 2015 the Group introduced a newly formulated risk management policy. In May 2018, the functions of the Risk Management Subcommittee were transferred to the Sustainability Working Group and the BCM and Crisis Management Working Group was established to strengthen the Group's framework for promoting risk management and business continuity.

Risk Management Policy

Risk management objectives The DIC Group undertakes risk management initiatives with the aim of appropriately and flexibly addressing changes in the operating environment and the diversification of risks, and of swiftly mitigating damage.

Definition of risks and risk management

The DIC Group's definition of risk and risk management is as follows:

1. Risk: All uncertainties that threaten the DIC Group's sustainability and business goals

2. Risk management: Initiatives to enhance corporate value by managing all risks to the DIC Group from a Groupwide perspective.

B Risk management initiatives

- 1. The DIC Group comprehensively evaluates all risks based on their potential impact on operations and likelihood of occurring, among others, and prioritizes systematic and effective responses.
- 2. The DIC Group constructs and validates risk management systems by repeating the PDCA cycle.
- 3. The Risk Management Subcommittee shares responsibilities with the risk management teams of individual businesses to properly deploy risk measures within the DIC Group. The conference group regularly reports on its activities to the Sustainability Committee.

DIC Corporation

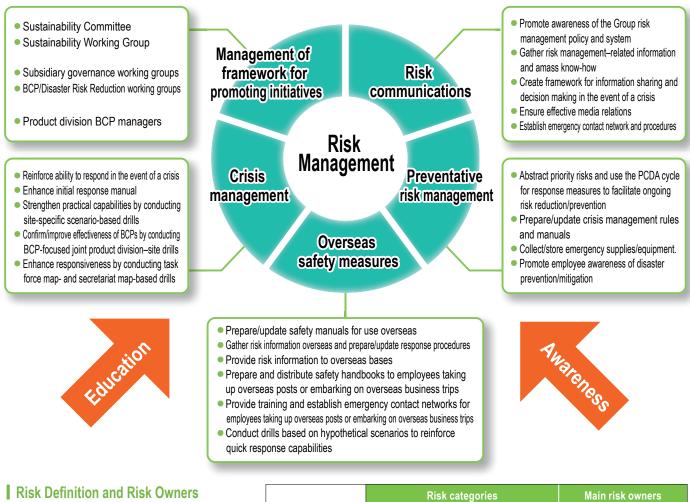
Efforts to Encourage Awareness

Since fiscal year 2016, DIC has encouraged awareness of its risk management policy across the global DIC Group by publishing information on the policy, as well as on risk management initiatives, on its in-house electronic notice board and through the Group's newsletter, *DIC Plaza*. In Japan, the Company also seeks to promote and raise awareness through the provision of training to plant general managers and senior executives of domestic Group companies.



Meeting of the Sustainability Working Group

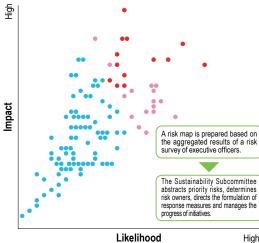
Risk Management Overview



The DIC Group recognizes risks in three principal categories. The Group manages these risks by clarifying specific risk owners, which are the divisions/departments responsible for implementing responses.

	Risk categories	Main risk owners
Business activities	Risks that should be dealt with by relevant departments These are risks to be considered in the course of conducting business, including those that affect production, development, investment and procurement.	 Product divisions Production, marketing and technical management units Purchasing departments
Corporate risk management activities	Risks that should be dealt with by specialized departments Unlike risks that should be dealt with by relevant departments, these are risks that affect all Group business activities and can be addressed at the corporate level. Examples include risks related to information management and legal and regulatory compliance.	 Headquarters' administrative units Corporate planning departments
	Risks beyond control These are risks arising from natural events and social circumstances.	 Sustainability Working Group Headquarters' administrative units Sites

Risk Map



Likelihood

19 Priority Risks for which Response Measures Have Been Adopted

- Currency and interest rate fluctuations
- Intellectual property
- Governance at subsidiaries
- 4 Product liability
- 6 Pandemics
- 6 Economic fluctuations
- Decline in debt ratings
- Information security
- Operations of overseas business units
- Major natural disasters
 - (Including those attributable to climate change)

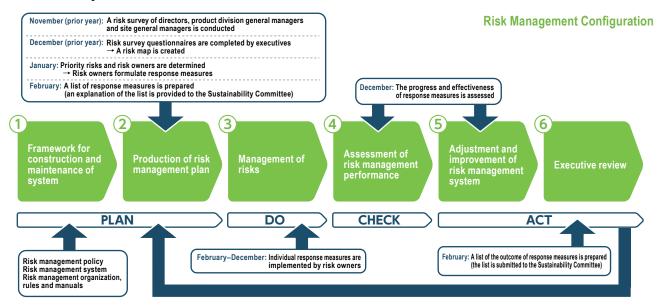
- Facility-related accidents
- Description of the second s
- Product quality complaints
- Management of chemical substances
- Optimized global production configuration
- 6 Establishment of global R&D network **BCP**
- - (B) Promotion of supply chain management
 - Promotion of occupational health and safety and consumer health (Including mental health)

Risk Management System

In the process of formulating the risk management policy, the Sustainability Working Group (previously the Risk Management Subcommittee) established the DIC Group risk management system. This system begins with the distribution to directors of survey questionnaires regarding risks with the potential to interrupt the Group's businesses. Based on survey results, the subcommittee determines priority risks. Risk management plans are produced and risk response measures implemented, improved and reviewed by executives, thereby completing the plan–do–check–act (PDCA) cycle, with the aim of facilitating ongoing risk reduction.

DIC positioned fiscal years 2014–2016 as the inaugural phase of risk management predicated on the new system, with subsequent steps to be repeated annually, leveraging knowledge and experience gained. Based on survey results, the subcommittee determines priority risks. The administrative groups that comprise the subcommittee spearhead the assignment of an owner to each risk and work with related departments to implement response measures. A total of 16 priority risks, including "earthquakes, tsunami, volcanic eruptions" and "currency and interest rate fluctuations" were identified as risks to be addressed during this phase.

Looking ahead, DIC will continue to promote awareness and dissemination of the risk management policy and the risk management system. To enhance BCM, corporate headquarters will spearhead the preparation of the BCP Guidelines for lateral deployment across the DIC Group, which will be optimized to account for the situation on the ground in various countries and territories.



Examples of Response Measures for Selected Priority Risks (Fiscal Year 2018)

In fiscal year 2018, DIC added "Insufficient supply chain management" and "Issues with the management of employee health (including mental health)" to the list of priority risks for which it is implementing response measures, bringing the number of risks on the list to five. The implementation of measures was completed for five of these priority risks in the period under review.

Examples of Response Measures for Selected Priority Risks

	Risk category	Possible negative impacts	Principle response measures	Status
1	Insufficient management of chemical substances/Insufficient response to changes in environmental laws and regulations (Relevant pages: 105–110)	Social sanctions and weakening of brand image attributable to media coverage of production stoppages, suspension of exports, recall of products, or legal/ regulatory violations; damage to employee health and resulting litigation	 Review procedures for managing CIRIUS information Promote global project to improve chemical information management Collect up-to-date information on all raw materials Conduct chemical substance risk assessments 	Complete
2	Insufficient/delay in the optimization of global businesses (Relevant pages: 56–61)	Significant declines in sales/profits in global markets due to erosion of price competitiveness; limits to business expansion due to inability to secure overseas production base; insufficient supplies owing to disaster affecting site	 Support efforts to optimize production of polymers and inks/ensure safe operations Ask product divisions to consider their production configurations prior to formulation of new medium-term management plan and hold hearings Ensure overall grasp of the global production configuration of each product division 	Complete
3	Governance at subsidiaries (Relevant page: 47)	Scandals, the inability to address issues properly and decline in reputation attributable to the appointment of incompetent executives and/or insufficient oversight by the Board of Directors	 Enhance the visibility of Group governance systems Ensure appropriate behavior by subsidiaries' executives Ensure appropriate behavior by subsidiaries' board of directors Implement measures that help subsidiaries ensure rational front-line operations 	Complete
4	Insufficient supply chain management (Relevant pages: 131–133)	Production declines or business withdrawals due to accidents or issues with raw materials suppliers or environmental regulations that cause the suspension of our materials supplies or hamper production of key products and have a significant negative impact on our business continuity and profits.	 Identify those raw materials for which risks are particularly high Prepare pertinent data, including supplier locations, and create a format that facilitates circulation thereof (a) Research/cultivate alternative materials/suppliers and conduct successive quality assessments (b) Gradually increase inventories of high-risk raw materials 	Complete
5	Issues with the management of employee health (including mental health) (Relevant pages: 129–130)	 Illness necessitating lengthy leave Decline in ability due to illness and resulting discrepancy between ability and treatment Decline in quality, output and efficiency resulting from lengthy leave Increase in burden on colleagues resulting from employee absence 	 Formulate and implement programs to prepare employees who have taken lengthy leaves to return to work Enhance annual health check data and promote the sharing of business information to ensure a solid grasp of individual risks Reconsider health risk items in annual hea th checks and step up related initiatives Appoint coordinating occupational physician to conduct overall management Take steps to identifylanalyze the causes of mental hea th disorders and develop and implement responses. 	Complete

Initiatives to Strengthen Governance at Subsidiaries

The DIC Group comprises 174 companies in 64 countries and territories. Two-thirds of the Group's employees are located at, and 60% of its consolidated net sales are generated by, bases outside of Japan. DIC recognizes that ensuring subsidiaries share the same values and vision—despite differences in culture, systems and customs— and maximizing management resources, while at the same time complying with local laws, regulations and rules, is critical to sustainable growth for the Group.

It goes almost without saying that in the event of a transgression, an incident of noncompliance or an unforeseen contingency at an overseas DIC Group base, there is a risk that the DIC brand image could be negatively affected, causing damage to the Group as a whole. DIC has thus positioned the management of this risk as a crucial challenge requiring immediate and ongoing initiatives and will continue to promote efforts to strengthen its framework for supporting risk-avoidance worldwide.

Framework for Supporting the Management of Subsidiaries

As an organization with global operations, DIC has worked continuously to create internal controls systems and establish governance configurations for its subsidiaries around the world. With the aim of ensuring that subsidiaries' risk management systems function and of reinforcing and increasing the efficiency of their management, in fiscal year 2016 DIC outlined four key themes to guide these efforts. This move was made in line with the Company's belief in the importance of establishing robust frameworks for the appointment of directors, the implementation of corporate auditors, the operating structures underpinning subsidiaries' management and the provision of support by the parent company.

Enhance the visibility of Group governance systems: The DIC Group's matrix-like governance organization positions products on one axis and regions on the other. Steps are

being taken to clarify and set down standards for the segregation of duties and the delegation of authority to assist overseas subsidiaries in determining which of the two aspects should be given priority in making business decisions.

- Ensure appropriate behavior by subsidiaries' boards of directors: Prerequisites for the appointment of directors to subsidiaries' boards of directors, which are responsible for supervising executives' performance of their duties, are being established, as are guidelines for board administration.
- Ensure appropriate behavior by subsidiaries' executives: Prerequisites for the appointment of executives, including leadership skills, managerial competence and awareness of compliance, are being established.
- Implement measures that help subsidiaries ensure rational front-line operations: Such measures include setting KPIs for subsidiaries that align with DIC targets, establishing criteria for the provision of support and management assistance by the parent company's functional departments and determining acceptable operating levels.

The establishment of management standards for subsidiaries in Japan regarding these four themes was completed in fiscal year 2017. The progress of related initiatives is inspected. DIC began expanding the application of these standards to overseas subsidiaries in fiscal year 2018 and is currently working to reduce various risks related to the governance of subsidiaries while ensuring the firm establishment and full awareness of these standards.

Themes Guiding Efforts to Strengthen Governance at Subsidiaries

174 Subsidiaries and Affiliates

Enhance the visibility of Group governance systems
 Ensure appropriate behavior by subsidiaries' boards of directors
 Ensure appropriate behavior by subsidiaries' executives
 Implement measures that bein subsidiaries ensure rational

(4) Implement measures that help subsidiaries ensure rational front-line operations

The DIC WAY

Responding to New Laws and Regulations

Transfer price taxation is one of the principal challenges facing the DIC Group's subsidiaries. With transfer pricing, companies risk double taxation on transactions within the Group, that is, being taxed on profits in the country of domicile and the country to which it transfers, i.e., sells, its products. As a consequence of the Base Erosion and Profit Shifting (BEPS) Project*, effective from fiscal year 2018 DIC will be obliged to provide uniform information to local tax authorities in all of the countries in which it has operations. In response, the Company will work with the Group's overseas regional headquarters (DIC (China) and DIC Asia Pacific) and Sun Chemical to confirm and organize transaction information.

* BEPS is the artificial reduction of taxable income through the shifting of profits to low-tax jurisdictions or other locations where there is little or no economic activity. The BEPS Project is an initiative undertaken in response to demands by G20 member countries seeking to prevent the erosion of their tax bases to plug gaps in tax rules that make BEPS possible.

Directors, Audit & Supervisory Board Members and Executive Officers

(As of May 2019)

Directors



1 Chairman of the Board of Directors Yoshiyuki Nakanishi

3 Representative Director Masayuki Saito

5 Director Hideo Ishii 7 Director* Kazuo Tsukahara

9 Director* Kuniko Shouji

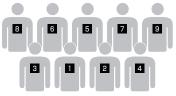
* Outside

2 Representative Director Kaoru Ino

4 Director Yoshihisa Kawamura

6 Director Toshifumi Tamaki

8 Director* Yoshiaki Tamura



Audit & Supervisory Board Members



Audit & Supervisory Board Member Yoshiyuki Mase

2 Audit & Supervisory Board Member Hiroyuki Ninomiya

3 Audit & Supervisory Board Member* Katsunori Takechi

4 Audit & Supervisory Board Member* Michiko Chiba



* Outside

Outside Director Profiles

Kazuo Tsukahara

 April
 2008
 Director and Managing Executive Officer, IHI Corporation

 April
 2012
 Representative Director and Executive Vice President, IHI Corporation

 June
 2014
 Advisor, IHI Corporat on

Yoshiaki Tamura

January 2007 Executive Officer, Asahi Glass Co., Ltd. March 2013 Representative Director and Executive Vice President, Asahi Glass Co., Ltd. March 2017 Executive Fe Iow, Asahi Glass Co., Ltd.

Kuniko Shouji

June 2004 Executive Officer, Terumo Corporation June 2010 Director and Senior Executive Officer, Terumo Corporation June 2017 Advisor, Terumo Corporation

Outside Audit & Supervisory Board Member Profiles

Katsunori Takechi

 April
 2000
 Puble Prosecutor, Civ I Affars Bureau, M nistry of Justice

 October
 2003
 Joins Anderson Möri & Tomotsune

 July
 2011
 Manag ng Partner, Takechi & Partners

Michiko Chiba

October 1989 Joined Showa Ota & Co. (currently, Ernst & Young ShinNihon LLC) July 2010 Senior Partner, Ernst & Young ShinNihon LLC September 2016 Founded Chiba Certified Public Accountant Office

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Executive Officers



President and CEO Kaoru Ino



Managing Executive Officer Toshifumi Tamaki Head of Corporate Strategy Unit In Charge of Kawamura Memor al DIC Museum of Art



Executive Vice President Masayuki Saito Assistant to President and CEO CFO Chairman of the Board, Sun Chemical Corporation Chairman of the Supervisory Board, Sun Chemical Group Coöperatief U.A.



Managing Executive Officer Naoyoshi Furuta General Manager, Production Management Unit



Managing Executive Officer Kazunari Sakai General Manager, Technical Management Unit



Managing Executive Officer Hideo Ishii President, Packag ng & Graphic Business Group



Managing Executive Officer Masami Hatao President, Color & Display Business Group General Manager, Display Material Products Div.



Executive Officer Rudi Lenz Vice Chairman of the Board, Sun Chemical Corporation



Executive Officer Koji Tanigami President and CEO, DIC Graphics Corporation



Shinsuke Toshima Chairman, DIC (China) Co., Ltd. Chairman, DIC (Shanghai) Co., Ltd.



Managing Executive Officer

Head of General Affairs and Legal Unit In Charge of Diversity

Masaya Nakafuji

Executive Officer Taihei Mukose Head of Purchasing and Logistics & Information Systems Unit



Managing Executive Office

Kazuo Hatakenaka

President, Functional Products Business Group General Manager, Performance

Executive Officer Kiyotaka Kawashima General Manager, R&D Management Un t General Manager, Central Research Laboratories



Executive Officer Masanobu Mizukoshi General Manager, Composite Material Products Div.



Executive Officer Paul Koek Managing Director, DIC Asia Pacific Pte Ltd



Executive Officer Myron Petruch President and CEO, Sun Chemical Corporation



Executive Officer Takeshi Asai General Manager, Corporate Planning Dept. In Charge of Osaka Branch and Naova Branch



Executive Officer Koji Asada Head of ESG Unit



Executive Officer Masahiro Kikuchi Deputy Managing D rector (South Asia), DIC Asia Pacific Pte Ltd



Executive Officer Masamichi Sota General Manager, Printing Material Products Div. General Manager, Packaging & Graphic Business Planning Dept.



Executive Officer Yuji Morinaga General Manager, Packaging Mater al Products Div.



Executive Officer Shuji Furuta Head of Finance and Accounting Unit



Executive Officer Kiyofumi Takano General Manager, New Business Development Headquarters



Executive Officer Yoshinari Akiyama General Manager, Color Material Products Div.

Overview of Sustainability

In line with its basic sustainability policy, the DIC Group promotes a variety of sustainability initiatives worldwide and works to maintain an accurate grasp of social imperatives pertaining to ESG-related issues.

Sustainability Report

Amid rising environmental concerns, including climate change, and increasingly urgent social imperatives, companies today face an ever-more diverse array of challenges, including rising awareness of the need to achieve sustainability in a manner that takes into account the environment, ecosystems and socioeconomic issues. The DIC Group launched its corporate social responsibility (CSR) program in fiscal year 2007. Having further clarified the overall direction of related initiatives as "sustainable growth," effective from fiscal year 2014 the Group changed the designation used across its program from "CSR" to "sustainability." In fiscal year 2018, DIC established the ESG Unit, a specialized department to further expand Group ESG initiatives worldwide. In line with its basic sustainability policy, the DIC Group promotes a variety of sustainability initiatives worldwide and works to maintain an accurate grasp of social imperatives pertaining to ESG-related issues.

Basic Sustainability Policy (Partially revised in March 2019)

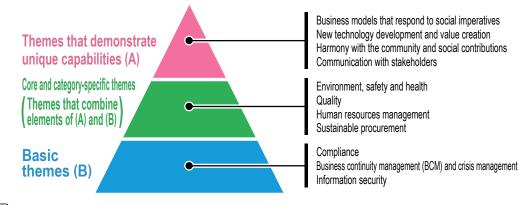
The DIC Group is dedicated to conducting its business while retaining a strong commitment to five key concepts: preserving safety and health, managing risks, ensuring fair business practices and respect for diversity and human rights, maintaining harmony with the environment and advancing its protection, and creating value for society through innovation and contributing to ongoing economic growth. DIC Group employees will continue working to deliver the value that its stakeholders—including its customers, suppliers, local communities, shareholders and investors, and employees—expect, showing ingenuity and a sense of responsibility. The Group itself will strive to remain an organization that contributes to sustainability for society, as well as to the conservation and improvement of the global environment, by capitalizing on its businesses to achieve unfaltering growth, thereby enhancing its own sustainability.

 Notes: 1. With the aim of ensuring that it remains a globally trusted corporate citizen with a proud reputation, in December 2010 the DIC Group became a signatory to the UNGC. The Group also takes the guidelines provided by ISO 26000, the International Organization for Standardization's standard for social responsibility, into account in conducting its operations.
 The global community today recognizes the promotion of ESG management, which seeks to balance sustainable economic growth and the resolution of social imperatives, as critical. This is evidenced by the fact that countries worldwide have ratified the Paris Agreement and the SDGs, both of which were adopted in 2015.

Sustainability Framework and Themes

Themes

To foster concrete measures, in fiscal year 2007 the DIC Group identified 12 key themes as a framework for implementing its CSR program. Subsequently, the Group partially revised these themes in response to changes in the external environment and the progress of its efforts. Today, the Group's sustainability framework comprises 11 key themes, which are categorized as basic themes, themes that demonstrate unique capabilities and themes that combine elements of the previous two classifications. The Group implements a broad range of global initiatives that take into account its responsibility to ensure proper product stewardship, as well as its position as a leading manufacturer of fine chemicals.



Deployment

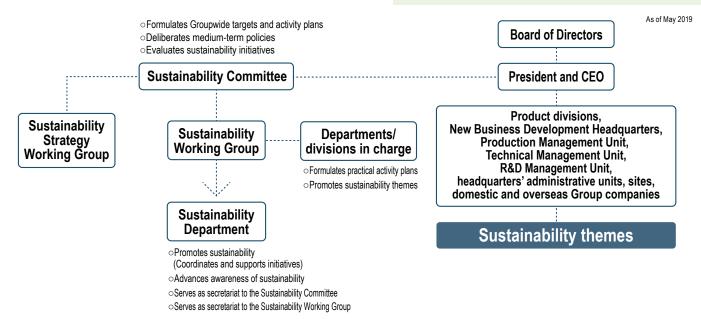
In line with its basic sustainability policy, the DIC Group has formulated medium-term (fiscal years 2019–2021) policies and creates annual activity plans for each of these themes. The Group makes use of the PDCA cycle in promoting initiatives and reports on its achievements annually in the DIC Report. Individual product divisions, business groups, sites, and overseas and domestic DIC Group companies are charged with pursuing effective sustainability programs by formulating their own annual activity plans, based on the Group's plan, as well as with ensuring that the Group's policies permeate their organizations and labor forces and linking sustainability initiatives to business targets.

System for Promoting Sustainability Initiatives

The DIC Group's system for promoting sustainability initiatives centers on the Sustainability Committee, which answers directly to the president and CEO. The committee is tasked with reporting on the status of sustainability themes, as well as with proposing policies and programs for advancing sustainability and deliberating on critical related matters. In January 2019, DIC established the Sustainability Strategy Working Group, which is responsible for proposing and advancing the implementation of concrete strategies for promoting sustainability.

Members of the Sustainability Committee

Executive Vice President, Head of the Finance and Accounting Unit, Head of the Corporate Strategy Unit, Head of the General Affairs and Legal Unit, Head of the ESG Unit, Presidents of the business groups, Head of the Purchasing and Logistics & Information Systems Unit, General managers of the product divisions, General Manager of the Production Management Unit, General Manager of the Technical Manager of the New Business Development Headquarters, General Manager of the Corporate Planning Department, CEOs of regional headquarters, and Members of the Audit & Supervisory Board



I Ensuring DIC Remains a Globally Trusted Corporate Citizen with a Proud Reputation

Leveraging Its Position as a Global Manufacturer of Fine Chemicals to Support the UNGC

Seeking to fulfill its responsibilities as a member of the international community in a more proactive manner, in December 2010 the DIC Group pledged its support for the 10 principles put forth by the United Nations (UN) and became a signatory to the United Nations Global Compact (UNGC).

Inaugurated in 2000, the UNGC is a voluntary initiative for companies that seek to achieve sustainable development. Companies and organizations worldwide have pledged their support for the UNGC in the belief that global sustainable development is possible if companies align their business practices with, and fulfill their social responsibilities in, 10 globally accepted principles in the areas of human rights, labor, the environment and the prevention of corruption.



Applying the Ten Principles of the UNGC

The DIC Group Code of Business Conduct conforms with the Ten Principles of the UNGC. The Group is capitalizing on its participation in this program to advance its operations around the world, while at the same time giving evergreater consideration to the environment and human rights, with the aim of ensuring sustainability for global society.

Ten Principles of the UNGC (Official Version)

Human rights	Principle 1	Businesses should support and respect the protection of internationally proclaimed human rights; and			
	Principle 2	make sure that they are not complicit in human rights abuses.			
	Principle 3	Businesses should uphold the freedom of association and effective recognition of the right to collective bargaining;			
Labour	Principle 4	the elimination of all forms of forced and compulsory labour;			
Labour	Principle 5	the effective abolition of child labour; and			
	Principle 6	the elimination of discrimination in respect of employment and occupation.			
	Principle 7	Businesses should support a precautionary approach to environmental challenges;			
Environment	Principle 8	undertake initiatives to promote greater environmental responsibility; and			
	Principle 9	encourage the development and diffusion of environmentally-friendly technologies.			
Anti-corruption	Principle 10	Businesses should work against corruption in all its forms, including extortion and bribery.			

Complying with ISO 26000

The DIC Group operates in a manner that is consistent with ISO 26000, released in November 2010, which provides businesses and organizations guidelines for operating in a socially responsible manner.

Themes	DIC Sustainability Themes	Relevant UN Sustainable Development Goal (SDG) Icons
	Business models that respond to social imperatives	8 dicent how and a second seco
Themes that	New technology development and value creation	9 NOTIFY HONGEN 12 ENDOWNER NEWTOXICE NEW
demonstrate unique capabilities (A)	Harmony with the community and social contributions	3 ADDREAME
	Communication with stakeholders	17 MINUSON SDGs Goal 17
Core and	Environment, safety and health	3 GOORTALIE -W 6 GLAMMETER -W 6 GLAMMETER 7 HIGHNERE 12 HONGEL 13 JUNE 13 JUNE 13 JUNE 14 HIGHNERE 15 HIGHNERE 16 HIGHNERE 17 HIGHNERE 18 HIGHNERE 18 HIGHNERE 19 JUNE 19 JUNE 19 JUNE 19 JUNE 10 JUNE 1
category-specific themes (Themes that combine elements of (A) and (B))	Quality Human resources management	3 ROUTENING → M SDGs Goals 3, 4, 5, 8 and 10 3 ROUTENING 4 ROUTENING 5 ROUT
	Sustainable procurement	12 EDGS Goal 12
Basic themes (B)	Compliance BCM • Crisis Management Information security	16 RMA ANDRY NETITIONS SDGs Goal 16

The 2030 Agenda for Sustainable Development

At the UN Sustainable Development Summit in September 2015, a proposal titled "Transforming our world: the 2030 Agenda for Sustainable Development," later summarized as the SDGs, was adopted with the participation of more than 150 UN member states. The agenda, which succeeded the Millennium Development Goals (MDGs), encompasses 17 goals and 169 targets. All UN member states are expected to mobilize efforts to attain the 17 goals, essential to sustainable development for the planet, by 2030. The DIC Group pledges to contribute through its business activities to the success of the SDGs.



For more information on the SDGs, please visit:

MED http://www.un.org/sustainabledevelopment/sustainable-development-goals/

Materiality Analysis

The DIC Group recently once again abstracted and analyzed material issues, that is, issues with the potential to negatively affect its performance, and has identified those of particular significance. Guided by its new medium-term management plan, DIC111, and by its long-term growth scenario, the Group will continue working to ensure that these efforts are beneficial to the management of its businesses.

Materiality Analysis Process

1 Abstraction of Issues

DIC has abstracted material issues of particular significance to the DIC Group based on, among others, the GRI's G4 Sustainability Reporting Guidelines, issues delineated in DIC111, and principal risks and opportunities.

2 Materiality Analysis

Sustainability Committee members, heads of departments that spearhead the implementation of initiatives related to sustainability themes, site general managers, and senior management from Group companies in the United States, Asia and elsewhere assessed abstracted issues from the perspectives of importance to DIC Group businesses and importance to stakeholders. Based on the results of this process, and of extensive subsequent deliberations by the Sustainability Working Group and the Sustainability Committee, issues of particular significance to the Group were determined.

As a result of this process, issues of fundamental importance to DIC Group businesses, including occupational health and safety, respect for human rights and compliance, are presented separate from the DIC Group's materiality matrix.

(a) Importance to DIC Group businesses

Issues were assessed for potential to negatively affect the DIC Group now or in the future, with consideration given to both risks and business opportunities.

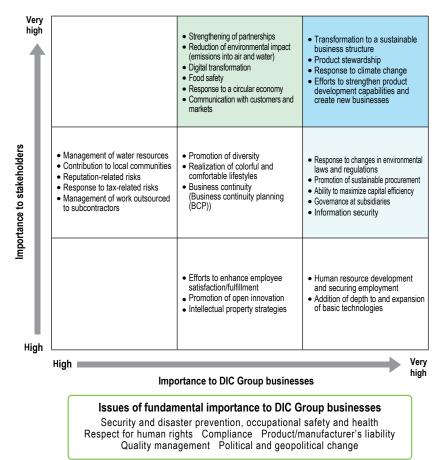
(b) Importance to stakeholders

The DIC Group recognizes four major external stakeholder groups (customers, suppliers, local communities and society, and investors). Issues were examined in terms of both level of interest on the part of stakeholders and potential impact. Key criteria from external assessment organizations (the Dow Jones Sustainability Indices (DJSI), FTSE, MSCI, the Sustainability Accounting Standards Board (SASB) of the United States and Sustainalytics) were also referenced, adding an objective perspective.

The DIC Group's Materiality Matrix

DIC has organized the issues abstracted and assessed through the process above into 28 general materiality categories. The materiality of these issues was scored and a materiality matrix created by plotting the scores using two scales, i.e., importance to stakeholders and importance to DIC Group businesses. In May 2019, this matrix, together with the separate issues of fundamental importance to DIC Group businesses, were approved by the Sustainability Committee and finalized.

The DIC Group's Materiality Matrix



Compliance

SDGs Goal 16

Toward Fair and Transparent Corporate Activities

Goals and Achievements of Major Initiatives Evaluations are based on self-evaluations of current progress. Key: *** = Excellent; ** = Satisfactory; * = Still needs work

Objectives of initiatives	Goals for fiscal year 2018	Achievements in fiscal year 2018	Evaluation	Goals for fiscal year 2019
Enhance awareness of compliance.	 Achieve target for percentage of employees participating in the e-learning program (95%). Implement compliance- and governance- related legal training in Japan, the Asia– Pacific region and Greater China. 	Compliance e-learning focused on international antitrust legislation and insider trading. The percentage of employees participating exceeded 95%. Follow-up presentations regarding the DIC Group Code of Conduct were held in the PRC, Singapore, Thailand, Malaysia and India.	**	 Achieve target for percentage of employees participating in the e-learning program (95%). Provide training on legal issues for DIC executives (once), executives of Group companies in Japan (once) and at DIC Group companies in six countries overseas.
Conduct business fairly.	Eliminate violations of antitrust and anti- corruption laws.	Zero violations of antitrust and anti-corruption laws were reported.	**	Achieve target of zero violations of antitrust and anti-corruption laws.

Basic Approach to Compliance

Compliance in the DIC Group encompasses not only obeying laws but also acting in a manner that is in keeping with social norms and the expectations of customers, communities and other stakeholders. With the aim of ensuring sustainable growth for businesses that are both fair and transparent, DIC formulated the DIC Group Code of Business Conduct, a unified set of guidelines the adherence to which it considers to be the foundation of compliance. DIC compels all DIC Group employees to conduct themselves in accordance with the code.

The DIC Group Code of Business Conduct

The DIC Group completed the DIC Group Code of Business Conduct in July 2014. The code not only mandates compliance with national laws and international rules but also presents 10 principles essential to the professional conduct of DIC Group employees. The Group held presentations for all existing Group employees at the time of release, while new employees receive training at point of hire. The goal of such training is to ensure employees worldwide share values cherished by the Group and approach their responsibilities with a sense of responsibility and a commitment to doing the right thing. In fiscal year 2018, the Group held follow-up presentations on the code in the PRC and the Asia–Pacific region.

DIC Group Code of Business Conduct Image http://www.dic-global.com/en/csr/pdf/code_of_business_conduct_en.pdf

10 Principles Essential to Professional Conduct

- 1 Your Rights as an Employee: Respect, Dignity, Privacy
- 2 Environment, Safety and Health
- 3 Your Responsibility to Avoid Potential Conflicts of Interest and to Protect Group Property
- 4 Anti-Corruption and Anti-Bribery Policy
- 5 Your Relationship with Governments and Government Officials
- 6 Your Relationship with Customers, Suppliers, and External Third Parties
- Money Laundering and Anti-Terrorism
- 8 Forced Labor, Child Labor, Conflict Minerals
- Insider Trading
- 10 Proper Accounting and Internal Controls Relating to Financial Reporting

Initiatives to Promote Compliance

The DIC Group promotes compliance through the following initiatives:

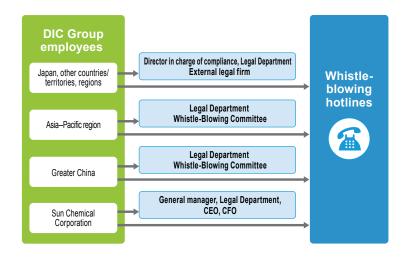
- Training focused on legal issues to improve compliance awareness is provided for employees at point of hire, when promoted and before overseas transfers. In addition, with the aim of promoting awareness of the DIC Group Code of Business Conduct, in fiscal year 2018 e-learning focused on international antitrust legislation and insider trading was provided. Training on legal issues was also provided once for DIC executives, once for executives of Group companies in Japan and at DIC Group companies in four countries overseas (PRC, Singapore, Thailand and Malaysia).
- Compliance officers are appointed at all regional headquarters—DIC Corporation (Japan), Sun Chemical Corporation (Americas and Europe), DIC (China) Co., Ltd. (PRC) and DIC Asia Pacific Pte Ltd (Asia and Oceania)—to spearhead global compliance efforts.

The DIC Group vows that it will not violate the principles of the DIC Group Code of Business Conduct, even if such a violation would appear to profit the Group. As a corporate citizen, the Group also pledges to respect social norms and act in a sound and socially acceptable manner. In fiscal year 2018, there were no serious violations of compliance laws.

Establishing and Operating a Whistle-Blowing System

The DIC Group has established a compliance whistle-blowing system independent from channels for communication used in the conduct of business. This system encompasses hotlines that can handle reports of compliance issues and questions in the languages of more than 160 countries. The Group has also devised strict rules under this system to protect whistle-blowers from retaliation and works to ensure the system functions in a proper manner.

When a report is received, the Group responds swiftly and appropriately, giving due consideration to pertinent laws while also incorporating internal and external opinions, to identify and correct or where necessary take disciplinary action. Details of reports and steps taken in response are reported to the Board of Directors. The Group will continue to use the whistle-blowing system to ensure the prompt discovery and correction of misconduct.



Antitrust and Anti-Corruption Legislation

The DIC Group has formulated a basic policy to comply with antitrust legislation and made Groupwide efforts to ensure fair business practices. The DIC Group Code of Business Conduct includes rules for complying with antitrust legislation and prohibits involvement in corruption. Since fiscal year 2014, the Group has held more than 160 presentations regarding antitrust and anti-corruption legislation for relevant employees to ensure strict compliance with the laws of the countries in which it operates. In fiscal year 2018, an e-learning program regarding international antitrust legislation was implemented at Group companies in Japan, the Asia–Pacific region and Greater China. The percentage of employees participating in the e-learning program reached 95%.

Promoting Compliance with Legislation Regarding the Timely Payment of Subcontractors

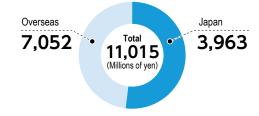
With the aim of enhancing understanding of the importance of appropriate and fair transactions with subcontractors, the Legal Unit held presentations on legislation regarding the timely payment of subcontractors for the purchasing departments of domestic DIC Group companies that incorporated case studies, and offered e-learning, principally for employees in charge of subcontractors. In addition, DIC has prepared the Manual for Internal Auditing of the DIC Group's Compliance with Japan's Act Against Delay in Payment of Subcontract Proceeds, Etc., to Subcontractors and created a framework for conducting audits in a more efficient manner. The Group also encourages employees in related positions to participate in programs sponsored by external organizations, including a workshop promoting adherence to the Act sponsored by the Japan Fair Trade Commission and the Small and Medium Enterprise Agency.

Taxation Compliance

In November 2017, the DIC Group formulated an official approach to tax. As an organization with global operations, the Group engages in fair and appropriate tax planning that reflects the nature of its businesses. The Group is also aware of risks associated with transfer price taxation and the use of tax havens and of its obligation to pay appropriate taxes in the proper jurisdictions as appropriate for its operations. The chart to the right shows a geographic breakdown of taxes paid by the Group in fiscal year 2018.

The DIC Group's Approach to Tax web http://www.dic-global.com/en/csr/philosophy/management/tax.html

Amount of Accrued Tax in Fiscal Year 2018



BCM and Crisis Management

Reducing Business Risks and Preventing the Recurrence of Incidents

Goals and Achievements of Major Initiatives Evaluations are based on self-evaluations of current progress. Key: *** = Excellent; ** = Satisfactory; * = Still needs work

Objective of initiatives	Goals for fiscal year 2018	Achievements in fiscal year 2018	Evaluation	Goals for fiscal year 2019
Ensure the continuity of DIC Group businesses.	 Periodically revise BCPs and reinforce cooperation among product divisions and sites. Reinforce corporate headquar- ters crisis management system and promote safety measures overseas. 	 Effective responses to multiple natural disasters were implemented in Japan. Joint product division-site BCP exercises were conducted and BCP seminars were held. Seminars were held on an ongoing basis for employees taking up new overseas posts or embarking on overseas business trips. 	***	 Strengthen efforts to create a global crisis management configuration Global: Promote the development of safety measures overseas through local assessments and other efforts. Work to collect global risk information and accumulate know-how. Japan: Fortify crisis response capabilities by reinforcing the ability of task forces to respond in the event of a crisis. Revise BCPs annually and reinforce cooperation among product divisions and sites. Global and Japan: Encourage the ongoing sharing of information related to BCP initiatives. Promote various awareness-enhancing measures designed to strengthen cooperation among product divisions and sites. Reinforce awareness of the basic risk management policy and the risk management system Global and Japan: Encourage awareness of the risk management policy and the risk management system. Continue to support efforts to improve the risk management system and identify priority risks and formulate/im- plement response measures. Support efforts by Group companies to promote risk management.

Basic Approach to BCM and Crisis Management

Drawing on lessons from the Great East Japan Earthquake, the DIC Group now accounts for all risks with the potential to interrupt business continuity through BCM. These risks include natural disasters such as large earthquakes and floods; influenza and other pandemics; explosions, fires, leaks and other facility accidents; and major corporate scandals. The Group comprehensively estimates the probability of each risk and its impact on management, prioritizing response measures for more significant risks. In Japan, which is currently experiencing an active period in terms of volcanic and seismic activity, the Group deploys ongoing natural disaster response measures. These include maintaining headquarters' functions and task force framework, support measures for disaster-stricken areas, and producing and revising BCPs for each key product. The Group facilitates and maintains a system to maintain business continuity through training exercises.

| Framework for Promotion

Having prepared crisis management rules and manuals for use across the DIC Group in the event of a major disaster, DIC has formulated BCPs for individual product divisions. To prevent BCPs from becoming empty formalities, the Group works to identify issues and implement ongoing improvements through annual training and emergency response exercises. In fiscal year 2015, DIC launched a review of BCPs based on social responsibility and customer imperatives with the aim of strengthening these plans. The Company completed the review process for all product divisions in fiscal year 2016 and continues to promote annual updates.

DIC's Framework for Promotion The DIC WAY Common across the DIC Group Basic sustainability policy Risk management policy Rules for managing emergency supplies Rules for crisis management in the event of a major natural or other disaster Task force manuals BCM system manuals Production di

Product division

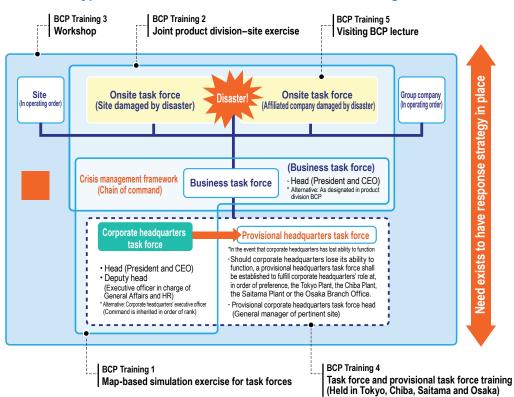
BCP manuals

Group company BCP manuals

| BCM in Fiscal Year 2018

A number of natural disasters struck Japan in fiscal year 2018. Particularly notable among these were the 2018 Osaka Earthquake, which struck northern Osaka Prefecture in June; torrential rains in southwestern Japan in July (officially called the "Heavy rain of July, Heisei 30") in July; and the Hokkaido Eastern buri Earthquake and Typhoon Jebi in September. In each instance, affected sites assessed the extent of impact, including confirming the safety of employees and their families and ascertaining damage, based on their BCPs and promptly informed corporate headquarters. Fortunately, these events did not affect the Group's production or supply activities and none of its major customers or suppliers suffered major damage.

Against this backdrop, the Group stepped up efforts to encourage awareness among and provide training for site and Group company BCP officers in Japan. To ensure that BCP officers share the same understanding of business risks, as well as to reinforce recognition of the need to address business continuity as an inherent aspect of everyday operations by encouraging the formulation of highly effective methods for countering various hypothetical crises—thereby enabling DIC to leverage limited resources to secure supply chains and restore sites to operability in the aftermath of a major disaster—DIC organized expert-led workshops and map-based simulation exercises for managers and joint product division—site exercises. DIC verified the results of these initiatives and used its findings to identify new issues and devise remedial measures.



Outline of Hypothetical Disaster Scenario–Based BCP Training

Promoting Complementary Production Capabilities

The DIC Group recognizes the need to ensure it can fulfill its supply responsibilities in the event of damage to facilities from a major natural disaster and thus incorporates this perspective into its BCPs. One way it does so is through complementary production capabilities. For example, the Saitama Plant in Japan and Qingdao DIC Finechemicals Co., Ltd. in the PRC, both of which produce LC materials, have developed a common response manual that outlines potential risks faced by each. In addition to holding regular response simulation sessions, the two facilities are currently developing a common BCP based on the assumption that one will take over for the other if required. Group pigment production facilities have developed a framework that involves continuous cooperation to plan emergency response measures.



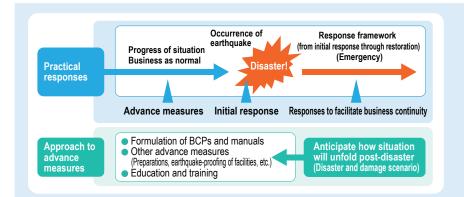
Visiting BCP Lectures Conducted at Domestic Sites

With the aim of facilitating collaboration between sites and corporate headquarters to ensure effective responses in the immediate aftermath of a hypothetical natural disaster, in fiscal year 2016 product divisions reviewed their BCPs. As part of efforts to promote awareness, in fiscal year 2017 DIC conducted visiting BCP lectures at 20 key sites in Japan.

The DIC Group produces a wide range of materials and components that can have a significant impact on society if supplies are delayed. For this reason, in the event a production facility suffers damage due to a disaster or other event, it is critical in normal times to maintain a configuration that ensures other sites (domestic production facilities, domestic/overseas Group companies or subcontractors) can temporarily take over production or provide backup and that supply chain functions are secured to facilitate procurement of raw materials. Accordingly, the Group recognizes the need to ensure a common crisis awareness among divisions and departments, notably product divisions, in normal times. This depends on clarifying roles and individuals in charge, creating an effective emergency contact network and conducting ongoing exercises aimed at improving responsiveness using hypothetical scenarios.

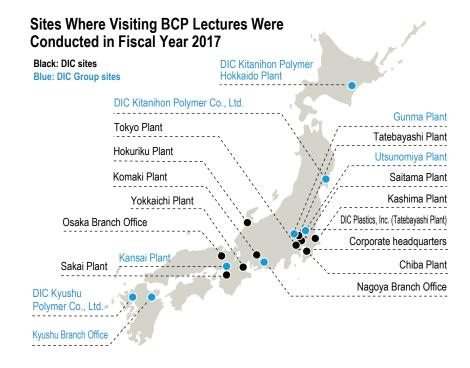
Initiatives Aimed at Formulating More Effective BCPs

DIC recognizes the need to ensure that divisions and departments share a common crisis awareness to ensure the prompt restoration of operations in the event a production site is damaged as the result of a disaster or other event. In fiscal year 2018, the Company organized BCP lectures for product division staff, as well as for domestic Group company executives and group leaders, and conducted BCP-focused joint product division–site exercises at seven principal domestic sites.





Visiting BCP lecture (Osaka Branch Office)

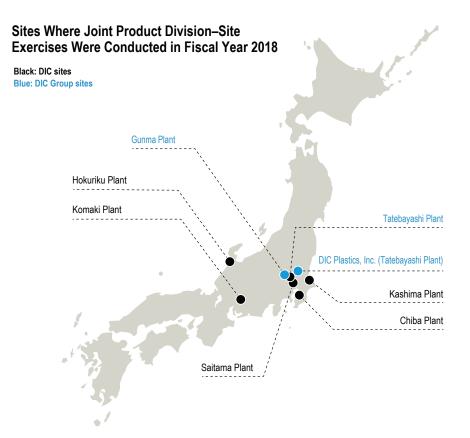


In fiscal year 2018, DIC conducted BCP lectures and BCP-focused joint product divisionsite exercises for the staff of seven sites and seven product divisions with the objectives of confirming the effectiveness of product division BCPs and ensuring a common understanding by product divisions and sites. As part of the joint exercises, sites conducted disaster prevention and mitigation exercises based on hypothetical scenarios, while product divisions conducted business continuity map-based simulation exercises with an emphasis on business continuity. In addition, Sustainability Working Group members assessed product division BCPs to confirm their effectiveness. These efforts were designed to avoid turning the BCP formulation process into a mere formality, but rather to facilitate the creation of effective and genuinely practical BCPs.

DIC will continue to promote such efforts with the aim of enhancing initial responses in the event of a disaster and of site restoration, complementary production, supplier management and regional response strategies.



Map-based simulation exercise



Conducting Emergency Response Exercises and Drills

The DIC Group has developed and maintains a system designed to ensure its ability to minimize damage in the event of a disaster, as well as to ensure the smooth restoration of operations. This system includes a wide range of exercises and drills, including safety confirmation drills, emergency radio warning drills, comprehensive disaster drills, map-based simulation exercises and BCP drills.



Crisis Management

Efforts to Reinforce Safety Measures Overseas

Owing to the expansion of its global operations, the DIC Group is establishing new overseas bases and increasing the number of employees being assigned to overseas posts or traveling overseas on business. With the rising frequency of terrorist acts, uprisings, kidnappings and other such incidents in various locations, the Group is reinforcing safety measures designed to help employees evade danger. These include taking steps to advance awareness among related individuals and reinforce corporate headquarters' ability to respond effectively in an emergency situation by establishing an emergency overseas contact network, providing risk information to overseas bases, distributing safety handbooks, providing safety training to employees prior to taking up new overseas posts or embarking on overseas business trips, and conducting exercises based on hypothetical scenarios set forth in crisis management manuals.



Safety training for employees prior to taking up new overseas posts



Safety training for individuals prior to traveling overseas on business



Safety handbook for individuals taking business trips overseas



Safety handbook for Company representatives posted overseas

Comment DIC is promoting measures that will ensure sustainable safety for Japan-based employees when they are abroad.

Effective risk management is indispensable to meeting the expectations of stakeholders worldwide in today's increasingly global corporate society. We have been assisting DIC in formulating safety- and healthcare-related measures for its Japan-based employees when they go overseas since fiscal year 2016. Since the beginning, DIC has worked actively to create a robust framework that is capable of responding to whatever issues might arise and has taken decisive steps with a view to ensuring effective corporate governance and fulfilling its obligation to ensure its employees' safety. In fiscal year 2018, DIC prepared various handbooks and conducted training sessions for approximately 760 employees at four sites.



As this shows, DIC's initiatives are not limited to the creation of a framework, but also focus on fostering a common crisis awareness on the front lines. Such efforts to leverage the framework it has created are enabling DIC to promote measures that will ensure sustainable safety for its Japan-based employees when they are abroad.

In fiscal year 2019, DIC will take steps to strengthen its framework. The Company will also apply this framework in a manner that responds to the needs of employees at sites around the world, thereby providing further support for its global business activities.

Senior Executive Advisor, Relo Panasonic Excel International Co., Ltd. Hiromichi Tsuji

First-Ever Emergency Drill Simulating Ballistic Missile Launch

Amid rising political tensions on the Korean Peninsula, in September 2017 DIC conducted its first-ever emergency drill simulating the launch of a ballistic missile in the direction of Japan. The drill played out a scenario in which information has been received via Japan's J-Alert emergency warning system that a missile has been launched, sounds a siren and broadcasts instructions for people to take appropriate actions to avert danger. On each floor, members of the Company's in-house firefighting squad issued instructions for employees to move away from windows and take cover under or behind solid objects. In the event of an unforeseen emergency, it is critical to remain calm and resist the urge to panic. The Sustainability Working Group assesses the effectiveness of various drills immediately afterward and incorporates its findings into subsequent disaster prevention planning.



Drill in progress



Government-prepared awareness poster in the corporate headquarters cafeteria

I DIC Corporate Headquarters Emergency Pocket Books

Approximately 1,300 employees of the parent company and various domestic Group companies work at the corporate headquarters in Tokyo. DIC has prepared *Emergency Pocket Books*, pocket-sized booklets that provide instructions on appropriate actions—both autonomous and in cooperation with others—in the event of a disaster for distribution to these employees and their families. The booklets also detail corporate headquarters' overall emergency response framework and the responsibilities of individual floors and departments in an emergency situation, as well as provide space for employees and their families to provide contact information. The compact size of the booklets ensures portability.



Emergency Pocket Books

I Training for Taking In Stranded Commuters in the Event of a Major Disaster

One of the most earthquake-prone countries in the world, Japan has been struck multiple times by devastating seismic activity. As a consequence, ensuring earthquake readiness, that is, the ability to prevent and mitigate the impact of earthquakes, is recognized as a critical challenge for society as a whole.

Tokyo's Nihonbashi district, home of DIC's corporate headquarters, is an area noted for its tightly clustered large commercial complexes and office buildings. Every year, a comprehensive neighborhood disaster drill is conducted on an empty lot near the DIC Building. Approximately 300 people took part in the 2017 drill, held on September 22, 2017, the scenario for which was an earthquake of close to 6.0 on the Japanese scale with an epicenter directly below a major urban area, which is something that is predicted to happen in Tokyo at some time in the future. Guided by personnel from the Nihonbashi Fire Station, participants received training in first aid (AED use and hemostasis); practiced using fire hydrants to extinguish fires; and toured facilities designated as temporary shelters for those stranded and an exhibition of relief tents set up by the Japanese Red Cross Society.

The DIC Building, designed with state-of-the-art earthquake-resistant technologies, has been designated as a temporary shelter for stranded commuters in Chuo Ward, where Nihonbashi is located. Accordingly, an exercise was conducted the scenario for which involved the opening of the first-floor main entrance area and taking in people stranded in Nihonbashi when public transportation is suspended in the wake of a disaster. Approximately 60 DIC employees took part in the exercise, which also included instruction in procedures for, among others, receiving and guiding shelter users, distributing rations, blankets, multipurpose plastic thermal sheets and other emergency supplies, and providing first aid and information.

In November 2018, DIC's corporate headquarters hosted the Disasters and Community Disaster Prevention conference, sponsored by the Nihonbashi Community Disaster Prevention Council. Owing to its proximity to Tokyo Station, Nihonbashi is abuzz with people day and night. Accordingly, the potential for damage from an earthquake with epicenters directly below the Tokyo metropolitan area, sudden heavy downpours and major typhoons is a significant concern. The objective of the conference was to create a system that will help minimize damage in the event of a disaster by encouraging collaboration between businesses and local residents.

The conference was attended by representatives of neighborhood associations, businesses, local government and the fire department and included lectures by disaster relief experts and speakers from nonprofit organizations (NPOs) focusing on, among others, disaster prevention systems, information collection, record keeping and responding to challenges, as well as a workshop-style drill using hazard maps. Participants divided into teams to address the tasks they were given, underscoring the important role of the conference as an opportunity for reinforcing understanding of emergency response procedures.

DIC will continue to play an active role in community-based efforts to reinforce local disaster preparations. In doing so, the Company aims to help ensure Tokyo's readiness to handle a major disaster.



Explanation to drill participants by Nihonbashi Fire Station personnel



Emergency training in the use of AEDs and hemostasis



Training in the use of fire hydrants to extinguish fires



Exhibit of temporary shelter for people stranded in Nihombashi



Japanese Red Cross Society exhibition of relief tents

Information Security

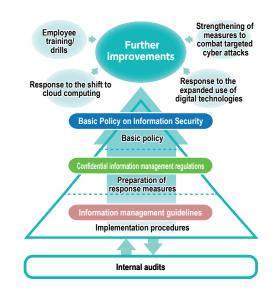
Initiatives to Ensure Information Security

Goals and Achievements of Major Initiatives Evaluations are based on self-evaluations of current progress. Key: ** * = Excellent; ** = Satisfactory; * = Still needs work

Objective of initiatives	Goals for fiscal year 2018	Achievements in fiscal year 2018	Evaluation	Goals for fiscal year 2019
Establish a global information security framework.	 Reinforce network infrastructure based on information infrastructure/BCPs designed to ensure preparedness for natural disasters and other issues. Complete Asia–Pacific region information infrastructure/secure environment creation project. Reinforce endpoint security. 	 Efforts commenced to create an infrastructure for the implementation of BCPs and to prepare for the shift to cloud computing. Management framework for the Asia-Pacific region information infrastructure/secure environment creation project was completed. Steps were taken to update the information security infrastructure with the aim of reinforcing endpoint security in preparation for a shift to Windows 10. 	**	 Fortify response to the expanded use of digital technologies. Create a new information infrastructure conducive to work style reforms, the further use of mobile devices and the expansion of global collaboration. Formulate and strengthen information security rules and frameworks, provide training and encourage awareness in a manner that responds to new information security threats and risks.

Basic Approach to Information Security

The DIC Group has positioned information security as a key management priority and established a Basic Policy on Information Security, which is founded on its recognition that protecting information assets that belong to or are managed by the Group is essential to its ability to conduct business. In line with this policy, DIC has formulated and implemented confidential information management regulations and information management guidelines. The DIC Group works to ensure that directors and employees use the Group's information assets appropriately in the course of business and appropriately handle confidential information. The Group also pursues continuous improvements by conducting internal audits to confirm current issues and identify risks.



Globally Maintaining and Enhancing Information Security

The DIC Group's approach to information security management rests on four pillars: Regulations and guidelines, management framework, infrastructure, and employee education and training. The Group is deploying measures in Japan and across the Asia–Pacific region and is promoting similar efforts in the Americas and Europe.

Regulations and Guidelines

The DIC Group continues to update its Basic Policy on Information Security, created in 2010, confidential information management regulations and information management guidelines regularly and as required to ensure its ability to address new security risks in a timely manner. The Group is also implementing new regulations as appropriate in response to the increasing prevalence of digital technologies. In addition, the Group has established separate rules for handling personal information and customer information in its information management guidelines, which it is working to disseminate among employees and put into operation. In fiscal year 2018, the DIC Group reported no breaches of customer privacy or losses of customer data.

Management Framework

The Information Security Committee meets twice annually to determine policies and procedures for information security in each area of the DIC Group's operations. Information security officers and managers are also appointed in each individual business group and functional unit to ensure the appropriate management and handling of important everyday information. To ensure it is prepared in the unlikely event of an information security–related incident, the Group has created a task force operational manual and periodically conducts training to ensure effective initial responses to incidents when they occur.

Infrastructure

In addition to ongoing initiatives, including the early installation of a next-generation firewall to protect against targeted cyber attacks by third parties, DIC has taken decisive steps to fortify its information security infrastructure to accommodate integration with the IoT, the expanded use of cloud computing and other new technologies, thereby reinforcing its management foundation.

In fiscal year 2018, DIC completed deployment of an information infrastructure/secure environment creation project initially implemented in the PRC and Southeast Asia (fiscal years 2015–2017) in the Republic of Korea (ROK) and Taiwan.

Employee Education and Training

Since fiscal year 2017, the DIC Group has offered an annual e-learning information security program to employees in Japan and elsewhere in Asia. The percentage of eligible employees participating in this e-learning program is currently 90%. The Group also provides information security training for employees in the Americas and Europe and works to promote awareness of the DIC Group's security policy, regulations and information infrastructure, and of effective ways to address new security threats and challenges associated with social media.

Comment As a business partner, this is my take on DIC's information security initiatives.

Our organization has provided assistance to DIC, particularly in the assessment of information security-related risks, since May 2017. One specific effort has involved the assessment of current capabilities from multiple perspectives, which involved the definition of critical data (including personal information and confidential business information), a secure configuration and set up for network systems that handle such critical data, physical and logical access control, audit log management and the establishment of a system for emergencies, and the maintenance of a policy that clarifies organizational roles and responsibilities. Having worked with DIC to assess and prioritize risks associated with issues highlighted through this process and clarified areas requiring reinforcement, we also assisted with the implementation of administrative, technical, human and organizational countermeasures.



The distinguishing feature of DIC's initiatives is the Company's focus on introducing measures and rules that give due consideration to practicality so as not to be a hindrance to existing business while at the same time ensuring its ability to ensure effective security. I look forward to continuing to assist DIC in its efforts to strengthen its information security in the years ahead.

General Manager, Advanced Information Security Services Division, BroadBand Security, Inc. Nobukazu Yamada

Environment, Safety and Health (ESH)



Toward the Achievement of a Sustainable Society

Management System

The DIC Group promotes a broad range of ESH initiatives through its Responsible Care program.

Basic Philosophy

As a company that manufactures and sells chemical substances, DIC sets standardized safety regulations for ESH initiatives. The Company is working to exceed regulatory standards and fully disclose results. Annual measures augment its core policy.

Initiatives to Date

Having established its Principle and Policy for the Environment, Safety and Health in 1992, in 1995 DIC pledged to implement the precepts of Responsible Care. Since reaffirming its support for Responsible Care management in January 2006 by signing the CEO's Declaration of Support for the Responsible Care Global Charter, the Company has promoted constant improvements. In 2014, DIC amended its Principle and Policy for the Environment, Safety and Health and renamed it the Policy for the Environment, Safety and Health. The name was subsequently revised to the Environment, Safety and Health Policy.



DIC is a signatory to the International Council of Chemical Associations' Responsible Care Global Charter

Environment, Safety and Health Policy

As a responsible corporate citizen and as a company that manufactures and sells chemical substances, DIC recognizes that care for the environment, safety and health is fundamental to the management of the Company. DIC is committed to the concept of sustainable development in all aspects of its businesses and contributes to the global environment, including biodiversity, by creating environmentally sound products and technologies.

- We take responsibility for the environmental, safety and health implications of products throughout their life cycles.
- We continuously set goals and targets for environmental, safety and health improvements.
- S We comply strictly with laws, regulations and agreements relative to the environment, safety and health. For countries lacking such laws, we prioritize safe operations and protection of the environment.
- 4 We systematically provide education and training on the environment, safety and health.
- S We prepare systems and audit internally to benefit the environment, safety and health.

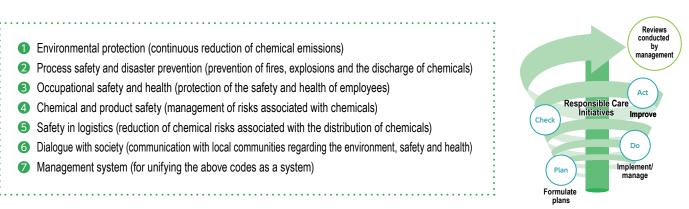
We disclose these policies internally and externally and ask that all DIC Group companies observe them. The abovementioned "safety" also encompasses security and disaster prevention.

Focus on Product Stewardship

The DIC Group views product stewardship as essential to the promotion of Responsible Care. Product stewardship is a philosophy that emphasizes assessing product-specific ESH risks and sharing findings, together with information on appropriate handling, with stakeholders, with the aim of reducing the ESH impact of products over their entire life cycle—i.e., from the development of chemical substances through to procurement, production, transport, sale, use and disposal or recycling.

Applying the PDCA Cycle to Seven Responsible Care Codes

The DIC Group manages its Responsible Care initiatives in a uniform manner using a system comprising seven codes, six of which are mandated by the Japan Responsible Care Council (the first six codes listed) and a management code that was devised internally. In undertaking these initiatives, DIC and DIC Group companies leverage the Group's ISO 14001-certified environmental management system. In addition to these systems, certain overseas Group companies are working to secure the ISO's Occupational Safety and Health Management System (OSHMS) certification through ongoing efforts to enhance their Responsible Care capabilities.



Annual Activity Plans

The DIC Group formulates annual Responsible Care activity plans, translating them into English and Chinese. Based on its activity plans for fiscal year 2018, the Group sought to ensure that Group companies operating in different regions developed their own specific plans, encouraging then to promote Responsible Care initiatives and contribute to an environment-friendly society through its manufacturing activities.

Fiscal Year 2018 Activity Plans

In fiscal year 2018, the DIC Group engaged in Responsible Care initiatives based on the following activity plans.

1	Occupational safety and health/disaster prevention
	In line with the DIC Group's fundamental objective, which remains the achievement of an accident-free workplace, set regional targets for reducing the incidence of occupational accidents in fiscal year 2018.
2	Environmental preservation
	In line with the DIC Group's goal of reducing its impact on the environment, set regional targets for lowering environmenta impact and implement measures to facilitate the achievement thereof. Of particular note, promote energy-saving initiatives and reduce CO ₂ emissions, including through the use of energy from renewable sources, maintaining an awareness of the medium-term target for reducing the DIC Group's absolute emissions of CO ₂ by 7.0% from the fiscal year 2013 level by fiscal year 2020 an annual average decrease of 1.0%. Logistics safety
2	Promote the provision of information pertinent to the safe transportation of chemical substances.
4	Product stewardship
	Promote the provision of information to stakeholders regarding the appropriate handling of products over their entire life cycles. Communication with society
	Report on the results of the DIC Group's Responsible Care activities via the DIC Report.
6	Management system
	Promote compliance with laws, regulations and agreements pertaining to ESH. Make use of the PDCA cycle in promoting
	Responsible Care activities. Foster human resources in areas pertinent to ESH.

Message from the CEO

DIC's president and CEO prepares a message for employees for Environment Month and National Safety Week.





ESH

Framework for Promoting Responsible Care

Each year, the DIC Group defines priority issues to address and uses the PDCA cycle in voluntary initiatives at the Group company, plant and research laboratory levels. The Responsible Care Department provides support for these initiatives to advance their progress and conducts regular audits to ensure compliance and improve safety and environmental performance.

Support for Group Company Responsible Care Initiatives

The Responsible Care Department provides wide-ranging support to Group companies in Japan and overseas, regardless of size (a total of 67 sites), with the goal of enhancing Responsible Care initiatives Groupwide.

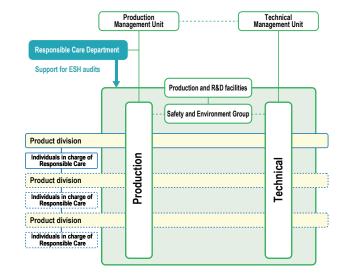
Acquisition of Certification Under ISO 14001

As of June 2018, 75% of the global DIC Group had acquired certification under ISO 14001, the International Organization for Standardization's standard for environmental management systems.

Principal Initiatives in Fiscal Year 2018

Support for Overseas Group Companies

Framework for Promoting Responsible Care



In fiscal year 2016, the DIC Group rebuilt its framework for supporting the efforts of Group companies overseas to promote ESH initiatives in a flexible, autonomous manner appropriate for each country and territory. Once annually, executives from Group companies and site general managers in Greater China and the Asia–Pacific region, executives in charge and Responsible Care officers from corporate headquarters and other individuals hold annual ESH and energy conservation conferences, during which they exchange views on the progress of initiatives, as well as on challenges and future directions.



Greater China and Asia-Pacific region ESH and energy conservation conference (Asia-Pacific region)

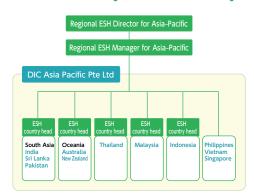


Eighth Greater China ESH and energy conservation conference (November 2018)

Asia–Pacific Region

In the Asia–Pacific region, the DIC Group has established ESH country heads (individuals in charge of Responsible Care in individual countries) under the supervision of the regional ESH director. Country heads hold periodic country-specific conferences, which are also attended by representatives from regional companies and production facilities and the regional ESH director, to discuss the region's ESH policies, targets and challenges. In addition, a regional country heads from Indonesia, Thailand and Malaysia, the regional ESH director, the executive in charge of regional operations, and Responsible Care officers, who meet to discuss ESH policies, targets and challenges for the subsequent year. A total of 15 people took part in the 2018 meeting, which was held in November.

Framework for Promoting ESH in the Asia-Pacific Region



[Regional Initiatives]

The DIC Group in the Asia–Pacific region comprises 16 companies in 10 countries. In addition to diverse customs and languages, a key challenge from an operations perspective is differences in awareness regarding occupational safety. To resolve such differences, it was crucial for the Group to establish common occupational safety standards and work to ensure the effective implementation thereof at all regional Group companies. DIC Asia Pacific, which overseas regional Group operations, has acquired certification under OHSAS 18001, the internationally accepted standard for occupational health and safety management systems, and has begun providing encouragement and support for companies in the region seeking to obtain certification, which a total of 12 regional sites have done to date. In fiscal year 2018, DIC Philippines, Inc., also earned certification. At present, the Group's regional OHSAS certification rate* is 88%.

* Calculated as percentage of production volume from OHSAS-certified companies.

Greater China

Steps have been taken recently to tighten the PRC's environmental laws, regulations and standards. Some of the country's standards are now even stricter than Japan's. Increasingly stringent safety standards have also been applied since the explosions that occurred at the Port of Tianjin in 2015. DIC's efforts to reinforce its ESH framework in Greater China include dispatching an ESH manager from corporate headquarters to serve as regional ESH director and assigning ESH coordinators to oversee efforts in the southern and eastern parts of the country. Teleconferences involving pertinent corporate headquarters and local staff are also held regularly to facilitate the prompt resolution of issues.

TOPIC

DIC (China) Conducts Fiscal Year 2018 Greater China Safety Management Improvement Training Program

On May 24–25, 2018, DIC (China)'s ESH team conducted a training program aimed at improving safety management in the city of Suzhou, Jiangsu Province. The program was attended by 38 individuals, including ESH officers and representatives of production and facility departments, from the PRC, Taiwan and Hong Kong.

Yi Fu Liu and Xue Gang Yang, general technical advisors for the State Administration of Work Safety's Process Safety Management (PSM) Project, served as program instructors, giving lectures on ESH training management, regional management, ESH audit management and job safety analysis management, among others. Lectures were designed to challenge participants to think for themselves. Feedback from participants was enthusiastic, with one commenting that the program had helped him clarify the idea of improving safety management, which he had previously found to be somewhat vague, and that he looked forward to promptly implementing changes at his workplace. DIC (China) will continue to organize opportunities such as this with the aim of enhancing safety management across the region.



Participants in the fiscal year 2018 Greater China Safety Management Improvement Training Program

Europe, the Americas and Africa

The Sun Chemical Group oversees all Responsible Care initiatives by Group companies in Europe, the Americas and Africa. With the aim of sharing the overall DIC Group Responsible Care policies and values and facilitating close cooperation with the Sun Chemical Group, ESH officers at corporate headquarters in Tokyo hold periodic ESH conferences. In May, September and November 2018, officers met to exchange views on, among others, the status of initiatives, management of chemical substances and systems in place to facilitate contact in the event of an emergency.

Support for Group Companies in Japan

Calls are increasing for companies to further reinforce their frameworks for managing employee health and preventing occupational accidents. In fiscal year 2016, DIC and DIC Graphics introduced GL conferences, gatherings of ESH officers from principal production facilities across the country who have been appointed group leaders (GLs) and who oversee site ESH initiatives. GL conferences were held five times in fiscal year 2018, with Responsible Care officers also in attendance, with the aim of crafting standards, among others, and exploring improvements to address shared challenges.

Basic Approach

Responsible Care Department specialists with expertise, experience and auditing capabilities regularly collaborate with executive officers to audit Responsible Care initiatives at Group companies. Top DIC executives also take part in ESH audits at numerous sites each year to enhance Responsible Care performance across the DIC Group.

Overseas, Responsible Care Department specialists and regional headquarters' ESH officers assess the progress of efforts at production sites and work together to enhance the effectiveness of Responsible Care initiatives.



EHS audit conducted by DIC's Chairman and CEO

Initiatives in Fiscal Year 2018

Third-Party Audits

In Japan, Responsible Care Department specialists have audited the Responsible Care efforts of domestic consolidated subsidiaries since fiscal year 2014 to verify efforts and support improvement activities. In fiscal year 2018, audits were conducted at DIC's nine principal sites and DIC Graphics' four sites. In addition, third-party safety audits were conducted at key sites in Japan (the Sakai and Komaki plants) as an objective way to identify issues.

The Company also conducted audits using self-assessment checklists of 13 sites belonging to nine other domestic Group companies with the aim of enhancing safety and environmental management. ESH officers from DIC's principal sites took part in the audits of domestic Group company sites and also provided directions regarding the administration thereof.

Similar efforts are also promoted overseas, with audits becoming more stringent every year. In fiscal year 2018, the Group conducted inspections to determine the status of management systems, as well as Responsible Care audits using self-assessment checklists in three areas (environment, safety and health), at 21 sites belonging to 21 companies in Greater China, four sites belonging to three companies in the ROK and 21 sites belonging to 16 companies in the Asia–Pacific region. The Group also promotes steady progress through application of the PDCA cycle.

In Greater China, third-party audits were conducted at DIC (China) sites, while monitoring was implemented at sites belonging to Qingdao DIC Finechemicals Co., Ltd., DIC Synthetic Resins (Zhongshan) Co., Ltd. and Changzhou Huari New Material Co., Ltd. In Europe, the Americas and Africa, audits were conducted at 33 sites belonging to the Sun Chemical Group and seven sites belonging to subsidiary Seiko PMC Corporation, which manufactures chemicals for paper production and resins for printing inks and reprographic products, with audit results and the progress of subsequent remedial measures communicated to DIC. The Group reported two violations* of Responsible Care–related regulations overseas during the period. Prompt steps were taken to make improvements.

* Violations with a penalty exceeding \$10,000



More detailed self-assessment checklist (Greater China)



Initiative at DIC Graphics Chia Lung Corp. (Taiwan)

Outline of ESH Audits Implemented (Fiscal Year 2018)



Audits Conducted at Subsidiaries' Sites (Fiscal Year 2018)



Occupational Safety and Health/Disaster Prevention

Viewing the prioritization of operational safety as a core management tenet, the DIC Group works tirelessly to prevent accidents and disasters and boost the level of ESH initiatives.

Goals and Achievements of Major Initiatives Evaluations are based on self-evaluations of current progress. Key: *** = Excellent; ** = Satisfactory; * = Still needs work

Objective of initiatives	Goals for fiscal year	2018	Achievements in fisc	al year 2018	Evaluation	Goals for fiscal ye	ear 2019
Ensure occupational safety and health.	Asia-Pacific region:2.Greater China:2.Americas and Europe:8.	lays lost. .8 2.2 2.0	Reductions achieved: DIC Group in Japan: Asia–Pacific region: Greater China: Americas and Europe: (Global DIC Group:	2.86 2.88 1.41 7.53 4.69)	*	Reduce frequency of oc accidents resulting in wo DIC Group in Japan: Asia–Pacific region: Greater China: Americas and Europe: (Global DIC Group:	•

Occupational Safety and Health

Operational Safety: Fundamental to Businesses

The DIC Group recognizes that operational safety is both fundamental to its businesses and the core component of Responsible Care. Accordingly, the Company undertakes occupational safety and health, security and disaster prevention measures to foster a "Safety First" philosophy Groupwide and in the mind of every employee.

Because its manufacturing operations span diverse fields, the DIC Group has numerous production processes that use hazardous and toxic materials and rotating devices, including ones that do not involve chemical reactions. Any accident involving such materials or devices has the potential to significantly impact society in general and damage the health of the Group and partner company employees and local residents.

With the aim of preventing such accidents, the DIC Group places a high priority on reducing risks in the workplace by enhancing awareness of *Principles* of Safe Conduct and training highly perceptive safety personnel. The Group strives to enhance safety through efforts to reinforce its safety infrastructure and create a safety-oriented corporate culture.



Workplace safety posters featuring the president and CEO in three languages for use at sites in Japan and overseas

Framework for Promotion

The DIC Group sets individual regional occupational safety and health targets. The Responsible Care Department and regional headquarters work together to conduct Group company-specific risk assessments, analyze occupational accidents and promote remedial measures.

Principal Initiatives in Fiscal Year 2018

and storing this data in the cloud to facilitate centralized management.

Making Regional Data Visible through Monthly Reports

The DIC Group conducts its diverse businesses in accordance with a wide range of national and regional legal systems, working environments and practices. The risk of accidents and disasters varies from one industry to another because of differences in the facilities, machinery and raw materials used. For Group companies to work as one to improve occupational safety and health, it is therefore crucial to establish appropriate benchmarks for each region (Japan, Greater China, the Asia–Pacific region, and the Americas and Europe).

DIC promotes the sharing of information on accidents, disasters and reporting procedures for each region, as well as gathered and shared statistical information related to occupational safety, including employee numbers, working hours, number of accidents leading to workdays lost, number of accidents not leading to workdays lost, number of

accidents involving fires/explosions, workdays lost, workdays lost before restart of operations, occupational accident frequency rate, occupational accident severity rate, workdays lost per thousand employees and workdays lost per million work hours. This approach makes it possible to objectively compare the operational safety of individual Group companies, establish more precise targets and facilitate improvement programs.

In fiscal year 2015, the DIC Group established a system for aggregating monthly occupational safety and health data for individual Group companies in Greater China and the Asia–Pacific region as a monthly report. This made it easier to more swiftly identify and compare working hours, the number of accidents leading to workdays lost, occupational accident frequency rates and other monthly data for these regions, thereby further enhancing Groupwide management and regional performances. In fiscal year 2018, the Group began recording

Reducing Risks

By understanding potential risks in production processes, facilities and devices, and the hazards of chemical substances, the DIC Group systematically prepares initiatives to prevent accidents and occupational injuries. In Japan, the Group has formulated guidelines for conducting risk assessments when deploying new or modified equipment or changing production processes and promotes ongoing efforts to reduce risks associated with chemical substances.

With the aim of reducing risks associated with chemical substances in Japan, since fiscal year 2015 the DIC Group has created a framework to facilitate the methodical implementation of risk assessments in line with the policy set forth by the Ministry of Health, Labour and Welfare. Of particular note, in fiscal year 2016 the Group formulated proprietary assessment guidelines, including for assessment procedures, and is considering measures to evaluate hazards and toxicity and lower risks associated with chemicals set forth in Japan's Poisonous and Deleterious Substances Control Act, such as modifying and improving practices for handling such substances. Individual sites have created risk assessment frameworks and developed three-year plans to govern initiatives. The progress of these risk assessments is confirmed through ESH audits.

TOPIC

DIC Holds Hands-On Demonstration of Powered Exoskeleton Suit

In October 2018, DIC's Tatebayashi Plant hosted a hands-on demonstration of the Hybrid Assistive Limb (HAL) powered exoskeleton suit which was also attended by employees of the Chiba and Saitama plants. With the goal of promoting work style reform, the Production Management Unit is working to increase opportunities for female employees on production lines and to provide positive work and production environments, thereby bolstering productivity. As part of this effort, the unit is considering the deployment of HAL.

HAL is a cyborg-type robot suit developed by Cyberdyne Inc. to improve, support and enhance the wearer's musculoskeletal functions. Thanks to its light weight (3.0 kg) and compact design, HAL reduces stress on the wearer's lumbar region by up to 40%. At the event, a total of 10 employees donned the HAL Lumbar Type for Labor Support and lifted heavy objects (25 kg paper sacks), with comments received indicating surprise that the degree of lumbar stress reduction exceeded expectations and enthusiasm that long-term use would yield significant benefits.

Looking ahead, DIC will analyze work and conduct practical tests at individual sites. Since the model tested is not explosion-proof, consideration of adoption will initially begin with sites that do not handle hazardous materials. Once an explosion-proof model is developed, adoption will be expanded to include hazardous materials–related sites.



HAL Lumbar Type for Labor Support



Employees participating in the hands-on demonstration

ESH

S Promoting E-Learning–Based Training for Employees

To enhance its ESH and disaster prevention capabilities, the DIC Group recognizes the importance of ensuring that all of its employees gain a broad understanding of chemical substances, production processes, and pertinent laws and regulations. In fiscal year 2016, the Group introduced an e-learning program on a trial basis, structuring training around laws and regulations pertinent to the operation of production facilities, including the Fire Service Act, the Air Pollution Control Law and the High Pressure Gas Safety Act, and verifying the appropriateness of education materials from the perspective of Responsible Care Department specialists, ESH officers and production departments, among others. In fiscal year 2017, the program was introduced formally for DIC Group companies in Japan, with 137 employees registering to take part. Participants can take up to 16 classes and must score above 80 points to earn certification. In fiscal year 2018, a total of 276 employees took part in the program.

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174基本用作	2015/dar12	6
CHARGE P.	2010/04/18	12
THERE .	2010-0410	12
COVER	2016/02/19	10
EH-BRUPS	2010/01/25	12
ANEIENR	2016/01/14	12
NABREA.	2016/12/25	e .
SBLPRRF1	2015/12/14	12
479111	2010/12/08	12
1.99.00	2015/12/03	52
MRGRADERS	2015/12/03	12
6292	2015/12/0	12
LITZERASUL	2016/12/01	12
CE9174	2016 18/26	e -

Portion of e-learning program

Itaining Skilled Safety Personnel to Predict Risks

To foster skilled safety personnel, the DIC Group provides regular safety education and training on how to handle chemical substances, using materials such as *Principles of Safe Conduct, Environment and Safety Guidelines for the R&D Department*, safety data sheets (SDSs) and its Occupational Accident Case Studies database. In recent years, the Group has focused especially on a technique called Kiken Yochi Training (KYT) ("hazard prediction training") and hands-on safety training for employees of Group companies worldwide. *Principles of Safe Conduct* has been translated into several languages, with local employees in the Republic of Korea (ROK) and Malaysia translating the document for their own use after corporate headquarters produced English- and Chinese-language versions for use as training materials at overseas Group companies.

Fiscal year 2018 brought publication of the fifth edition of *Principles of Safe Conduct*, which is updated every 10 years, as well as the launch of an animated version. The Group also continued to promote use of KYT, a constructive technique to further increase safety awareness, among Group companies in Japan, as well as to accelerate deployment of KYT in Greater China and the Asia–Pacific region.



Web-based animated version of Principles of Safe Conduct

Image: Promoting Hands-On Safety Training

The DIC Group's full-fledged hands-on safety training program began in 2012 with the introduction of a mobile initiative using equipment transported from site to site. Since fiscal year 2013, the Group has installed permanent training equipment in Japan (six sites), the PRC (three sites), Taiwan, Malaysia and Indonesia. Over the past few years, these and other initiatives have helped to almost halve the occupational accident frequency rate* at DIC Group sites in Japan. The Group's hands-on safety training simulates common production floor accidents— including those involving entanglement in rotating devices, falls from high places and incised wounds caused by cutting equipment—based on actual previous examples with the aim of reducing employees' willingness to accept risks and fostering their ability to recognize danger. In doing so, the Group seeks to transform the mindset of employees by encouraging them to think and act on their own to protect themselves and each other from latent risks.

* The "occupational accident frequency rate" expresses the frequency of accidents resulting in workdays lost, calculated as the number of deaths or injuries per million work hours.

Initiatives in Japan

In 2014, the DIC Group opened the Saitama Hands-On Safety Training Center, a facility boasting equipment that allows the simulation of an array of accidents, with the goal of fostering skilled safety personnel by incorporating training in new employee and rank-specific training programs. DIC's Chiba, Sakai, Hokuriku, Saitama, Kashima and other plants have also established their own hands-on safety training equipment and curricula to further embed safety into the Group's culture.

With the aim of reducing accidents among inexperienced employees, Group companies, led by DIC and DIC Graphics, have included

hands-on safety training and KYT in the training curricula for new employees. In fiscal year 2015, the Group downsized six types of hands-on equipment for use in the mobile hands-on training initiative. Instructors for this initiative are employees at each site. The Responsible Care Department places a high emphasis on fostering hands-on training instructors and has established a licensing system.



KYT for new employees



Hands-on safety training: Simulating being caught in a chucking apparatus

VOICE I believe it is important to increase employees' ability to recognize danger and to think and make improvements on their own.

The number of accidents at and resulting damage to DIC facilities continues to trend upward. In many cases, the causes thereof outlined in disaster bulletins are unacceptable. Feeling a strong need to improve my ability to recognize danger, I participated in the Class 2 hands-on training instructor licensing program organized by the Responsible Care Department. Hands-on training is also provided at the Hokuriku Plant and I have served as an instructor in the past, but our focus was always on the importance of basics, that is, of knowing what not to do. In contrast, the Class 2 hands-on training instructor licensing program prioritized our ability to recognize issues and improvements that could be made at our own workplaces. Lecturers did not try to force their opinions on us, but rather guided us skillfully to think for ourselves, which I found tremendously helpful.



Going forward, I will work to provide guidance in a manner that will help improve the ability of employees to recognize danger, as well as to think and make improvements on their own. Through such efforts, I hope to help reduce the number of unacceptable accidents.

Assistant Manager, Safety and Environment Group, Hokuriku Plant, DIC Corporation Yasushi Sunada

Initiatives to Prevent Electrostatic Accidents

Electrostatic accidents such as fires, explosions and electric shocks occur when front-line employees at production facilities become electrically charged and energy from the accumulated static electricity is discharged, causing solvents, solvent-containing materials or powders to ignite.

Recent years have brought an increase in the use of easily charged copolymers in a broad range of industries, which has led to an increase in accidents in diverse locations and all seasons. To prevent such disasters, is it important to recognize the dangers of static electricity and

take proper precautions on a regular basis to maintain and/or improve workplace safety. It was with this in mind that in March 2017 DIC organized a lecture at the Tokyo Plant on the theme of electrostatic accidents and their prevention. A total of 106 enthusiastic employees attended the lecture. In fiscal year 2019, the Company plans to hold related lectures at the Kashima Plant and at four sites belonging to DIC Group sites in Indonesia.





Lecture at the Tokyo Plant

Initiatives at Overseas Group Companies

Group companies overseas are also deploying hands-on safety training. In Greater China, hands-on safety training equipment has been installed at Nantong DIC Color Co., Ltd., a manufacturer of printing inks and organic pigments; DIC Graphics (Guangzhou) Ltd., a manufacturer of printing inks; and Changzhou Huari New Material, which manufactures synthetic resins, in the PRC, and printing inks manufacturer DIC Graphics Chia Lung, in Taiwan. In the Asia–Pacific region, equipment has been installed at DIC Compounds (Malaysia) Sdn. Bhd. and Indonesia's PT DIC ASTRA Chemicals, both of which manufacture compounds. These companies provide hands-on safety training for employees across their respective regions, as well as education for safety instructors. In fiscal year 2016, the cumulative number of participants in hands-on safety training across the global DIC Group surpassed 10,000.

Hands-On Safety Training Facilities Established in Thailand and India

In August 2017, hands-on safety training equipment for simulating entanglement in rotating devices, tumbles, falls from high places and other common workplace accidents were installed at Siam Chemical Industry Co., Ltd.'s plant in Samut Prakan Province and DIC India Ltd.'s plant in Noida. The global deployment of hands-on safety training equipment, including the installation of equipment, has proceeded under the direction of DIC in Tokyo. These facilities also provide training to qualify ESH officers assigned to Group companies across the Asia–Pacific region as hands-on safety instructors to oversee training to local employees, which has underpinned a steady increase in awareness of safety. The installation of equipment at Siam Chemical Industry and DIC India facilities marks the first time local Group companies and employees have spearheaded such a move.



Employees participating in hands-on safety training at Siam Chemical Industry (left) and DIC India (center) and view of a training room



Other Initiatives

In the PRC, synthetic resins manufacturer Changzhou Huari New Material is expanding efforts to foster a safety-oriented corporate culture. These include installing safety-related signage across its site and encouraging awareness of occupational safety and health and disaster prevention.



Large-scale digital safety display in the PRC

Themes

Measures to prevent falls and measures to prevent

Measures to prevent the exposure of solvents and

measures to prevent the exposure of dust

Number of Hands-On Safety Training Participants (Fiscal Year 2018)

	DIC Group in Japan	DIC Group overseas (Greater China: 4 companies; Asia–Pacific region: 4 companies)	Total
FY2018	363	1,256	1,619
Cumulative total (FY2012–2018)	8,805	4,394	13,199

ΤΟΡΙΟ

Expanding Implementation of Measures to Prevent Accidents: Best Practices Award Established

The Sustainability Committee reflects priority initiatives designed to ensure safe operations in its annual sustainability activity plans. In fiscal year 2018, DIC established a best practices award to recognize creative measures by DIC Group companies in Japan to prevent accidents and began promoting the dissemination of outstanding examples using the Group's intranet.

The best practices award program begins with the selection of annual themes related to accidents requiring special attention. Group companies are encouraged to submit measures implemented in their workplaces for consideration by a screening committee including plant Safety and Environment Group managers, which votes to select outstanding examples to receive awards. In fiscal year 2018, the themes chosen were "Measures to prevent falls" and "Measures to prevent chemical burns." A total of 33 measures to prevent falls and 39 measures to prevent chemical burns were submitted, from which winners of an award for excellence and second and third place awards were chosen for each theme.



Award for excellence (Measures to prevent falls)

Tokyo Plant, DIC Graphics Corporation General Affairs & Administration Group (Fumihito Shirai)

Fiscal year 2018

Fiscal year 2019



chemical burns

Award for excellence (Measures to prevent chemical burns) Chiba Plant, DIC Corporation Team 2, Polymer Technical Group 1 (Masayuki Nanjo)

Status of Occupational Accidents

The DIC Group promotes a variety of initiatives aimed at eliminating occupational accidents.

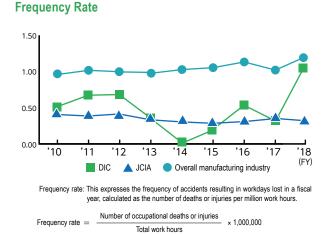
In fiscal year 2018, the number of occupational accidents resulting in workdays lost across the global DIC Group was up slightly from fiscal year 2017. Looking ahead, the Group will continue working to analyze the causes of occupational accidents resulting in workdays lost that have occurred to date and to reflect its findings in concrete improvements with the goal of preventing the occurrence of such accidents in the future.

Note: DIC aggregates and reports data on full-time, part-time and contract employees.

Workdays Lost Due to Occupational Accidents (FY2016–2018)

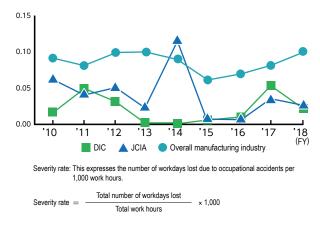
	DIC			DIC Group (Japan)			DIC Group (Global)		
	2016 2017 2018		2016	2016 2017 2018		2016 2017		2018	
Number of workdays lost	3	2	6	5	3	8	71	70	91
Frequency rate	0.541	0.360	1.071	0.548	0.331	0.848	1.893	1.752	2.221
Severity rate	0.012	0.054	0.021	0.026	0.028	0.013	-	-	-
TRIR*	2.35	2.16	2.50	3.07	2.65	2.86	3.84	3.98	4.69

* Total recordable injury rate (TRIR): Number of occupational accidents resulting in lost workdays + Number of occupational accidents not resulting in lost workdays / Million work hours



A frequency rate of 1.0 means one occupational accident resulting in workdays lost in one year at a site with 500 people.

Severity Rate



A severity rate of 0.1 means 100 workdays lost in one year at a site with 500 people.

Safe Corporate Climate Cultivation Working Groups

Safe Corporate Climate Cultivation working groups comprise personnel in charge of safety at plants belonging to DIC and subsidiary DIC Graphics. These groups have been active since fiscal year 2011. Members meet regularly to discuss and exchange proposals regarding safety policies and measures.

- Fiscal year 2012: Working groups presented recommendations on safety policies and produced warning stickers to enhance awareness of workplace hazards.
- Fiscal year 2013: Working groups prepared safety posters featuring the president and CEO and started reading out key passages from *Principles of Safe* Conduct in workplaces with the aim of making the practices therein routine.
- Fiscal year 2014: Working groups prepared an illustrated version of Principles of Safe Conduct for reading out in workplaces.
- Fiscal year 2015: Working groups edited *Principles of Safe Conduct* into a tear-off calendar version for distribution at all workplaces. The calendar version was translated into English and Chinese.
- Fiscal year 2016: Working groups in the PRC began reading out key passages from Principles of Safe Conduct to further strengthen the DIC Group's culture of safety.
- Fiscal years 2017–2018: Working groups updated *Principles of Safe Conduct* and in January 2019 published the fifth edition of the document. Working groups also launched an animated version in Chinese and English with the aim of bolstering understanding.

_____ 安全基本動作



Pages from the illustrated version of *Principles of Safe Conduct* for workplace reading circles (available in Japanese, English and Chinese)

Occupational Health

The DIC Group handles a broad range of chemicals, including specified chemical substances and organic solvents. To safeguard the health of employees handling these chemicals, the Group regularly conducts health checkups and environmental measurements, and modifies and improves working conditions as needed. Industrial physicians, health supervisors and other experts inspect workplaces to manage employee health.

Occupational Health and Safety for Employees of Partner Companies and Subcontractors

In Japan, the DIC Group signs outsourcing agreements with partner companies and subcontractors that have offices on its sites and contracts work out to construction and logistics firms. All such firms are obliged to observe the DIC Group's Environment, Safety and Health Policy, as well as pertinent occupational safety and health-related laws and regulations. The Group has established a DIC Safety Council at each principal domestic site, enabling site safety and health personnel and partner companies/subcontractors to cooperate in implementing safety patrols, conducting training and drills related to the handling of chemical substances, and staging safety rallies that feature lectures, presentations on best practices and other awareness-promoting initiatives during National Safety Week (July) and National Environment Month (June) and on site-specific safety days.

Disaster Prevention

Basic Approach and Organization

Any fire, explosion or leak of hazardous substances from a chemicals plant could have a tremendous impact on local residents and the rest of the community and damage the health of employees, including those of partner companies. In addition to establishing a security management system to prevent such accidents, the DIC Group operates and maintains its facilities in line with pertinent laws and regulations. The Group regularly conducts emergency drills and has earthquake and other response measures in place.

DIC also undertakes risk assessments to ensure its ability to construct safe production facilities. In 2013, the DIC Group formulated the DIC Process Risk Management (PRM) Guidelines*, which consist of four assessment techniques and implementation timetables for each. The Group uses these tools to conduct regular risk assessments at each of its sites. To aid in effective BCP, an essential component of risk management, in fiscal year 2016 the Group identified priority risks and implemented emergency response drills.

* The DIC PRM Guidelines outline timetables and implementation frameworks for assessing the handling of chemical substances, production processes, production formulas, machinery and work practices with the aim of comprehensively identifying and steadily reducing risks associated with production and R&D processes.

Process Safety Management

DIC calculates process safety accidents at DIC Group sites in Japan in accordance with International Council of Chemical Associations (ICCA) guidelines. In fiscal year 2018, the Group reported 16 process safety accidents. The process safety accident frequency rate—the number of such accidents per 200,000 work hours—was 1.70. There was one accident involving an explosion at a DIC Group company in Japan that resulted in a fatality.

Facility Safety Assessment

1 Assessment Procedures

DIC Group production facilities have an array of equipment, ranging from units where chemical reactions are conducted to machine presses and other processing equipment. When modifying processes or upgrading/replacing equipment, the Group assesses safety at every stage, from process design and construction through to operation, maintenance and final disposal, in line with risk assessment guidelines for reaction processes and facilities, to ensure higher safety levels for new processes and facilities. In fiscal year 2015, DIC revised risk assessment guidelines for machinery and equipment and prepared educational materials to prevent static electricity accidents.

2 Accident and Disaster Analysis and Timely Information

DIC collects and compiles information on internal and external accidents, disasters and problems into its Occupational Accident Case Studies and Accident Case Studies databases. After identifying the causes of accidents or problems and establishing points to be checked, the Company incorporates database information into safety education for DIC and DIC Group companies in Japan and overseas.

S Initiatives to Enhance Safety Competency

A company's safety competency can be defined as its ability to maintain safety levels at its various sites. As a means of objectively evaluating and enhancing its safety competency, in fiscal year 2013 DIC introduced an assessment system that encompasses questions about safety infrastructure (technical considerations) and the Company's culture of safety (operation and management of organizational culture). This system was developed by the Japan Society for Safety Engineering (JSSE) as a common benchmark for engineers in the chemicals industry and is currently used by companies in Japan that are members of the Safety Competency Enhancement Center.

In fiscal year 2015, the Safety Competency Enhancement Center formulated a system for evaluating processing sites and a prioritized version of the system to streamline evaluations. In fiscal year 2016, the center reviewed and revamped criteria for assessing safety infrastructure and culture of safety, as a result of which application of the system has expanded to include non-chemicals industry companies. Safety Competency Enhancement Center inspections were conducted at the Yokkaichi and Saitama plants in fiscal year 2017 and at the Komaki and Sakai Plants in fiscal year 2018. Inspection results of which the Company is using to implement further improvements.

Skai Plant



Comaki Plant

We accept objective facility safety assessment findings with an open mind and use them to create a virtuous cycle of improvement in safety.

Our facility safety assessment system uses third-party assessment organizations with the objective of gaining an objective grasp of safety levels at DIC sites and taking proactive steps to create a virtuous cycle of improvement. With the aim of achieving the first priority of the Sakai Plant's sustainability policy, which is to ensure safe operations and improve occupational safety, we recognize that it is crucial that we secure the safety of our own site by taking steps to overcome existing weaknesses and front-line capabilities. Pertinent departments at the Sakai Plant work with the Responsible Care Department to carefully examine strengths and weaknesses identified through assessments and the results of avidance modeling.

results of guidance received. This process makes it possible to discern challenges to be tackled by the Sakai Plant, as well as to determine the direction of remedial measures for challenges that should be addressed not only by a single facility but also on a Companywide basis, and to translate such measures into action in appropriate departments.

General Manager, Sakai Plant, DIC Corporation Tadashi Inoue

Emergency Response Drills

In addition to daily security patrols and periodic equipment checks, the DIC Group conducts regular emergency response drills based on hypothetical scenarios, particularly at production sites in Japan and overseas.



Comprehensive disaster drill at the Sakai Plan



Comprehensive disaster drill at the Kansai Plant



Comprehensive disaster drill at the Chiba Plant, a designated special disaster protection area

ΤΟΡΙΟ

DIC Graphics' Utsunomiya Plant Earns First-Ever Win in Tochigi City Ohira Sports Park Hazardous Materials Safety and Firefighting Technology Competition

The 20th Tochigi City Ohira Sports Park Hazardous Materials Safety and Firefighting Technology Competition was held in November 2018. This event is held every two years with the aim of promoting improvements in the technologies used in disaster prevention and to gauge the results of everyday disaster drills.

The competition is divided into three parts. Each participating team—consisting of a director and a firefighter—must fill an ignition plate 20 meters ahead of them, ignite the fuel and then extinguish the fire when signaled to do so. Each team begins with 200 points and points are deducted based on the judges' assessment of the director's instructions, as well as basic operation of the fire extinguisher, fire extinguishing method used, time required to extinguish the fire and individual attitude, among others. A total of 26 teams and 52 individuals took part in the 2018 competition. The nine teams from DIC Graphics' Utsunomiya Plant achieved their first-ever victory, finishing with 175 points.



Utsunomiya Plant employees holding a certificate and trophy to mark their first-ever win