

Environmental Performance Data

Category	Item	Scope of Data	Unit	2017/3	2018/3	2019/3			
Environmental Accounting									
	Environmental preservation cost	Investment	Daicel's business sites and on-premise Group companies	100 million yen	1	15	40		
		Expense	Daicel's business sites and on-premise Group companies		7	14	67		
	Economic benefit associated with environmental preservation activities		Daicel's business sites and on-premise Group companies		2	3	25		
Global Warming Prevention									
	Energy consumption	Daicel's business sites and on-premise Group companies		1,000 kL	462	436	411		
		Other Group companies			95	105	111		
		Overseas Group companies			107 ^{*1}	107 ^{*1}	107 ^{*1}		
	Energy intensity index (base year: 2009)	Daicel's business sites and on-premise Group companies		%	86	79	78		
	Greenhouse gas emissions (Scope 1 and 2)	Daicel's business sites and on-premise Group companies		1,000 t-CO ₂	1,735 ^{*2}	1,657 ^{*2}	1,644		
		Other Group companies			260	249	213		
	Energy-related CO ₂ emissions	Daicel's business sites and on-premise Group companies		1,000 t-CO ₂	1,331	1,216	1,195		
		Other Group companies			260	249	213		
		Overseas Group companies			239 ^{*1}	235 ^{*1}	239 ^{*1}		
	Non-energy-related CO ₂ emissions	Daicel's business sites and on-premise Group companies		1,000 t-CO ₂	402	439	447		
		Other Group companies			0	0	0		
	Energy intensity index (base year: 2005)	Daicel's business sites and on-premise Group companies		%	100	92	90		
	Greenhouse gas emissions from downstream transportation (Scope 3)	Marine transport	Daicel's business sites and on-premise Group companies	1,000 t-CO ₂	7.6 ^{*2}	7.9 ^{*2}	7.4		
		Rail transport	Daicel's business sites and on-premise Group companies		0.4 ^{*2}	0.4 ^{*2}	0.3		
		Road transport	Daicel's business sites and on-premise Group companies		8.9 ^{*2}	9.3 ^{*2}	9.2		
Industrial Waste Reduction									
	Industrial waste	Waste generated	Daicel's business sites and on-premise Group companies	1,000 t	138.6	137.4	135.6		
			Other Group companies		7.8	8.9	9.1		
			Overseas Group companies		17.3 ^{*1}	13.5 ^{*1}	15.7 ^{*1}		
		Landfill	Daicel's business sites and on-premise Group companies		1.5	1.8	1.5		
			Other Group companies		0.0	0.0	0.0		
			Overseas Group companies		6.6 ^{*1}	4.5 ^{*1}	5.7 ^{*1}		
		Final landfill disposal rate	Daicel's business sites and on-premise Group companies		%	1.1	1.3	1.1	
			Other Group companies			0.0	0.0	0.4	
			Overseas Group companies			38 ^{*1}	34 ^{*1}	36 ^{*1}	

*1: The data collection period of overseas Group companies is from January to December (For overseas Group companies, "2019/3" shows data from January 2018 to December 2018)

*2: Third-party assured.

Category	Item	Scope of Data	Unit	2017/3	2018/3	2019/3			
Water Resources and Water Quality									
	Water consumption	Daicel's business sites and on-premise Group companies	Million t	92.6	91.4	91.4			
		Other Group companies		7.3	7.1	6.7			
		Overseas Group companies		1.5* ¹	1.4* ¹	1.3* ¹			
	Water discharge	Daicel's business sites and on-premise Group companies		88.0	88.7	90.8			
		Other Group companies		5.3	5.1	4.8			
		Overseas Group companies		0.9* ¹	0.9* ¹	0.8* ¹			
	COD (BOD) emissions	Daicel's business sites and on-premise Group companies	t	802	800	804			
		Other Group companies		46	45	49			
	Total phosphorous emissions	Daicel's business sites and on-premise Group companies		83	81	85			
		Other Group companies		6	4	2			
	Total nitrogen emissions	Daicel's business sites and on-premise Group companies		199	183	170			
		Other Group companies		15	14	17			
Atmospheric Emissions									
	SOx emissions	Daicel's business sites and on-premise Group companies		t	559	187	248		
		Other Group companies			43	23	2		
	NOx emissions	Daicel's business sites and on-premise Group companies			701	577	598		
		Other Group companies			182	94	41		
	Soot and dust emissions	Daicel's business sites and on-premise Group companies			52	32	28		
		Other Group companies	38		14	3			
	VOC emissions	Daicel's business sites and on-premise Group companies	1,531		1,430	1,065			
	Substances Subject to the PRTR Act								
		Released	Amount released to air		Daicel's business sites and on-premise Group companies	t	25	26	26
					Other Group companies		9	15	11
Amount released to water			Daicel's business sites and on-premise Group companies	9	19		40		
			Other Group companies	0	0		0		
Total emissions			Daicel's business sites and on-premise Group companies	34	45		66		
			Other Group companies	9	15		11		
Transferred		Daicel's business sites and on-premise Group companies	59	58	59				
		Other Group companies	15	16	23				

*1: The data collection period of overseas Group companies is from January to December (For overseas Group companies, "2019/3" shows data from January 2018 to December 2018)

Environmental Load Data

The environmental load data for Daicel's business sites and on-premise Group companies, Other Group companies, and Overseas Group companies for FY2019/3 are as follows.

1) Daicel's business sites and on-premise Group companies

Item	Water consumption	Energy consumption	SOx emissions	NOx emissions	Soot and dust emissions	Greenhouse gas emissions	COD (BOD) emissions	PRTR substances		Landfill
								Released	Transferred	
	1,000 t	Crude oil equivalent kL	t	t	t	1,000 t-CO ₂	t	t	t	
Aboshi Plant	32,761	190,316	187	227	15	600	320	5	3	258
Ohtake Plant	42,546*	164,115	47	316	11	934	410	36	4	53
Arai Plant	15,165	23,908	8	43	2	51	63	1	1	432
Harima Plant	214	11,485	6	9	0	22	0	3	17	4
Hirohata Plant	442	12,586	0	2	0	20	1	11	1	42
Kanzaki Plant	189	7,600	0	1	0	13	10	10	30	731
Innovation Park	40	1,270	0	0	0	2	0	0	3	20

*Includes 35,590,000 tons of seawater.

2) Other Group companies

Item	Water consumption	Energy consumption	SOx emissions	NOx emissions	Soot and dust emissions	Greenhouse gas emissions	COD (BOD) emissions	PRTR substances		Landfill
								Released	Transferred	
	1,000 t	Crude oil equivalent kL	t	t	t	1,000 t-CO ₂	t	t	t	
Polyplastics Co., Ltd. Fuji Site	6,151	106,806	0	39	3	206	48	11	2	1
Dainichi Chemical Corp.	374	1,080	0	1	0	3	1	0	21	0
DM Novafoam Ltd.	45	1,718	2	1	0	4	0	0	0	31
Daicel Pack Systems Ltd.	169	770	0	0	0	0	0	0	0	2
Daicel Pyrotechnics Ltd.	3	116	0	0	0	0	0	0	0	0
Daicel Logistics Service Co., Ltd.	3	361	0	0	0	0	0	0	0	0

3) Overseas Group companies (from January to December 2018)

Item	Water consumption	Greenhouse gas emissions
	1,000 t	1,000 t-CO ₂
Ningbo Da-An Chemical Industries Co., Ltd.	658	99
Daicel Nanning Food Ingredients Co., Ltd.	207	19
Xi'an Huida Chemical Industries Co., Ltd.	180	52
Shanghai Daicel Polymers, Ltd.	33	3
Daicel Safety Systems (Thailand) Co., Ltd./Daicel Safety Technologies (Thailand) Co., Ltd.	139	16
Special Devices (Thailand) Co., Ltd.	8	2
Daicel Safety Systems (Jiangsu) Co., Ltd.	84	23
Daicel Safety Systems America, LLC/Daicel Safety Technologies America, Inc./Daicel Safety Tube Processing, Inc.	22	16
Daicel Safety Systems Europe Sp. z o.o.	3	2
Daicel Safety Systems Korea, Inc.	3	2
Special Devices, Inc./Daicel Safety Systems America Arizona, Inc.	5	4
Chiral Technologies, Inc.	0	1
Chiral Technologies Europe S.A.S.	1	1
Daicel Chiral Technologies (China) Co., Ltd.	5	1
Daicel Chiral Technologies (India) Private Ltd.	1	1

Social Performance Data

Item		Unit	Scope of Data	2017/3	2018/3	2019/3		
Employees								
Number of employees			Consolidated	11,556	12,309	12,319		
	Number of employees* ¹	Male	Persons	Non-consolidated	2,732	2,832	2,886	
Female		279			305	320		
Total		3,011			3,137	3,206		
Full-time employees* ²	Male	2,504			2,596	2,652		
	Female	228			248	264		
	Total	2,732			2,844	2,916		
	Ages 18 and 19	35			31	33		
	Ages 20 to 29	451			481	476		
	Ages 30 to 39	548			599	658		
Contract employees	Ages 40 to 49	871			808	778		
	Ages 50 to 59	827			925	971		
	Male	228			236	234		
	Female	51			57	56		
Temporary staff	Total	279			293	290		
	Male	44			38	49		
	Female	54	53	67				
Average age	Total	98	91	116				
	Staff members	Age		38.5	38.6	38.7		
	Managers			50.3	50.5	50.6		
	Male			41.8	41.9	42.0		
	Female			41.1	41.4	41.6		
Total	41.8			41.8	41.9			
Number of managerial staff	Male	Persons		20	27	28		
	Female			3	0	7		
	Total			23	27	35		
New graduates recruitment	Male			81	79	65		
	Female			12	10	9		
	Total			93	89	74		
Mid-career recruitment	Male			71	79	70		
	Female			11	13	11		
	Total			82	92	81		
Human Resource Development								
Participation in position-specific training				Persons	Non-consolidated	282	364	406
Participation in engineering ethics training						—	44	54
Participation in overseas language training		72	73			56		
Diversity								
Ratio of female employees	Staff members	%	Non-consolidated	9.1	9.6	9.1		
	Managers			2.0	2.1	3.1		
Employment of persons with disabilities		Persons		62.5	68.0	64.0		
Ratio of employees with disabilities		%		2.07	2.16	2.02		
Ratio of post-retirement reemployment* ³				98.0	96.9	97.1		
Number of foreign nationals in the workforce	Male	Persons		12	12	12		
	Female			2	2	2		
	Total			14	14	14		

Item		Unit	Scope of Data	2017/3	2018/3	2019/3
Work-Life Balance						
Average length of service	Male	Years	Non-consolidated	18.0	18.0	16.9
	Female			15.0	14.5	16.6
	Total			17.7	17.6	16.9
Employee turnover rate		%		1.0	1.1	1.0
Ratio of employees taking annual paid leave	Staff members			70.0	70.5	76.4
	Managers			43.8	46.3	54.4
	Male	61.7		64.1	70.7	
	Female	68.2		66.7	70.2	
Total		63.2		64.4	70.6	
	Male	Persons		0	25	19* ⁴
	Female			1	2	7
Total	1			27	26	
Ratio of employees taking childcare leave	Male	%		0.0	29.8	22.6* ⁴
	Total			100	100	100
	Total			1.1	33.3	28.6
Number of employees using shorter working hours for childcare	Male	Persons		0	0	0
	Female			10	1	11
	Total			10	1	11
Number of employees using teleworking system* ⁵	Male	Persons		—	6	84
	Female		—	18	62	
	Total		—	24	146	
Number of employees taking nursing care leave	Male	Persons	0	0	0	
	Female		0	0	0	
	Total		0	0	0	
Number of employees using shorter working hours for nursing care	Male	Persons	0	0	0	
	Female		0	0	0	
	Total		0	0	0	
Number of labor union members			1,970	2,069	2,122	
Ratio of labor union members		%	65.6	66.0	72.8	
Occupational Safety and Health						
Number of occupational accidents		Cases	Daicel and on-premise partner companies	12	12	17
			Other Group companies	4	3	9
			Overseas Group companies	28	25	26
Occupational accident frequency rate		%	Daicel and on-premise partner companies	1.10	1.07	1.56
			Other Group companies	1.43	1.03	3.00
			Overseas Group companies	2.43	1.94	2.10
Physical and Mental Health						
Ratio of employees taking health checkups	Male	%	Non-consolidated	100	100	100
	Female			100	100	100
	Total			100	100	100
Research and Development						
Research and development expenses		100 million yen	Consolidated	168	188	207
Number of research and development staff		Persons		1,128	1,183	1,318

*1 Excludes directors, subordinate directors, and loaned staff. Includes full-time employees and contract employees. Contract employees are full-time employees working under a fixed-term contract, and excludes part-time employees.

*2 Includes employees on loan to Group companies and companies outside the Group.

*3 Ratio of employees using the reemployment system after mandatory retirement.

*4 Figures are as of March 31, 2019.

*5 The system was introduced in April 2017, and eligibility was expanded to all employees in October 2018.

Governance Data

Item		Scope of Data	Unit	2017/3	2018/3	2019/3	
Corporate Governance							
Number of Directors*	Male	Non-consolidated	Persons	7	7	8	
	Female			1	1	0	
	Total			8	8	8	
Ratio of female directors*				%	12.5	12.5	0.0
Number of External Directors (number of independent directors)	Male		Persons	2(2)	3(3)	4(4)	
	Female			1(1)	1(1)	0(0)	
	Total			3(3)	4(4)	4(4)	
Term of Directors				Years	1	1	1
Frequency of meetings of the Board of Directors				Times	14	14	15
Attendance at Board of Directors meetings	External Directors		%	97.6	96.3	96.7	
	Outside Audit & Supervisory Board Members			95.2	97.6	95.6	
Number of Audit & Supervisory Board Members*	Male		Persons	5	5	5	
	Female			0	0	0	
	Total			5	5	5	
Ratio of female Audit & Supervisory Board Members*				%	0.0	0.0	0.0
Number of Audit & Supervisory Board Members (number of independent officers)	Male	Persons	3(3)	3(3)	3(3)		
	Female		0(0)	0(0)	0(0)		
	Total		3(3)	3(3)	3(3)		
Term of Audit & Supervisory Board Members			Years	4	4	4	
Frequency of meetings of the Audit & Supervisory Board			Times	14	14	14	
Attendance of Audit & Supervisory Board Members	Outside Audit & Supervisory Board Members		%	95.2	97.6	100.0	
Compliance							
The number of cases reported via the whistleblowing systems		Consolidated	Cases	16	31	52	

*Number of persons and ratios are as of the end of each fiscal year.