Nitto
Innovation for Customers

Environmental Data Book 2020

Material flow

Environment Index				Value	Unit
Inputs	Raw materials	Other than organic solvent(resin film, chemicals etc.)(non-consolidated)		132,467	ton
		★Organic solvents purchased		50,807	ton
	Energies	★Electricity purchased		740,909	MWh
		★Green electricity purchased		42,691	MWh
		★Solar electricity generated & used		1,435	MWh
		★Steam purchased		4,152	ton
		★Diesel oil / A-type heavy oil purchased		2,883	kL
		★LPG purchased		1,446	ton
		★Natural gas purchased		2,305,243	GJ
		★LNG purchased		37,950	ton
		★Gasoline and kerosene purchased		13,254	GJ
	Water withdrawal	★Municipal supply water/ Industrial water		3,586,412	m^3
		★Ground water		2,830,761	m^3
Outputs	Atmospheric release	★Organic solvents*		2,004	ton
		★CO_2		758,903	ton
	Waste etc.	★Amount disposed		123,008	ton
		Disposal	★Amount recycled	96,902	ton
			Final disposal amount(landfill or incineration without energy recovery)	26,106	ton
	Water discharged	★Amount discharged		5,214,550	m^3
		Discharge to	Public water areas	3,531,212	m^3
			Sewage lines	1,683,338	m^3
		★Pollutants(COD) to public water areas		13.8	ton
Others		★Organic solvent recycled		14,439	ton
		★Water recycled		817,232	m^3
		Water consumed		1,202,623	m^3

*: Previously, part of N-hexane was not included in the atmospheric release of organic solvents, but it was included in the atmospheric release of organic solvents in FY2019. The amount of N-hexane included in the atmospheric emissions of organic solvents in FY2019 is 500 tons.

Environmental efficiency(to sales)

Energy intensity

	Unit	FY2016	FY2017	FY2018	FY2019
Total energy input*1	GJ	7,239,694	7,450,666	7,434,946	7,413,954★
Sales	M¥	767,710	856,262	806,495	741,018
Intensity*1	GJ/M¥	9.43	8.70	9.22	10.01

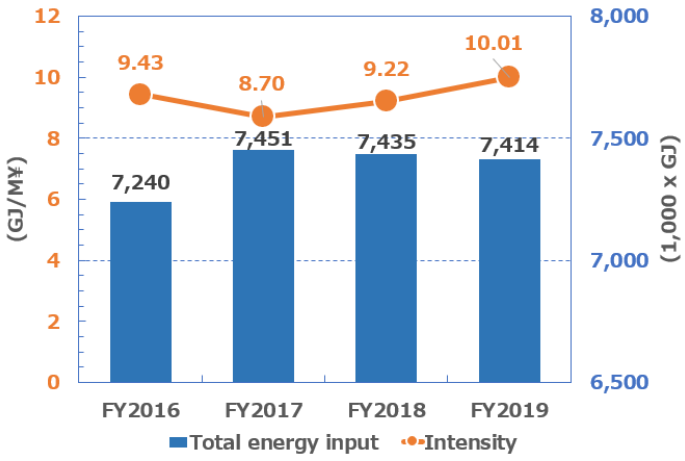
*1: From FY2019, we have included “Green electricity purchased” in “Total energy input”. Changes have been applied retroactively to previous years. Along with this, intensity is also recalculated. The impact of these changes is minor.

CO_2 emissions intensity

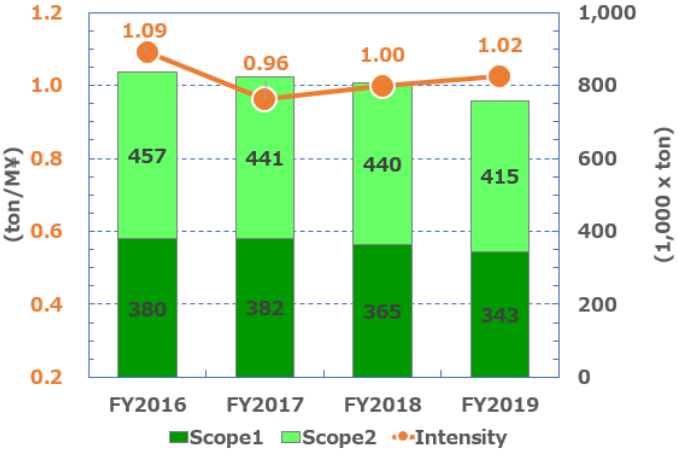
	Unit	FY2016	FY2017	FY2018	FY2019
CO_2 emissions(Scope1)*2	Ton	379,870	381,505	365,138	343,471★
CO_2 emissions(Scope2)*3	Ton	457,162	441,311	440,377	415,432★
CO_2 emissions(Total)	Ton	837,032	822,816	805,515	758,903
Sales	M¥	767,710	856,262	806,495	741,018
Intensity*4	ton/M¥	1.09	0.96	1.00	1.02

*2: To improve accuracy, we have revised the CO_2 emissions (Scope 1: direct emissions) from FY2016 to FY2018. The impact of these revisions is minor.
*3: From fiscal 2019, we have changed the CO_2 emission coefficients used (see "Environmental Data Calculation Standards"). Changes have been applied retroactively to previous years. The impact of these changes is minor.
*4: With the revision of CO_2 emissions (Scope1) and CO_2 emissions (Scope2) of previous years, intensity of previous years is also recalculated.

Energy intensity



CO_2 emissions intensity



Change in environment indexes

□Total energy input[*1] Unit: GJ

	FY2016	FY2017	FY2018	FY2019
Japan	4,384,177	4,549,631	4,573,768	4,626,270
The Americas	487,781	531,691	499,856	449,438
Europe	463,535	475,170	484,678	473,469
Asia and Oceania	1,904,202	1,894,174	1,876,644	1,864,776
Total	7,239,694	7,450,666	7,434,946	7,413,954★

*1: From FY2019, we have included the amount of green electricity purchased in the total amount of energy input. Changes have been made retroactively to previous years. The impact of these changes is minor.

□Total waste etc. disposed Unit: ton

	FY2016	FY2017	FY2018	FY2019
Japan	69,518	68,214	67,258	65,802
The Americas	11,423	9,468	10,103	8,926
Europe	10,902	9,789	9,530	8,703
Asia and Oceania	51,905	40,955	40,403	39,577
Total	143,748	128,426	127,294	123,008★

□CO_2 emissions(Scope1: Direct emissions)[*2] Unit: ton

	FY2016	FY2017	FY2018	FY2019
Japan	252,119	250,636	236,388	225,578
The Americas	16,325	14,407	16,282	14,414
Europe	40,057	42,857	40,809	33,756
Asia and Oceania	71,369	73,605	71,659	69,724
Total	379,870	381,505	365,138	343,471★

*2: To improve accuracy, we have revised the CO_2 emissions (Scope 1: direct emissions) from FY2016 to FY2018. The impact of these revisions is minor.

□Percentage of waste etc. recycled Unit: %

	FY2016	FY2017	FY2018	FY2019
Japan	98	98	99	98
The Americas	20	24	17	21
Europe	97	97	97	93
Asia and Oceania	41	50	42	56
Total	71	77	74	79★

□CO_2 emissions(Scope2: Energy indirect emissions)[*3] Unit: ton

	FY2016	FY2017	FY2018	FY2019
Japan	265,675	261,719	258,016	238,146
The Americas	24,026	24,077	24,183	20,413
Europe	4,069	4,236	4,093	4,980
Asia and Oceania	163,393	151,279	154,085	151,893
Total	457,162	441,311	440,377	415,432★

*3:From fiscal 2019, we have changed the CO_2 emission coefficients used (see "Environmental Data Calculation Standards"). Changes have been applied retroactively to previous years. The impact of these changes is minor.

□Hazardous waste disposed Unit: ton

	FY2016	FY2017	FY2018	FY2019
Japan	10,071	9,416	8,297	9,566
The Americas	2,033	1,186	1,092	1,249
Europe	597	620	697	1,131
Asia and Oceania	23,823	15,184	14,637	12,820
Total	36,524	26,406	24,722	24,767★

□CO_2 emissions(Scope3: Other indirect emissions)(non-consolidated) Unit: ton

	FY2017	FY2018	FY2019
Purchased goods and services★	396,698	389,128	325,581
Capital goods	57,791	85,852	106,991
Fuel-and-energy-related activities(not included in Scope1 or 2)★	44,380	44,447	58,260
Upstream transportation and distribution	9,789	8,809	7,594
Waste generated in operations★	36,103	34,548	27,428
Business travel	790	801	812
Employee commuting	2,515	2,554	2,599
Upstream leased assets	-	-	-
Downstream transportation and distribution	-	-	-
Processing of sold products	-	-	-
Use of sold products	-	-	-
End of life treatment of sold products★	74,536	71,579	53,061
Downstream leased assets	-	-	-
Franchises	-	-	-
Investments	-	-	-
Total	622,602	637,717	582,326

□Atmospheric release (non-consolidated) Unit: ton

	FY2016	FY2017	FY2018	FY2019
Dust	8.32	2.36	6.54	2.06★
NOx	206.2	224.8	161.0	154.7★
SOx	3.8	0.2	0.3	0.3★
Toluene	590.3	276.9	250.1	197.5

□Water withdrawal Unit: m^3

	FY2016	FY2017	FY2018	FY2019
Japan	4,140,776	4,445,897	4,576,444	4,354,757
The Americas	666,324	643,168	537,586	352,373
Europe	82,641	78,488	93,226	75,630
Asia and Oceania	1,818,916	1,791,713	1,628,613	1,634,413
Total	6,708,657	6,959,266	6,835,869	6,417,173★

□Pollutants(COD) to public water areas Unit: ton

	FY2016	FY2017	FY2018	FY2019
Japan	9.3	9.3	9.7	11.6
The Americas	0	0	0	0
Europe	0	0	0	0
Asia and Oceania	2.1	2.4	3.1	2.2
Total	11.4	11.7	12.8	13.8★

*) Due to rounding, sum of values by country or region may not equal total value.

Environmental Data Calculation Standards

To enhance the reliability of its disclosed information, Nitto Group has such information assured by a third-party organization. In this Environmental Data Book 2020, environmental performance indicators marked with ★ have been assured accordingly.

1. Period and Organizations Covered by Environmental Data

FY	Period	Organizations Covered (No. of companies)	Organizations Covered (% of production unit)
2019	April 2019 to March 2020	38	95%

2. Calculation methods

2-1. Energy, CO_2, NOx and SOx related

Data	Calculation method
Total Energy Input Unit: GJ	Total Energy Input = Energy purchased, and Solar electricity generated & used x Heat value per unit 3.6MJ/kWh is adopted as the heat value per unit value of electric power. Energy purchased includes "Green electricity purchased". Heat values per unit of fuels are based on " Act on Rationalizing Energy Use enforcement regulations ".
Electricity purchased Unit: MWh	Total amount of purchased electricity from third parties
Green electricity purchased Unit: MWh	Total amount of purchased green electricity from third parties
Solar electricity generated & used Unit: MWh	Total amount of solar electricity generated & used by Nitto Gr.
Steam purchased Unit: ton	Total amount of purchased steam from third parties
Diesel oil / A-type heavy oil purchased Unit: kL	Total amount of purchased Diesel oil, gas oil and A-type heavy oil (Japan) from third party
LPG purchased Unit: ton	Total amount of purchased Liquefied petroleum gas from third parties
Natural gas purchased Unit: GJ	Total amount of purchased natural gas from third parties
LNG purchased Unit: ton	Total amount of purchased Liquefied natural gas from third parties
Gasoline and kerosene purchased Unit: GJ	Total amount of purchased gasoline & kerosene from third parties

<table>
<tr>
<td>CO_2 emissions
Scope1:Direct emissions
Scope2:Energy indirect emissions
Unit: ton</td>
<td>The calculation method is based on “A Corporate Accounting and Reporting Standard Revised Edition” issued by The Greenhouse Gas Protocol.

Emission coefficient
a) Energy(fuel, steam):
Coefficient stipulated in ”Act on Promotion of Global Warming Countermeasures”
b) Energy(electric power):
Emission coefficients by electric power companies or individual region’s coefficients provided by “IEA, CO_2 emissions from fuel combustion” or “EPA, Emissions & Generation Resource Integrated Database (eGRID)”
c)Materials burned by Nitto Gr. (solvent):
Coefficient decided by Nitto assuming combustion reaction of solvent
d) Materials burned by Nitto Gr. (waste):
Coefficient stipulated in ”Act on Promotion of Global Warming Countermeasures”</td>
</tr>
<tr>
<td>CO_2 emissions
Scope3:Other indirect emissions
Unit: ton</td>
<td>The calculation method is based on The Basic Guidelines on Accounting for Greenhouse Gas Emissions throughout the Supply Chain ver.2.3 (Ministry of the Environment and Ministry of Economy, Trade and Industry in Japan).
Emission coefficients are based on the following database:
a) the Emissions per Unit Database for the Purpose of Calculating the Greenhouse Gas and other Emissions of Organizations throughout the supply Chain ver.3.0
b) JEMAI CFP Program Basic Database ver. 1.01
c) JEMAI CFP Program Available Database ver. 1.04
<table>
<tr><td>1</td><td>Purchased goods and services</td><td>Σ{Weight of purchased material by type x CO_2 emissions per unit}</td></tr>
<tr><td>2</td><td>Capital goods</td><td>Equipment investment amount x CO_2 emissions per unit</td></tr>
<tr><td>3</td><td>Fuel-and energy-related activities</td><td>Σ{Amount of purchased energy by type x CO_2 emissions per unit}</td></tr>
<tr><td>4</td><td>Upstream transportation and distribution</td><td>Based on the Act on the Rationalizing Energy Use</td></tr>
<tr><td>5</td><td>Waste generated in operations</td><td>Σ{Amount of waste discharged by type x CO_2 emissions per unit}</td></tr>
<tr><td>6</td><td>Business travel</td><td>Number of employees x CO_2 emissions per unit</td></tr>
<tr><td>7</td><td>Employee commuting</td><td>Σ{Number of employees by site x Number of employees x Annual operating days}</td></tr>
<tr><td>8</td><td>Upstream leased assets</td><td>Included in Scope1 & 2</td></tr>
<tr><td>9</td><td>Downstream transportation and distribution</td><td>Included in “Upstream transportation and distribution”</td></tr>
<tr><td>10</td><td>Processing of sold products</td><td>Not calculated (because our products are intermediate materials and it is difficult to recognize processes of our customers.)</td></tr>
</table>
</td>
</tr>
</table>

	11	Use of sold products	Not calculated (because our products are intermediate materials and it is difficult to recognize processes of our customer.)
	12	End-of-life treatment of sold products	Shipped weight (plastic product) x CO_2 emissions per unit
	13	Downstream leased asset	N/A (no leased asset)
	14	Franchises	N/A (no franchises)
	15	Investments	N/A (We are not investors or financial providers.)
Dust atmospheric emissions Unit: ton	Dust atmospheric emissions = Concentration of dust contained in exhaust gas x Amount of exhaust gas		
NOx atmospheric emissions Unit: ton	NOx atmospheric emissions = Concentration of nitrogen oxides contained in exhaust gas x Amount of exhaust gas		
SOx atmospheric emissions Unit: ton	SOx atmospheric emissions = Concentration of sulfur oxides contained in exhaust gas x Amount of exhaust gas		

2-2. Water-related[*1]

Data	Calculation method
Water withdrawal Unit: m3	Sum of municipal supply water, industrial water and ground water.
Municipal supply water/ Industrial water Unit: m3	Total amount of water of quality that can be used for household use, and water of quality not suitable for household use purchased from outside the Nitto Gr.
Ground water Unit: m3	Total amount of ground water pumped by Nitto Gr.
Water recycled[*2] Unit: m3	Total amount of rainwater stored for reuse and recycled water within the Nitto Gr.
Water discharged Unit: m3	Total amount of water discharged to public water areas, sewage lines and the others from Nitto Gr. Some sites, which do not measure amount of water discharged, regard amount of water withdrawal as amount of water discharged.
Pollutants (COD) /COD Discharged Unit: ton	Pollutants(COD) = Concentration of chemical oxygen demand (COD) contained in water discharged x Amount water discharged This data covers only sites which must measure COD according to local rules.
Water consumed Unit:m3	Deduct amount of water discharged from water withdrawal

*1: Nitto Denko Avecia Inc. and Matex Kakoh Corporation are excluded for this water related data.

*2: Results of Nitto Denko Corp. Onomichi and Kameyama Plants.

2-3. Organic solvents-related

Data	Calculation method
Amount purchased Unit: ton	Total amount of purchased organic solvents (see below) from third parties: Toluene, Ethyl acetate, Cactus solvent, Dimethylformamide, Isopropyl alcohol, Hexane *Until FY2017 it partially included purchased organic solvents other than the above ones, but from FY2018 it was limited to the above ones.
Amount recycled Unit: ton	Total amount of refined organic solvents for the purpose of reuse by Nitto Gr.
Atmospheric release of organic solvents Unit: ton	Atmospheric release of organic solvents (see below) = Σ{Concentration of organic solvent by type x Amount of exhaust gas}. Some sites use estimated figures calculated from purchased solvents. Toluene, Ethyl acetate, Cactus solvent, Dimethylformamide, Isopropyl alcohol, Hexane *Until FY2017 it was partially included organic solvents other than the above ones, but from FY2018 it was limited to the above ones.

2-4. Waste-related

Data	Calculation method
Amount disposed / Total waste etc. disposed Unit: ton	Total amount of waste (including hazardous waste) and valuable resources that are treated by external experts' service.
Amount recycled Unit: ton	Amount recycled = Total amount of waste which is recycled, reused or incinerated for energy recovery + Total amount of valuable resources
Percentage of waste etc. recycled Unit: %	Percentage of waste etc. recycled = Amount recycled ÷ Total waste etc. disposed
Hazardous waste disposed Unit: ton	Total amount of hazardous waste regulated by each country and is treated by external experts' service.

2-5. PRTR-related

Data	Calculation method
Atmospheric release Unit: ton	Calculation method of each substance is based on Law concerning Pollutant Release and Transfer Register (PRTR) in Japan.

Nitto
Innovation for Customers

Third-Party Assurance

KPMG

Independent Assurance Report

To President, CEO & COO of Nitto Denko Corporation

We were engaged by Nitto Denko Corporation (the "Company") to undertake a limited assurance engagement of the environmental performance indicators marked with ★ (the "Indicators") for the period from April 1, 2019 to March 31, 2020 included in its Environmental Data Book 2020 (the "Data Book") for the fiscal year ended March 31, 2020.

The Company's Responsibility

The Company is responsible for the preparation of the Indicators in accordance with its own reporting criteria (the "Company's reporting criteria"), as described in the Data Book.

Our Responsibility

Our responsibility is to express a limited assurance conclusion on the Indicators based on the procedures we have performed. We conducted our engagement in accordance with the 'International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements other than Audits or Reviews of Historical Financial Information' and the 'ISAE 3410, Assurance Engagements on Greenhouse Gas Statements' issued by the International Auditing and Assurance Standards Board. The limited assurance engagement consisted of making inquiries, primarily of persons responsible for the preparation of information presented in the Data Book, and applying analytical and other procedures, and the procedures performed vary in nature from, and are less in extent than for, a reasonable assurance engagement. The level of assurance provided is thus not as high as that provided by a reasonable assurance engagement. Our assurance procedures included:

- Interviewing the Company's responsible personnel to obtain an understanding of its policy for preparing the Data Book and reviewing the Company's reporting criteria.
- Inquiring about the design of the systems and methods used to collect and process the Indicators.
- Performing analytical procedures on the Indicators.
- Examining, on a test basis, evidence supporting the generation, aggregation and reporting of the Indicators in conformity with the Company's reporting criteria, and recalculating the Indicators.
- Making inquiries and reviewing materials including documented evidence of two of the Company's factories selected on the basis of a risk analysis, as alternative procedures to a site visit.
- Evaluating the overall presentation of the Indicators.

Conclusion

Based on the procedures performed, as described above, nothing has come to our attention that causes us to believe that the Indicators in the Data Book are not prepared, in all material respects, in accordance with the Company's reporting criteria as described in the Data Book.

Our Independence and Quality Control

We have complied with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. In accordance with International Standard on Quality Control 1, we maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

KPMG AZSA Sustainability Co., Ltd.
Osaka, Japan
July 17, 2020