# **2024** ENVIRONMENTAL REPORT







# We promote corporate activities covering the stages from development through to disposal of products, considering the environmental preservation at all times.

Our corporate objective is to color the day-to-day life abundant and comfortable.

Dynic Group always takes care to follow Environmental Basic Policy, which was established for the purpose of directing us to a habitable earth. We regard addressing the risks associated with biodiversity and climate change as an important issue and we are working hard every day on environmentally friendly corporate activities in consideration of harmony between technology and environment.

Our 5 factories in Japan have already engaged in activities toward carbon neutrality, such as the installation of energysaving equipment and the promotion of the use of renewable energy. We will continue to strengthen these activities and promote product design and conservation activities considering biodiversity.

In order to make our activities more concrete, we have decided to establish and work on the specific activity targets for climate change and biodiversity as non-financial targets in our 3-year medium-term management plan "SOLID FOUNDATION 2026" starting from April 2023.

In FY2022 for the first time, we newly challenged to joining to CDP (Carbon Disclosure Project) activities, which is a non-governmental organization and analyzes and evaluates companies' initiatives to the climate change.

In FY2023, we expressed our supports for TCFD and TNFD and will further accelerate our initiatives to environmental issues.

Dynic Astronomical Observatory, opened in 1987, continues activities to raise environmental awareness through astronomical observation events and planetariumscreenings in cooperation with Taga-Cho, the local administration.

Our Group companies both in Japan and overseas are also continuously introducing energy-saving equipment and promoting biodiversity conservation initiatives.

To ensure that we continue to be a trusted company in the future, all of our employees will work together as one team to strengthen our efforts regarding environmental measures and undertake the development of environment-related products that take into consideration the global environment and living environments, promoting business activities that contribute to the realization of global environment preservation with our eyes towards the next generation.



Hidenobu Yamada President and CEO Dynic Corporation

August 2024



# **Company Profile**

Corporate Name	Dynic Corporation
Establishment	August 18, 1919
Capital	JPY5,795.65 million
Stock Listing	Standard Market of the Tokyo Stock Exchange
Amount of Sales	JPY29.3 billion (Consolidated sales JPY42.1 billion) (As of March 31, 2024)
Employees	620 (1,131 including Group companies) (As of March 31, 2024)
Hood Office	Tokyo Head Office: Shin Onarimon Bldg., 6-17-19, Shimbashi, Minato-ku, Tokyo 105-0004 Tel: +81-3-5402-1811 Fax: +81-3-5402-3146
Head Office	Kyoto Head Office: 26 Daimon-cho, Nishikyogoku, Ukyo-ku, Kyoto 615-0812
Branch	Sapporo, Tokyo, Nagoya, Osaka, Fukuoka, Hong Kong, Singapore, U.S.A., Thailand, U.K., China , Indonesia, Czech (including Group companies)
Factory	Shiga, Saitama, Oji, Fuji, Moka, U.S.A., Thailand, U.K., China, Indonesia, Czech (including Group companies)
Affiliated Company	7 companies in Japan; 11 companies in other countries
Business	Manufacturing and sales of the following product lines: Book covering material, Material for printing and business purpose, Decorative covering material for package, Covering material for passbook, Coated film, Label material, Composite film, Printer ribbon, Business card printer, Material for stationery, Magnetic coated material, Moisture getter sheet for organic EL, Carpet material, Wallcovering, Celling material, Sunshade material, Non-woven fabric/carpet for automotive interior, Filter material, Industrial tarpaulin material, Tent fabric, Rain wear material, Industrial non-woven fabric, Aluminum foil/lid material for container sealing, Paper core, Paper package, Embossed film for cataplasm, Freshness- maintaining agent for food, Adhesive interlining, Fancy product Transportation and storage (Including group company products)

As global warming and other global environmental issues become increasingly severe, continued efforts are required to achieve carbon neutrality and create a recycling-oriented society. Dynic Corporation has established Basic Environmental Policy as described below and is committed to addressing environmental issues.

# [Basic Environmental Policy]

Dynic Corporation recognizes that efforts to ensure environmental preservation are an important business challenge and believes that it is our responsibility as a manufacturer to observe all applicable environmental laws and regulations at home and abroad and offer products with a lower environmental burden. To implement this concept in a specific manner, we are committed to thoroughly promoting the following principles in each stage including development, material procurement, manufacturing, sales, distribution and disposal;

- (1) We are committed to reducing environmental load, biodiversity conservation and climate change initiatives in all stages of our business activities throughout the life cycle of our products.
- (2) We are committed to making proactive initiatives to save energy and reduce waste, thereby preventing environmental pollution.
- (3) We are committed to preventing the risk of harmful chemical substances damaging the environment.
- (4) We are committed to disclosing information regarding our business activities related to the environmental and proactively promoting environmental conservation activities with local communities; and
- (5) We are committed to implementing education and training related to environmental conservation to improve awareness of the environment.

Hidenobu Yamada,

President and CEO Dynic Corporation

#### Initiatives to Reduce Environmental Load

We are introducing the manufacturing method that features less of an energy load and imple-menting product design where resource saving and longer service life are taken into consideration; in addition, we consider materials that feature less of an environmental load and materials that are easy to be recycled from the design phase of the product.

In the manufacturing phase, we make efforts to save energy and reduce waste in the manufa-cturing scene every day, thereby contributing to the reduction in the environmental load. In the marketing phase, we propose environmentally-friendly products that reduce the environmental load at the customer by using the products, thereby making efforts to contribute to the environmental preservation of the earth.

#### Initiatives to Climate Change and Biodiversity Conservation

We promote countermeasures against climate change through our initiatives for energy-saving and reducing emissions of carbon dioxide throughout entire company. And we make efforts for the contribution to construction of sustainable society and coexistence with the global environment regarding biodiversity.

# **Initiatives to the Environmental Issues**

Dynic Corporation considers the following environmental issues for realizing a sustainable society.



Environmental Issues	Action to Take
A. Environmental destruction (Direct threats caused by human activities such as land development)	<ul> <li>Reduction of final disposal volume (Refer to P8)</li> <li>Assessment for environmental impact in case of utilization of unused land</li> </ul>
B. Changes in Lifestyle (Threats due to reduced human influence on nature and indifference to nature)	<ul> <li>Proper use of biomass materials</li> <li>Education, Experience (Development the material for education)</li> </ul>
C. Environmental pollution and alien species issue (Threats by the things brought in by human activities)	<ul> <li>Reduction of waste (Refer to P8)</li> <li>Proper management of wastewater and exhaust gas (Refer to P7)</li> <li>Reduction of PRTR substances use (Refer to P10)</li> <li>Resource circulation (Development a product using recycled material and easy-to-be-recycled product) Management chemical substances containing in product</li> </ul>
D. Climate change (Threats caused by changes in the global environment)	<ul> <li>Energy saving (Refer to P6)</li> <li>Introduction of renewable energy</li> </ul>

In FY2023, we analyzed and evaluated our activities related to "climate change" while being aware of the relevance of the four tasks from above A. to D.The results were reflected in and registered with CDP (Carbon Disclosure Project), which is a non-governmental organization engages in analysis and evaluation companies' initiatives to the climate change.

Evaluation to us was "B-" among 8 steps, A, A-, B, B-, C, C-, D and D-.We will analyze the evaluation results and aim to enhance our activities and improve the evaluation. We will also strengthen our initiatives on issues other than climate change.

# **Environmental Targets and Results**

We set the midterm targets for environmental performance (FY2023 to FY2025) and are committed to promoting them.The results in FY2023 are as follows:

### FY2023 Environmental Target and result List

Areas		11-24	FY2023				Target for	Final
		Unit	Target	Result	Self -evaluation	Related page	FY2024	for FY2025
Prevention	CO2 emissions reduction		15% reduction from FY2013	-12.3%	$\bigtriangleup$	P6	17% reduction from FY2013	20% reduction from FY2013
climate change	Reduction in energy intensity *1)	L/km of oil equivalent	6% improvement from FY2017	+6.4%	×	P6	7% improvement from FY2017	8% improvement from FY2017
Resource saving and recycling	Reduction in water consumption	1000 tons	16% reduction from FY2017	+7.4%	×	P7	17% reduction from FY2017	18% reduction from FY2017
	Waste volume reduction	t	20% reduction from FY2017	-5.2%	Δ	P8	21% reduction from FY2017	22% reduction from FY2017
	Volume reduction of wastes subject to final disposal	t	8% reduction from FY2017	-19.4%	Ô	P8	9% reduction from FY2017	10% reduction from FY2017
Prevention of environmental pollution	Reduction in PRTR substances emission *2)	t	16% reduction from FY2016	-11.1%	$\bigtriangleup$	P10	17% reduction from FY2016	18% reduction from FY2016
Environment -related products	Increase in % sales	%	1.5% increase from FY2020	+2.7%	$\bigcirc$	P12	2.0% increase from FY2020	2.5% increase from FY2020

<Self-evaluation legend>

 $\odot$  : More than twice the target

 $\bigcirc$  : Achieved the target

 $\bigtriangleup\,$  : The target was not achieved but better figure than last year.

**×** : Improvement toward the target was not made.

\*1 Calculation formula for energy intensity by Energy Conservation Act has been changed since FY2023. This report uses the former formula to maintain continuity with figures for FY2022 and earlier.

\*2 The number of Class I designated amount substances (including specified substances) under PRTR Law was changed from 462 to 515 in FY2023. Even though including the substances newly added in FY2023, the amount of substance emissions was reduced.

### Initiatives related to climate change/saving energy

We are implementing initiatives to reduce energy use and reduce CO<sub>2</sub> emission in production processes.

The focus is on improving energy efficiency by updating and installing new equipment, such as high-efficiency air conditioners and steam boilers, inverter type compressors, and additional power generation panels for in-house consumption.

While input volume to production decreased by 9.1% YoY in FY2023, our energy use decreased by only 4.5% YoY. As a result, our energy intensity worsened by 5.1% YoY. CO2 emission, another activity indicator, decreased by 0.6% YoY.

In FY2024, we will continue to increase productivity aggressively and install more energy-saving equipment to reduce the environmental load.





#### CO<sub>2</sub> Emissions (t-CO<sub>2</sub>)



#### \* Calculation formula for energy intensity by Energy Conservation Act changed in April 2023. However, this report uses the former formula to maintain continuity with figures for FY2022 and earlier.

## Initiatives related to saving resources/reducing waste

### Efficient use of water resources

2013

2014

2015

2016

We have recycled more wastewater from the washing and cooling systems in our production processes in order to effectively conserve water resources.

In 2023, total intake amount of water resources was 102.9% of previous year figure and total amount of wastewater was 102.7% of previous year figure. Both increased compared to the previous year. One of the reasons for the increase was suspected to be leaks from piping and other sources, so inspections of the facilities are underway.

In FY2024 as well, we will continue to inspect facilities and verify wasteful use of water in the production process, and work to reduce the total amount of water resources used.





#### Total Drainage Water (1,000 tons)

Total Water Resource Used (1,000 tons)

2018

2019

2020

2021

2022

2023

### Initiatives related to saving resources/reducing waste

### Initiatives to reduce waste

We are committed to waste reduction to protect the global environment. In order to not only reduce waste generation but also effectively use resources, we push forward reuse and recycling approaches.

Total material input in FY2023 was 33,624 tons, 4.1% less than the previous year due to a decrease in input volume to production. On the other hand, total waste volume was reduced to 4,803 tons, 6.2% less than the previous year. In addition, the amount of waste sent to landfills or incinerated was significantly reduced to 690 tons, 40.6% less than the previous fiscal year, through the promotion of recycling and recovery.

In FY2024, we will strive to promote the resource recovery in order to promote the effective use of resource.



Total Amount of Materials Used (tons)



Total Amount of WasteFinal Disposal Amount of Waste



### Initiatives related to saving resources/reducing waste

### Initiatives to Reduce Plastic Waste

We have set a target for the effective utilization rate of waste plastic based on the basic principles and policies of The Plastic Resource Circulation Act, which came into effect on April 1, 2022, and the reduction target for the final disposal of waste in our medium-term management plan "SOLID FOUNDATION 2026," .

In FY2023, we proceeded to change the disposal method of waste plastics from incineration and landfill to thermal recovery and others. As a result, the effective utilization rate improved by 11% from the previous fiscal year, reaching 78%, exceeding the final fiscal year target.

Although we achieved the final year's target, we will continue to promote further effective use of resources in FY2024 with resource recycling in mind.

	FY2021	New law related to plastic resources in FY2022	FY2023	FY2024	Target in FY2025
Amount of final disposal (t)	1,134	948	621		625
Amount of resource recovery (t)	1,544	1,895	2,141		1,875
Total amount of waste plastic emission (t)	2,678	2,843	2,763		2,500
Effective utilization rate	58%	67%	78%	80%	75%





**Effective utilization rate** 

It takes a certain of time to reduce the emission amount as we need to create new formulation using lighter and different raw materials. However, we progress systematically and slowly but firmly. We will launch and introduce them as environment-related products.

### Initiatives to Reduce the Release of Chemical Substances

In accordance with the Law concerning Pollutant Release and Transfer Register (PRTR Law), we notify the regulatory authority of the amounts of chemical substances that are released into the environment after our use in the manufacturing process and make efforts to reduce them.

The released amount decreased by 15.4% YoY and the transferred amount decreased by 7.4% YoY in FY2023.

In FY2024, we will carry out initiatives aiming to achieve the release reduction of 35% compared to FY2016, which is the target on our medium- and long-term plan.



#### **Total Released Amount (tons)**

#### **Total Transferred Amount (tons)**



\* The number of Class I designated amount substances (including specified substances) under PRTR Law was changed from 462 to 515 in FY2023. Even though including the substances newly added in FY2023, the amount of substance emissions was reduced.

# **Overall environmental load from business** activities in FY2023(Material Flow)

We assess the environmental load from various emissions (OUTPUT) generated as a result of our business and production activities involving raw materials, energy and water resources (INPUT) in order to more effectively conserve those resources through more efficient use.

In FY2023, we were able to significantly achieve our target for volume reduction of wastes subject to final disposal. In FY2024, we will continue our efforts to utilize renewable energy and resource and improve energy conservation to achieve our CO<sub>2</sub> emissions reduction target.

INPUT						
Energy consumption : 13,437,000 L (of oil equivalent)						
Electric Power (Purchased) : 28,604 MWh						
LNG : 1,563 tons						
City Gas : 3,187,000 m <sup>3</sup>						
Bunker A : 464,000 L						
LPG : 21 tons						
Gasoline : 6,000 L						
Water consumption : 598,000 tons						
Groundwater : 389,000 tons						
Industrial water : 164,000 tons						
City water : 45,000 tons						
Total raw material input : 33,624tons						



[ Dynic product groups ]

Publishing and Stationery Products/Print Media Supplies/Nonwoven Fabric Products/Apparel/ Household Products/Industrial Products/Special Embossed Products/Foil, Films, and Paper Products

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Greenhouse gas (CO2 emissions)
Emissions from production process : 24,816 t-CO2
Emissions from product logistics : 995 t-CO2
X Logistics are outsourced to group company.
Emission into the atmosphere
PRTR substances : 330 tons
NOx : 17.8 tons
SOx : 0.3 tons
Dust : 0.3 tons
Emission into water system
Emission : 483,000tons
BOD : 0.5tons
COD: 1.3 tons
Emission into soil : N/A
Chemical substances (PRTR substances)
Emissions into the environment : 330 tons
Transferred as waste : 198 tons
Total waste amount : 4,803 tons
Incineration/landfill disposal amount : 689 tons
Recycled amount : 2,438 tons
Valuables amount : 1,675 tons
Recycling rate : 86%

# **Environment-Related Products**

Dynic Corporation is working hard on the development of various products that contribute to the development of society and creation of more affluent life. We believe the distribution of such new products to society will lead to our contributing to society through our business activities.

Dynic Corporation defines "products that take the global and living environments into consideration" as " environment-related products".

#### Products that take the global environment into consideration

#### [Products that reduce the load on the environment]

#### PVC-free products, Plastic-free products, Solvent-free products

Non-vinyl-chloride covering materials (for eco-files), Olefin based covering materials, \*Magnetic cards based on paper, EVA base containers materials, Water-paint based covering materials for file binders and notebooks

#### Products using recycled paper, recycled fiber, recycled resin

Covering materials based on recycled paper for books, textbooks and back tapes of notebook, Label materials manufactured by wet coating method, \*Carpet based on recycled polyester, \*Label materials based on recycled polyester

#### Products using sustainable natural resources

\*Biomass mark certified Thermal Transfer Ribbon (BMC1), \*FSC certified covering material (EPALON), Colored nonwoven fabrics based on 100% rayon (PANELON COLOR SHEET)

#### [Products that take treatment and disposal into consideration]

#### Products that take ease of disposal into consideration

Cutting blades based on paper for polyethylene food wrap and aluminum foil, Paper lid materials for drinks

#### Products that contribute to resource-saving and 3R (Reuse, Reduce, Recycle,)

Stretchable wallcoverings, Reused toner cartridges, Sub-cassettes for refill, Automotive light weighting headliner material,

Desiccant for organic EL devices, Adhesive sheet for bookbinding

#### Products that take the living environment into consideration

#### Products that provide comfortable spaces

Deodorant filters, Antimicrobial and deodorant wallcoverings, Antivirus wallcoverings, Filter materials for air purifiers, Sound-absorbing nonwoven floor fabrics.

#### Products useful for maintaining the freshness of health products/food

Water-resistant food packaging materials, Food freshness preservatives, \*OEKO-TEX certified Thermal Transfer Ribbons \*OEKO-TEX certified nylon-coated label materials, Embossed film for poultice.

#### Products with antibacterial and deodorant properties

Antibacterial book covering materials

#### Products marked with an asterisk [\*] are certified by third-party.



#### Occupation Ratio of Sales of Environment-related Products (%)

 $\odot$  You are able to find the details for these environment-related products on our website.

We have actively promoted product development with "Contribute to society through environment-related products" as a key phrase.

In FY2023, environment-related products occupied 38.5% of our total sales and we achieved the target.

We would like to continue the contribution to society by increasing the proportion of environment-related products that consider human health and the environment.





#### Study Session for SDGs in FY2023

In order to realize a sustainable society, we established "Sustainability Initiatives Policy" in 2022, and we are promoting the policy by reflecting it in our mid-term management plan "SOLID FOUNDATION 2026," which started in 2023. We held a study session on the theme of "Basics of SDGs Management" as an opportunity to consider how we should respond to the social issues indicated in 17 SDGs through our business on October 26, 2023.

In the first half of the session, we learned about the changes in social perspectives and values toward companies in Japan, the purposes and procedures for addressing SDGs, and the roadmap for integrating solutions to SDG issues into management. In the second half of the session, we discussed the relationship between our business activities and 17 SDGs and 169 Targets, and were able to realize that all our business activities are related to the SDGs Goals and Targets in some way and contribute to society from a global perspective.

We will continue to promote initiatives to contribute to the achievement of as many SDGs targets as possible.

#### Company-wide study session for SDGs



Tokyo Head Office



Osaka Branch



Shiga Factory



Saitama Factory



It was the first opportunity to discuss SDGs as a theme. Since we do not usually hold such study sessions with group companies, the positive attitude of the participants from group companies made us aware of some issues, and we were able to share them, which was a valuable time for us to think about sustainable corporate activities.

### Study Session for Circular Economy in FY2023

"Climate change response" and 'biodiversity conservation' are two issues that we must address to build a sustainable society. We held a study session on "resource recycling and circular economy" as the means to solve these two issues. We were able to learn about the items that must be taken into consideration at the product design stage by learning about leading European case studies.



### LCA practical training for major products in each factory

Climate change, biodiversity, and resource recycling do not exist as separate issues, but are interrelated. Sometimes, the solutions to one can have negative impacts (trade-off) on the other(s). To avoid trade-offs, it is important to understand the environmental impacts from a product throughout its life cycle, that is from the mining of raw materials to the disposal of used products.

We have started the practical training by factories, considering the introduction of LCA (Life Cycle Assessment) as a tool for designing products with less adverse effects, with an awareness of various environmental issues. The programs are scheduled to be implemented at all factories from FY2023 to FY2024.



Practical training scene in Moka Factory

#### Shiga Factory - A model factory aiming at harmony between high technology and nature -

Shiga Factory is our largest factory with a vast site of approx. 350,000m<sup>2</sup>, surrounded by mountains and greenery nurtured by the clean water of Lake Biwa water system and fresh air. With the backbone of Dynic's unique advanced technology, they produce many of our key products such as covering materials for books and magnetic passbooks, wallcoverings, woven interlining, moisture removal sheet for OLED and sound absorption flooring materials.

Benefiting from the rich natural environment, Shiga Factory has also emphasized harmony with the natural environment and conservation. They, fully equipped with wastewater treatment facilities, are committed to recycling resources and have earned a high reputation as a model factory themed on energy saving and no pollution.



#### Environmental index results

Item	Energy intensity (k ℓ /km)	CO <sub>2</sub> emissions (t)	Intake of water resources(kℓ)	Total waste (t)	Final disposal waste (t)	PRTR substance emissions (t)
Results	0.070564	9,638	175	1,766	228	5
Compared to FY2022	+1.3%	+1.3%	+12.5%	-11.1%	-44.7%	-2.5%

### Reducing the environmental load -Installation of energy-saving equipment - Initiatives toward carbon neutrality

#### Installation Solar Panel

Utilizing FY2023 Government Subsidy for carbon dioxide emission control projects, we have installed solar power generation panels additionally with a capacity of 1,056 KW to an idle lot (former golf course site) adjacent to Shiga Factory. All the electricity generated by the additional panels, approximately 1.2 million KWH per year is consumed in-house, making a significant contribution to reducing CO<sub>2</sub> emissions. The construction was carried with consideration for biodiversity, such as limiting the amount of soil and gravel being piled up and preventing the introduction of invasive species.

On the other hand, the area where the panels were installed was confirmed to be a breeding site for wild birds classified as rare species (those with a fragile base of existence in the prefecture) in Red Data Book 2020 of Shiga Prefecture. Unfortunately, the site was lost due to the installation, but we will consider measures to restore the breeding site, including the surrounding area.





Start operation in January 2024

#### Upgrading to high-efficiency steam boiler

Utilizing Government Subsidy for energy conservation investment promotion project, we upgraded a steam boiler to a high-efficiency model. The equipment was selected with consideration given not only to boiler efficiency but also to system efficiency and other factors. The introduction of the system is expected to reduce city gas consumption by 3.6% and electricity consumption by 50%, resulting in an annual reduction of 94 tons of CO<sub>2</sub> emissions.



Start operation in January 2024

#### Initiatives for biodiversity conservation: Working together with the local community

#### Zero Trash Cleanup Activities

Every year, Taga-Cho, where Shiga Factory is located, holds cleanup activities on the day around May 30 ("Gomi zero" or "Zero trash" day), designated by Shiga Prefecture as a day for environmental beautification activities.We support these activities and on Sunday, May 28, 2023, our 16 members took part in the zero trash cleanup activities along Route 306 in the town.





#### Forest Conservation Activities

On Saturday, October 14, 2023, "Volunteer activities for forest improvement" were hosted by the Environmental Conservation Association of Shiga Prefecture at Takatoriyama Fureai Park in Taga-Cho. Dynic Corporation is a member of the association and our 10 members joined in the activities.

They pruned branches, cut and sorted out small trees



#### Lake Biwa Beautification Activities

nature. It was a good experience for them.

Shiga Prefecture designates July 1 as Lake Biwa Day and holds an environmental beautification campaign called "Lake Biwa Beautification Activities" every year around the day.

We support the campaign and our 5 members participated in the clean-up activity around Matsubara Beach.





• Lake Biwa is the largest lake in Japan and the pride of the people in Shiga Prefecture.

#### Saitama Factory - Future-oriented, advanced, composite technology and the most modern FA line -

Saitama Factory, production site in the east, is in operation as a future-oriented factory focusing on technology development. The factory generates products covering wide range of business fields from value-added high-tech products to mass produced products which make up the backbone of the industry, utilizing exceedingly high level composite technology and the most modern FA (Factory Automation) line. The production system consists of 6 production centers, each of which is responsible for covering paper material, covering vinyl material, tarpaulin, inked ribbon, FFC (Fine Film Coating), carpet, and nonwoven fabric, independently. The Factory diligently implements regional and environmental measures and its greening promotion initiative and industrial waste recycling system have earned a high level of trust from public institutions.



#### Environmental index results

Item	Energy intensity (k ℓ /km)	CO <sub>2</sub> emissions (t)	(t) Intake of water resources(k $\ell$ )		Final disposal waste (t)	PRTR substance emissions (t)	
Results	0.045509	11,298	283	1,972	338	306	
Compared to FY2022	+7.7%	+0.3%	+6.4%	-0.2%	-32.1%	-15.4%	

#### Reducing the environmental load - Installation of energy-saving equipment - Low carbon initiatives

#### Installation of the High-Efficiency Air Conditioner

We switched 3 of load/unload type compressors with 22kw motor output to inverter type high-efficiency compressors.

The replacement has greatly improved energy efficiency and reduced CO<sub>2</sub> emissions by approximately 94 tons per year for the three compressors in total. We plan to continue upgrading progressively to high-efficiency compressors for other areas.



#### **Replacement to LED lighting**

#### Improvement thermal efficiency/Reduction heat loss

We switched the explosion-proof fluorescent lighting fixtures to explosion-proof LED fixtures, which are environmentally and economically superior. The illuminance has increased by approximately 60% compared to the previous lighting fixtures, allowing us to reduce the number of lighting fixtures from 45 to 32.

The energy saving effect of approximately 48% per fixture was also realized, resulting in a 60% reduction in power consumption while maintaining the same level of illumination as before.



#### Initiatives for biodiversity conservation

#### With community

Once a month, Saitama Factory conducts cleanup activities on the roads around the factory. During FY2023, we implemented these activities 12 times and collected cigarette butts, food packages, beverage bottles and other trash.

#### • Dealing with designated invasive alien species

Saitama Prefecture held a major survey to find red-necked longhorn beetles (Aromia bungii) by inviting participation from citizens. We cooperated with this survey and examined the trees on our site last year as well and confirmed the damage to cherry blossoms and plums on the premises. The insect has a strong reproductive capacity

has been expanding its distribution in the northern Kanto region. In addition to cherry blossoms, it also invades fruit trees such as plum and peach, and sometimes kills the affected trees.(Left : Male, Right : Female)

Location	Tree Species	Number of tree	Insecticide Infusion Year	Damage Status	Potential Risks		Frequency	Counter-measure
North side	ide Someiyoshino 26 2021 & 2024 Moderate to slight		Moderate to slight	Deterioration of the landscape from bank Accidents involving fallen trees and branches to shipping operators Decrease of cicadas	Sma <b>ll</b> Medium Sma <b>ll</b>	Low Low Medium	Restoration of tree vigor by fertilizer application after larviciding Pruning hazardous branches Restoration of tree vigor by fertilizer application after larviciding	
Persimmon 1 None		None	Infected but healed spontaneously No adult exit hole	Accidents involving fallen trees and branches to commuters	Small	Low	Pruning hazardous branches	
East side in	Yamazakura	5	None	Infected but healed spontaneously No adult exit hole	Accidents involving fallen trees and branches to commuters Accidents involving fallen trees and branches to shipping operators Insect adhesion to products awaiting shipment and expansion at the customer's site	Sma <b>li</b> Sma <b>li</b> Sma <b>li</b>	Low Low Low	Pruning hazardous branches Pruning hazardous branches Capture and kill adult insects
Plum 4 None		Infected but healed spontaneously No adult exit hole	Accidents involving fallen trees and branches to commuters	Sma <b>ll</b>	Low	Pruning hazardous branches		
Persimmon		1	None	No infection confirmed	Accidents involving fallen trees and branches to vehicles on public road Power outages and communication malfunctions caused by fallen trees and branches Accidents involving fallen trees and branches to commuters	Sma <b>l</b> Sma <b>l</b> Sma <b>l</b>	Low Low Low	Pruning and trimming hazardous branches Pruning and trimming hazardous branches Pruning and trimming hazardous branches
South side	Apple	1	None	No infection confirmed	Accidents involving fallen trees and branches to vehicles on public road Power outages and communication malfunctions caused by fallen trees and branches Accidents involving fallen trees and branches to commuters	Sma <b>li</b> Sma <b>li</b> Sma <b>li</b>	Low Low Low	Pruning and trimming hazardous branches Pruning and trimming hazardous branches Pruning and trimming hazardous branches
Beside the main gate in southeast side along the pulic road	Someiyoshino	7	2021	Moderate to severe	Accidents involving fallen trees and branches to vehicles on public road Power outages and communication malfunctions caused by fallen trees and branches Accidents involving fallen trees and branches to commuters Deterioration of the landscape from public road Decrease of cicadas	Large Large Large Medium Sma <b>ll</b>	Low Medium Low Medium Medium	Pruning and trimming hazardous branches Pruning and trimming hazardous branches Pruning and trimming hazardous branches Restoration of tree vigo ty fertilizer application after larviciding Restoration of tree vigor by fertilizer application after larviciding

We conducted an assessment of the impact from red-necked longhorn beetles (Aromia bungii) on the premises of Saitama Factory. The damage to the trees on the site is significant, not only reducing the number of flowers and spoiling the landscape. If a tree falls and branches fall due to strong winds, there is a risk of accidents to passersby and vehicles, as well as power outages and communication malfunctions due to the severing of power lines and other equipment. In particular, the damage to the cherry blossoms (Someiyoshino) besides the main gate is significant. We rated the risk as high because there are power lines and other facilities nearby. The persimmon and apple trees in the center of the south side are small and no damage has been confirmed so far, but we will continue to monitor the area. We will prioritize measures such as pruning and trimming of hazardous branches for high-risk areas and will consider measures to restore tree vigor, such as extermination of larvae by chemical injection. Furthermore, we will consider guard nets to prevent re-infestation of treated trees.

This is a comparison of the blooming of cherry trees on the premises 12 years ago and this year (Left: taken in 2012; Right: taken in 2024). It seems that there are fewer flowers than before, and the trees have weakened due to the feeding damage by the insects.







### Oji Factory - With reliable quality control we have earned the trust of our customers -

Oji Factory is mainly responsible to produce aluminum-foil for lid and inner sealant material. Since introducing " LECTRASEAL<sup>®</sup> " (container sealing material using processed aluminum foil) from the U.K., we have obtained a substantial

share in this field. This technology involves heating aluminum foil at high frequency and bonding it to the container with a hot-melt adhesive of our own compound, which contributes to improving the quality of our customers' products by making them both easy to open and airtight. In addition, in order to respond to improvements in food safety and quality on a global scale, we have acquired FSSC22000 certification, which is for food safety management system, and have adopted hygiene management based on HACCP. We produce lid material in the factory with well-controlled hygiene work environments such as clean room facility.



#### Environmental index results

Item	Energy intensity (k ℓ /km)	CO <sub>2</sub> emissions (t)	Intake of water resources(kℓ)	Total waste (t)	Final disposal waste (t)	PRTR substance emissions (t)
Results	0.046141	1,574	17	455	94	1.5
Compared to FY2022	+12.5%	-5.2%	-6.7%	-2.3%	-28.0%	-16.7%

### Fuji Factory - Producing environment-friendly renewable products -

Operating under a clean environment and the strict quality control, We are engaged in the production of paper-tube containers for food and firepot.

Our ongoing pursuit of environment-friendly materials encourages us to take up the challenge of the "next."



#### Environmental index results

Item	Energy intensity (kℓ/km)	CO <sub>2</sub> emissions (t)	Intake of water resources(kℓ)	Total waste (t)	Final disposal waste (t)	PRTR substance emissions (t)
Results	0.000490	252	1	73	6	0
Compared to FY2022	-7.8%	-14.4%	-7.9%	-12.9%	-26.9%	_

• We do not handle the substances subject to the PRTR Law beyond legal standards.

#### Reducing the environmental load - Installation of energy-saving equipment - Low carbon initiatives

#### Installation of the High-Efficiency Compressor

We switched a load/unload type compressor with 22kw motor output to inverter type high-efficiency compressor. The new facility has reduced CO<sub>2</sub> emissions by approximately 12 tons per year, due in part to the effect of reviewing the discharge pressure and changing the setting to a lower pressure than before the renewal. We plan to continue upgrading progressively to high-efficiency compressors for other areas.



# Fuji Factory - Producing environment-friendly renewable products -

#### Reducing the environmental load - Installation of energy-saving equipment - Low carbon initiatives

#### Introduction renewable energy equipment

When introducing renewable energy equipment, we conducted an impact assessment on the surrounding area.As a result, we determined that installing on the roof of the factory building, as originally planned, would have the least impact. We will now proceed with the procedures for installation.

Area	Impact on Ground	Impact on Surroundings	Other Impacts	lmpact Degree	Frequency	Issues, Concers and Solutions	
Rooftop of Factory Building	No	No	Thermal insulation effect on 2nd floor work area	Medium	Always	Ensure a safe space	
	No	No	Decrease allowance load on ceiling	Medium	Rare	Less effective installation area, less power generation	
Wall of Factory Building	No	Yes	Reflected light on vehicles traveling on adjacent public roads	Large	Sometimes	Not considered	
Rooftop of Warehouse	No	No	Insufficient strength	Large	Usual	Less effective installation area, less power generation	
Vacant Land inside site	Yes	Yes	None	Large	Sometimes		
	Yes	Yes	Larger risk of metal theft	Large	Sometimes	Not considered	
Off-Site Vacant Land	Yes	Yes	Large power transmission loss due to site separation	Large	Usual		
	Yes	Yes	Larger risk of metal theft	Large	Sometimes		

#### Study on Introduction of Renewable Energy at Fuji Factory

#### Initiatives for biodiversity conservation

#### Dealing with designated invasive alien species

We have continued to mow long-headed poppy (Papaver dubium L.) that were thriving on the premises immediately after they bloomed.In FY2023, its population was greatly reduced and only a few flowered.

\*Long-headed poppy (Papaver dubium L.) has been designated as a "notable invasive alien species" by some local governments, and there are concerns about its impact on agricultural lands and other areas.





#### Moka Factory - Delivering safe quality from our well-controlled work environment -

Responding to rapidly diversifying needs for aluminum-foil and other lid materials, Moka Factory was quick to create composite lid materials by taking advantage of its technological strength in the field of aluminum-foil processing.

This has resulted in our soft-packaging materials for processed food and industrial uses winning the unflagging trust of our customers. We are determined to continually meet the challenge of the "next" by making the most of our wealth of proprietary technologies.



#### Environmental index results

Item	Energy intensity (kℓ/km)	CO <sub>2</sub> emissions (t)	Intake of water resources(kℓ)	Total waste (t)	Final disposal waste (t)	PRTR substance emissions (t)
Results	0.0088230	1,929	122	538	23	18
Compared to FY2022	+6.9%	-8.8%	-13.1%	-12.1%	-79.7%	-18.2%

#### For reduction environmental load – Reduction energy loss -

#### Renewal of steam piping system

We manufactured and installed jacket-type heat insulators exclusively for each piece of equipment in the steam piping for the production facilities in collaboration with Tokyo Gas Engineering Solutions Corporation.Since this jacket-type heat insulator is installed in almost all equipment, resulting in a significant reduction in heat release and a 5% reduction in energy consumption for the entire production facility.





#### Initiatives for biodiversity conservation – Working together with the local community -

#### • Participation in a simultaneous cleanup activity for Industrial Park

A cleanup for Moka Industrial Park, where Moka Factory is located, was held on Wednesday, November 8, 2023, under the auspices of the General Management Association of Moka Industrial Park. We also participated in the cleanup of roads around our factory.



# DYNIC USA CORPORATION

Dynic USA Corporation was established in Hillsboro, Oregon, USA in 1988. We produce thermal transfer ribbons and the printable fabric "CETUS" for tags/labeling and exports these products to North, Central and South America.

#### Office & Factory

4750 N.E.Dawson Creek Drive, Hillsboro, Oregon 97124,U.S.A TEL:1-503-693-1070 FAX:1-503-648-1185 https://www.dynic.com/



#### **Reducing the environmental load - Installation of energy-saving equipment**



#### Installation of LED Lighting

Dynic USA is planning to replace all fluorescent lighting with LED lighting in 2024.

This will reduce our electricity usage by an estimated 70% per year.

#### **Initiatives for Biodiversity Conservation**

#### Activities for wetland conservation

Dynic USA has celebrated it 25th year in it's role assisting in preserving Jackson Bottom Wetlands in October of 2023.

Located in Hillsboro, Oregon Jackson Bottom is a 257 ha (635 acre) wetland reserve with a diverse variety of native plants and

animals.



# DYNIC (CZ) s.r.o.

In 2018, DYNIC (CZ) s.r.o. was established in Czech Republic as a base for continental Europe, which converts and distributes thermal transfer ribbons in collaboration with DYNIC (UK) LTD.

#### Office & Factory

Segro Logistics Park Prague Hala H, U Dalnice 1384, 253 01, Hostivice, Czech Republic TEL:+420-212-246-397



#### **Reducing the environmental load - Renewal of forklift truck**

#### Introduction of electric forklift truck

We replaced one of our forklift trucks with an electric one from an LNG-powered one. This has reduced LNG consumption and odor from waste gas and has improved the work environment.







**Electric forklift truck** 



# DYNIC ASTRONOMICAL OBSERVATORY

DYNIC ASTRONOMICAL OBSERVATORY, equipped with a 60cm diameter Reflector telescope and a variety of observation equipment, is the first public observatory operated by a private company.

Since the company foundation, we have been deeply involved in the fields of culture and education through book covering materials and we opened this observatory in 1987 as an ideal form of social contribution and cultural activities.

#### Introduction our activities through TV and newspapers

#### The asteroid "Minor Planet No.5008 Miyazawakenji" discovered by us was introduced in a TV broadcast

NHK "Kokoro-no Jidai" aired the 6 parts special program for Miyazawa Kenji from April to September in 2023, the 90th year of his passing away. In the first part, the asteroid "Minor Planet No.5008 Miyazawakenji" was introduced and "How it was named", "How it was discovered", and "Images of simulated in the planetarium" were shown on national TV.

# **Special Observation Event for Perseid Meteor Shower**

#### Special Observation Event for Perseid Meteor Shower held for the first time in 4 years

Special observation event for Perseid Meteor Shower, which had been canceled to prevent the spread of COVID-19, was held for the first time in 4 years since 2019.On August 12, the largest number of meteors were seen from the evening to midnight, and about 150 attendees enjoyed cheering at the occasional meteor shower.

#### **Astronomical Observation Event**

#### Digital planetarium

The full-fledged digital planetarium, which was installed to mark the centennial of the company's foundation, continuously is high popularity.

> observatories and the planetarium. ▲Simulated picture

In addition to the regular astronomical observation event held every Saturday, we also host the observation event occasionally in accordance with celestial phenomena such as total lunar eclipse and meteor shower. In 2022, Uranus was hidden behind the moon during the total lunar eclipse, which is a very rare phenomenon. The event was also broadcast live via the Internet by utilizing the remote observatory observation system built so far.



Regular Astronomical Observation Event	Every Saturday 19:30 to 21:30	$\Big)$
Observation Fee	Junior High school students and youngers JPY100 Adult JPY200	





▲ Minor Planet No.5008 Miyazawakenji in the center

of Perseids Meteor Shower in Summer





# **Environmental Report 2024**

Issued by: Environmental Steering Office, Dynic Corporation Issued on: August 16, 2024