

Results and Plans for RC Activities

☆☆☆ : Achieved、☆☆ : Mostly achieved、☆ : Further efforts required

	RC Medium-term Plan 2023 (2021-2023) (◆Grow UP 2023 KPI; Other: RC target)	Results of Three Years of Activities (2021-2023)	Assessment	RC Medium-term Plan 2026 (2024-2026)
Occupational Health and Safety	<p>Occupational Health and Safety</p> <p>Aim to eliminate occupational injuries at the worksites of MGC and its partner companies. Visualize the factors that directly and indirectly affect occupational safety through various evaluation methods and build foundations for improvement.</p> <p>Quantitative occupational health and safety targets until 2023</p> <p>◆Serious occupational injuries*1: 0</p> <p>Lost time injuries and non-lost time injuries requiring three or more doctor visits at MGC: 0</p> <p>Cooperating company frequency rate: 0.3 or lower; Severity rate: 0.003 or Lower</p>	<p>(1) Autonomous safety activities</p> <ul style="list-style-type: none"> - In addition to 5S, hiyari-hatto (near miss) detection, kiken-yochi (KY, hazard prediction), and safety meetings at workplaces, monthly campaigns with different themes, education on past cases using the KY handbook, publication of environmental conservation news, personal safety declarations, safety dialogues, safety speeches, and other unique daily safety activities tailored to each business location were conducted. - Workplace-led safety activities were conducted through the promotion of TPM activities, and the implementation status of these activities was confirmed through safety patrols. - LINK leaders' meetings were held in the four divisions of manufacturing, engineering, research, and filling and cargo handling, to promote safety activities through sharing of safety management procedures, research on accident cases, and good practices. 	☆☆	<p>Strive to eliminate occupational injuries at the worksites of the MGC Group and its partner companies. Evaluate and visualize the various factors that affect occupational health and safety and build foundations for comprehensive improvement measures.</p> <p>Quantitative occupational health and safety targets until fiscal 2026</p> <p>Serious occupational injuries*2: 0</p> <p>Lost time injuries and non-lost time injuries requiring three or more doctor visits at MGC Group: 0</p> <p>MGC partner company frequency rate: 0.3 or lower; Severity rate: 0.003 or lower</p> <p>MGC Group partner companies in Japan: Investigate setting quantitative targets for occupational injuries</p>
	<p>Process Safety and Accident Prevention</p> <p>Aim to eliminate accidents in the workplace. Visualize the factors that directly and indirectly affect process safety and accident prevention through various evaluation methods and build foundations for improvement.</p> <p>Quantitative process safety and accident prevention targets until 2023</p> <p>◆Serious accidents*2: 0</p> <p>ICCA annual score: 0 (for both MGC and cooperating companies)</p>	<p>(2) Prevention of similar occupational injuries and human error</p> <ul style="list-style-type: none"> - Campaigns were conducted to prevent recurrence of frequently occurring occupational injuries such as "falls, crashes, and tumbles" and "exposure to chemical liquids." - Maps of fall, crash, and tumble hazard areas were reviewed, and safety measures such as labeling were implemented. - Efforts toward human error prevention were made through improvement presentations, lectures by outside instructors, group reading of past human error cases and work procedure manuals, and exercises to establish the "point and call" system. <p>(3) Support for reduction of occupational injuries at partner companies</p> <ul style="list-style-type: none"> - Meetings were held with subcontractors to discuss accident prevention, safety information such as accident examples and safety management methods and systems were provided, and efforts were made together with subcontractors to create safe workplaces. - The Group opened its training facilities, such as the Safety Dojo and Process Dojo, for the training of employees of subcontractors on the premises. VR safety experience training for construction subcontractors was launched. - Efforts were made to improve the work environment by utilizing hiyari-hatto (near misses) and suggestions for improvement submitted by subcontractors. <p>(4) Voluntary safety activities</p> <p>Fire and leakage countermeasures were reconfirmed based on past cases to prevent fading away and recurrence of such incidents.</p> <ul style="list-style-type: none"> - LINK leaders' meetings were held in the four divisions of manufacturing, engineering, research, and filling and cargo handling, to promote safety activities through the sharing of safety management procedures, research on accident cases, and good practices between business sites. - Efforts were made to prevent recurrence of leakage accidents and problems by systematically managing external corrosion. 		
Process Safety and Accident Prevention		<p>(5) Improvement activities utilizing evaluation tools such as MGC Safety and Accident Prevention guidelines and MOSMS diagnostics</p> <ul style="list-style-type: none"> - RC audits and internal audits were conducted using the MGC Group Safety and Accident Prevention Guidelines. - After MOSMS diagnostics, failure cause analysis meetings were held, a spare parts management system was introduced, and improvement activities continued. 	☆☆	<p>Strive to eliminate accidents in the workplace. Evaluate and visualize the various factors that affect process safety and accident prevention and build foundations for comprehensive improvement measures.</p>

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		<p>(6) Realization of MGC smart factories and introduction of new technologies</p> <ul style="list-style-type: none"> - To realize smart factories, the Group verified DX technologies already in place, such as equipment management systems, and worked on a security management system plant that utilizes IoT, including drones and online abnormality prediction systems. - A KY Activity Suggest System was developed using a natural language-based AI model to improve the quality and efficiency of pre-operational KY. <p>(7) Identification of sources of safety and accident prevention hazards and measures to ensure safety (including natural disasters)</p> <ul style="list-style-type: none"> - HAZOP education was provided by external instructors, and through in-house training such as Process Dojo. - In conducting HAZOP, progress was managed by the number of nodes to facilitate systematic HAZOP implementation. - The latest hazard maps were obtained and disaster prevention regulations were reviewed. - Efforts were made to develop a timeline for progressive disasters such as windstorms and floods. <p>(8) Education and training</p> <ul style="list-style-type: none"> - Education was carried out using in-house training facilities such as the Maintenance Dojo and Process Dojo, and hands-on training was conducted at the Keiyo Combi and Sanyo Human Resource Development Course, etc. - Safety education was conducted by integrating VR and real-life experiences. - Education was continued during the pandemic by introducing e-learning and utilizing online seminars. - Disaster prevention drills were conducted for fire, and evacuations drills were conducted in readiness for earthquakes, and tsunamis. <p>[Actual performance versus quantitative targets by 2023]</p> <ul style="list-style-type: none"> - Grow UP 2023 KPIs⁴⁾ <ul style="list-style-type: none"> Serious occupational injuries: 1 in FY2021, 1 in FY2022, 0 in FY2023 Serious accidents: 0 in FY2021, 0 in FY2022, 0 in FY2023 - Numerical Targets of RC Medium-term Plan 2023 (calendar year) <ul style="list-style-type: none"> Lost time injuries at MGC: 1 in 2021, 2 in 2022, 0 in 2023 Non-lost time injuries requiring three or more doctor visits at MGC: 1 in 2021, 3 in 2022, and 3 in 2023. MGC partner company frequency rate: 1.62 in 2021, 0.80 in 2022, 1.64 in 2023 MGC partner company severity rate: 0.027 in 2021, 0.002 in 2022, 0.103 in 2023 ICCA score for MGC: 2 in 2021, 5 in 2022, 27 in 2023 ICCA score for MGC partner companies: 0 in 2021, 1 in 2022, 0 in 2023 		<p>Quantitative process safety and accident prevention targets until fiscal 2026</p> <p>Serious accidents^{*3)}: 0</p> <p>ICCA annual score: 0 (for MGC Group and partner companies)</p>
Environmental Conservation	<p>Aim to protect the natural environment and contribute to communities through business activities. From those results, improve MGC's reputation in society.</p> <p>Qualitative and quantitative environmental conservation targets until 2023*</p> <p>(1) ◆Reduce greenhouse gas (GHG) emissions* by 28% compared to fiscal 2013</p> <p>◆Reduce GHG emissions intensity* by 19.9%</p>	<p>Reducing greenhouse gas emissions</p> <ul style="list-style-type: none"> - Ongoing GHG reduction activities were implemented, such as the use of LED lighting, replacement of air conditioners and pumps with high-efficiency equipment, reviews of operating conditions of manufacturing facilities, etc., as well as proper management of heat and cold insulation and steam traps. - Renewable electric power was introduced and non-fossil fuel certificates were purchased. <p>Waste reduction</p> <ul style="list-style-type: none"> - Efforts were made to reduce waste by reducing the amount of dried sludge generated and selling it as fertilizer, thoroughly separating and collecting waste, recycling by distillation, selling plastic used for prototyping, selling metals recovered from catalysts, and converting waste into fuel. 	☆☆☆	<p>Strive to protect the natural environment and contribute to communities through business activities. From those results, improve MGC's reputation in society.</p> <p>Qualitative and quantitative environmental conservation targets until fiscal 2026</p> <p>(1) Reduce GHG emissions in fiscal 2026 by 33% compared to fiscal 2013 (MGC Group)</p> <p>Energy conservation improvement rate in</p>

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	<p>compared to fiscal 2013</p> <p>① Continuously reduce emissions by 4,000 t-CO₂e/year</p> <p>② Completely eliminate heavy oil used for in-house power generation and in boilers, etc. (Mizushima Plant, Yokkaichi Plant)</p> <p>③ Reduce the GHG emissions coefficient for purchased electric power (0.45; Mizushima Plant)</p> <p>◆④ Introduce 10% renewable energy to purchased electric power (all business sites)</p> <p>(2) Zero emissions of waste ◆*Waste zero emissions rate*3: 0.3% or less</p> <p>(3) Reduce releases of chemical substances subject to the Pollutant Release and Transfer Register system* by 10% compared to 2020</p> <p>(4) Water resource conservation *Water reuse rate: 95% or higher Identify water risk (domestic manufacturing sites)</p> <p>(5) Biodiversity conservation *"Bookcase for Biodiversity" donation program: Total of 10 instances *Establishment of "actual sites" of biodiversity: 1 installation</p>	<p>Water resource conservation</p> <ul style="list-style-type: none"> - Efforts were made to use water resources efficiently through stable operation and water reuse. - Water consumption was surveyed and the results were published on the website. - Risk/opportunity case studies relating to water were investigated, and findings were incorporated into CDP Water Security Questionnaire responses. <p>Biodiversity conservation</p> <ul style="list-style-type: none"> - Surveying and biological surveys were conducted for the construction of biotopes. - The Group participated in local activities such as seaside preservation activities and the planting of black pine saplings. - Cleanup activities were conducted around plants. <p>Air and water quality</p> <ul style="list-style-type: none"> - Emissions of air pollutants were reduced by installation of scrubbers. - Exhaust gases emitted from waste treatment facilities were analyzed and results were published. - Wastewater was analyzed and wastewater treatment facilities were properly managed. <p>Noise, vibration, and odor</p> <ul style="list-style-type: none"> - Patrols were conducted to confirm that no noise, vibration, or odor was generated. - RC audits confirmed that there are no problems with the environmental management system. <p>PRTR</p> <ul style="list-style-type: none"> - Emissions of PRTR substances were curbed by improving facilities such as detoxification towers and replacing materials with substances that are not subject to PRTR. - Amounts of emissions of substances subject to notification under the PRTR Law were investigated and disclosed on the website. <p>[Actual performance versus quantitative targets by 2023]</p> <ul style="list-style-type: none"> - Grow UP 2023 KPIs Greenhouse gas (GHG) emissions: 27% reduction in FY2021, 34% reduction in FY2022, 37% reduction in FY2023 Greenhouse gas (GHG) emission intensity: 13.1% reduction in FY2021, 8.6% reduction in FY2022, 1.9% reduction in FY2023 Renewable energy introduction rate for purchased electricity: 0% in FY2021, 19% in FY2022, 24% in FY2023 Zero waste emission rate: 0.27% in FY2021, 0.25% in FY2022, 0.13% in FY2023 <p>Numerical targets of RC Medium-term Plan 2023⁴⁾</p> <ul style="list-style-type: none"> Emissions of PRTR substances compared to 2020: 10% reduction in FY2021, 22% increase in FY2022, 16% reduction in FY2023 (Note that the substances covered in FY2023 results differ from those covered in previous years due to revisions to the law.) Water reuse rate: 94% in FY2021, 93.7% in FY2022, 93.3% in FY2023 Donations for book boxes for conservation of biodiversity (cumulative): 2 in FY2021, 0 in FY2022, 0 in FY2023, 6 in total Establishment of "visible sites" of biodiversity: 0 in FY2021, 0 in FY2022, 0 in FY2023 		<p>fiscal 2026 compared to the reference year: 3.0% (MGC Group)</p> <p>(2) Zero emissions of waste Waste zero emissions rate*4: 1.2% or less (domestic MGC Group) Waste zero emissions rate*4: 0.2% or less (MGC)</p> <p>(3) Reduce waste plastic releases in fiscal 2026 by 10% compared to fiscal 2023 (MGC)</p> <p>(4) Water resource conservation Water reuse rate: 95% or higher (MGC)</p> <p>(5) Biodiversity conservation Implement measures for the establishment of "actual sites" of biodiversity (MGC)</p>
Chemical and Product Safety	<p>Clarify the properties and handling methods of chemicals and products to protect the safety and health of all handlers and the environment.</p> <p>Quantitative chemical and product safety targets until 2023**</p> <p>(1) Conduct phased safety evaluations in product</p>	<p>(1) Safety evaluation of developed substances and products through each assessment</p> <ul style="list-style-type: none"> - Safety tests were conducted on developed substances and safety evaluations were conducted during market launch and market development reviews. - New registrations of small amounts were made under the Act on the Regulation of Manufacture and Evaluation of Chemical Substances, and under the Industrial Safety and Health Act. - Hazard assessment seminars by outside lecturers were held four times a year to educate employees on the importance of safety evaluation. 	☆☆☆	<p>Clarify the properties and handling methods of chemicals and products to protect the safety and health of all handlers and the environment.</p> <p>Perform safety evaluations in product development, risk assessment and risk management of handled products, and reliable implementation of and responses to the chemical</p>

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	<p>development (ongoing) **Review new product launches and market development: 100% (percentage of products)</p> <p>(2) Promote risk assessment and risk management of handled products (ongoing) **Product safety training: 100% (percentage of members of the MGC Group Environment and Safety Council)</p> <p>(3) Ensure that applications and registrations are carried out in accordance with the chemical substance management laws and regulations of each country **Chemical substance registrations under the systems for management of chemical substances in each country: 100% (percentage of products)</p> <p>(4) Operation and deployment of automated SDS production system **Preparation and delivery of safety information (SDS): 100% (percentage of products)</p>	<p>(2) Appropriate responses to legal revisions applicable to products handled - Information on revisions to the Industrial Safety and Health Act applicable to products handled was collected and distributed to business sites and Group companies.</p> <p>(3) Safety education on chemical substances handled - Training was provided to new employees, sales representatives, and handlers of chemical substances at the business sites.</p> <p>(4) Collection of information on chemical substance control laws and regulations in each country and compliance with registration systems - Chemical safety tests, etc., were conducted for registration of chemical substances in Europe, the UK, Korea, and Turkey. - Meetings were held and e-learning was conducted to provide information on overseas laws and regulations.</p> <p>(5) Utilization of SDS preparation system in compliance with domestic and foreign laws and regulations and appropriate delivery of SDSs to customers - SDSs for MGC and affiliated companies were created using an automated SDS creation system. The revised Chemical Substances Control Act was addressed, and preparation for and response to the revised Industrial Safety and Health Act was made.</p> <p>[Actual performance versus quantitative targets by 2023] Numerical targets of RC Medium-term Plan 2023⁴⁾ Review of new product launches and market development (% of products): 100% in FY2021, 100% in FY2022, 100% in FY2023 Product safety education (% of member for Council companies): 100% in FY2021, 100% in FY2022, 100% in FY2023 Substance registration in chemical substances management in each country (% of products): 100% in FY2021, 100% in FY2022, 100% in FY2023 Preparation and delivery of safety data sheets (SDS) (% of products): 100% in FY2021, 100% in FY2022, 100% in FY2023</p>		<p>management laws and regulations of each country.</p> <p>Qualitative and quantitative chemical and product safety targets until fiscal 2026</p> <p>(1) Conduct phased safety evaluations in product development (ongoing) Review new product launches and market development: 100% (percentage of number of products)</p> <p>(2) Ensure that applications and registrations are carried out in accordance with the chemical substance management laws and regulations of each country (ongoing) Chemical substance registrations under the systems for management of chemical substances in each country: 100% (percentage of number of products)</p> <p>(3) Reliably provide safety information (such as SDS) Preparation and delivery of safety information (such as SDS): 100% (percentage of number of products)</p> <p>(4) Respond to amendments of the chemical substance management laws and regulations of each country, standards, etc.</p>
Safe Transport and Storage of Chemicals	<p>Aim to develop an improved reputation among stakeholders and build trust.</p> <p>(1) Continued analysis of logistics problems and horizontal deployment to other areas</p> <p>(2) Sharing logistics safety information with logistics divisions of Group companies</p> <p>(3) Analysis and improvement of the status of cargo handling operations at the delivery destination</p>	<p>(1) Analysis of logistics accidents, occupational injuries, etc. - Problems were tabulated and analyzed, and the problem information was deployed horizontally to other areas. - Business sites provided information to on-site subcontractors through the Transportation Subcommittee to prevent the recurrence of logistics problems.</p> <p>(2) Occupational safety, security, and accident prevention in filling and cargo handling - The filling and cargo handling LINK was established to exchange information on filling and cargo handling operations, and to eliminate occupational injuries and accidents.</p> <p>(3) Strengthening dialogues with group logistics companies through audits and questionnaires - Logistics audits were conducted. The five prime contractor subcommittees were joined by business divisions to form the Logistics Quality Improvement Committee, which stimulated the exchange of information.</p> <p>(4) Increasing the rate of security agreements - The logistics system was used to centrally manage the status of security agreements and facilitate their execution.</p>	☆☆☆	<p>Strive to eliminate accidents and problems when transporting and storing chemicals.</p> <p>(1) Regularly analyze problems that occur at business sites when transporting and storing chemicals and distribute results to all relevant workplaces</p> <p>(2) Share information on the safe transport and storage of chemicals with the logistics departments of each group company</p> <p>(3) Closely monitor shipments of chemicals to final destinations and make improvements when necessary</p>

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Stakeholder Relations	Aim to promote environmental and safety activities across the entire MGC Group. Reinforce communications within the Group and promote security, process safety and disaster prevention, and environmental management.	(1) Improving the website as well as integrated reports, environmental and safety reports from business sites - The contents of the Integrated Report, Sustainability Data Book, and website were reviewed and enhanced. - Environmental and safety reports for the business sites were prepared and published on the website.	☆☆☆	Strive to develop an improved reputation among stakeholders and build trust.
		(2) Facilitating the expansion of dialogue opportunities such as RC regional dialogues and tours - RC community dialogue and plant tours were planned to expand dialogue opportunities through participation in local events, but activities were limited due to the COVID-19 pandemic. After the pandemic, the Group reviewed its activities and worked to resume them.		
		(3) Receiving recognition from outside the company - The Group underwent external audits for ISO 14001, GHG third-party verification, and risk surveys by insurance companies.		
Responsible Care Initiatives and Management	Aim to promote environmental and safety activities across the entire MGC Group. Reinforce communications within the Group and promote security, process safety and disaster prevention, and environmental management.	Analysis and utilization of MGC Group accident and disaster information - Accident and disaster information collected from MGC Group companies was shared among Group companies, and reported and deployed at the MGC Group President's Meeting.	☆☆	Strive to promote environmental and safety activities across the entire MGC Group. Enhance and increase communications within the Group and promote occupational safety, process safety and accident prevention, and environmental management.
		MGC Group Safety Performance Improvement - During audits of MGC Group companies, the MGC Group Safety and Accident Prevention Guidelines were used to evaluate and encourage improvement of weak points.		
	MGC Group Environment and Safety Promotion Council, audits, and liaison meetings for relevant staff, etc. - Information was exchanged and support for Group companies provided at the MGC Group Environment and Safety Promotion Council, inspections and audits of Group companies, and liaison meetings for relevant staff.			
	Make continuous improvements to responsible care management systems.	Bolstering collaboration with each department in RC activities - Information was exchanged and good practices were introduced at the Environment and Safety Office General Managers' Committee, the Production Technology Subcommittee, and the LINK Leaders' Meeting.		Make continuous improvements to responsible care management systems.

*1 Disability eligible for, or possibly eligible for disability compensation involving lost work accidents, fatal accidents and accidents resulting in permanent inability to work, and those involving four or more lost work days

*2 Accidents and major workplace accidents which threaten third parties, including localized environmental pollution and accidents affecting local residents

*3 Final disposal of waste/waste generated