

Data Compilation

Reporting Period:
January 1 to December 31, 2018

Table 1 SOx Emissions

DIC Group (In Japan)

Fiscal year	2010	2011	2012	2013	2014	2015	2016	2017	2018
SOx (ton)	63	82	64	58	46	38	42	14	12
SOx emissions per unit of production (g/ton)	60	83	69	62	51	43	46	15	13

Note: SOx emissions per unit of production is the volume of SOx emitted per ton of production.

Table 2 NOx Emissions

DIC Group (In Japan)

Fiscal year	2010	2011	2012	2013	2014	2015	2016	2017	2018
NOx (ton)	203	194	205	186	185	177	156	186	202
NOx emissions per unit of production (g/ton)	194	197	221	198	204	199	173	200	219

Note: NOx emissions per unit of production is the volume of NOx emitted per ton of production.

Table 3 COD (chemical oxygen demand) Emissions in Wastewater

DIC Group (In Japan)

Fiscal year	2010	2011	2012	2013	2014	2015	2016	2017	2018
COD (ton)	394	483	473	495	530	844	831	783	810
COD emissions per unit of production (g/ton)	376	491	510	527	585	945	920	842	876

Note: COD emissions per unit of production is the volume of COD emitted per ton of production.

Calculations for sites having no COD emissions data are based on biological oxygen demand (BOD) emissions.

Table 4 Volume of Industrial Waste Disposed of as Landfill

DIC Group (In Japan)

Fiscal year	2010	2011	2012	2013	2014	2015	2016	2017	2018
Volume disposed of as landfill (tons)	207	158	106	86	80	139	183	148	204
Volume disposed of as landfill emissions per unit of production (kg/ton)	0.197	0.161	0.114	0.092	0.088	0.156	0.202	0.159	0.221

Note: Industrial waste disposed of as land II refers to the volume of industrial waste buried in land II sites after reduction (through desiccation or incineration) or directly.

DIC Group (Overseas)

Fiscal year	2010	2011	2012	2013	2014	2015	2016	2017	2018
Volume disposed of as landfill (tons)	-	-	31,271	22,059	23,539	27,230	24,739	22,832	24,976
Volume disposed of as landfill emissions per unit of production (kg/ton)	-	-	27	19	23	27	24	16	24

DIC Group (Global)

Fiscal year	2010	2011	2012	2013	2014	2015	2016	2017	2018
Volume disposed of as landfill (tons)	-	-	31,377	22,145	23,619	27,230	24,922	22,980	25,180
Volume disposed of as landfill emissions per unit of production (kg/ton)	-	-	13	11	12	14	13	12	13

Table 5 Energy Consumption

* Energy consumption per unit of production is calculated using adjusted production volume (parent company in Japan only.)

(Notification submitted to Japan's Ministry of Economy, Trade and Industry)

DIC Group (In Japan)

Fiscal year	2010	2011	2012	2013	2014	2015	2016	2017	2018
Energy consumption (1,000GJ)	5,112	5,045	4,408	4,399	4,337	4,256	4,314	4,314	4,255
Energy consumption per unit of production(GJ/t)	4.447	4.574	4.347	4.170	4.147	3.714	4.010	3.914	3.904

Note: Energy consumption per unit of production is the volume of energy consumed per ton of production.

Fiscal year	2010	2011	2012	2013	2014	2015	2016	2017	2018
Energy consumption (MWH)	994,989	989,845	847,529	836,909	834,168	845,444	875,670	851,201	833,287
Energy consumption per unit of production (MWH/t)	0.903	0.897	0.836	0.793	0.798	0.738	0.814	0.772	0.765

Note: Energy consumption per unit of production is the volume of energy consumed per ton of production.

DIC Group (Overseas)

Fiscal year	2010	2011	2012	2013	2014	2015	2016	2017	2018
Energy consumption (1,000GJ)	7,540	6,771	7,356	8,090	6,789	6,844	7,064	6,740	6,647
Energy consumption per unit of production(GJ/t)	5.553	6.365	6.317	6.999	6.549	6.764	6.746	6.469	6.353

Note: Energy consumption per unit of production is the volume of energy consumed per ton of production.

Fiscal year	2010	2011	2012	2013	2014	2015	2016	2017	2018
Energy consumption (MWH)	1,308,114	1,184,148	1,260,671	1,371,891	1,140,960	1,150,904	1,187,553	1,148,469	1,147,018
Energy consumption per unit of production (MWH/t)	0.963	1.113	1.083	1.187	1.101	1.137	1.134	1.102	1.096

Note: Energy consumption per unit of production is the volume of energy consumed per ton of production.

DIC Group (Global)

Fiscal year	2010	2011	2012	2013	2014	2015	2016	2017	2018
Energy consumption (1,000GJ)	12,652	11,816	11,765	12,489	11,127	11,100	11,379	11,054	10,902
Energy consumption per unit of production(GJ/t)	5.046	5.453	5.400	5.649	5.343	5.144	5.360	5.156	5.104
Energy consumption index	-	-	-	100	95	91	95	91	90

Note: Energy consumption per unit of production is the volume of energy consumed per ton of production.

The energy consumption index compares the change in consumption per unit of production with 2013 as the base year.

Fiscal year	2013(Base year)	2010	2011	2012	2013	2014	2015	2016	2017	2018
Energy consumption (MWH)	2,303,103	2,173,993	2,108,200	2,208,800	1,975,129	1,996,349	2,063,223	1,999,670	1,980,305	
Energy consumption per unit of production (MWH/t)	0.918	1.003	0.968	0.999	0.948	0.925	0.972	0.933	0.927	
Energy consumption index	-	-	-	100	95	93	97	93	93	

Note: Energy consumption per unit of production is the volume of energy consumed per ton of production.

The energy consumption index compares the change in consumption per unit of production with 2013 as the base year.

Table 6 CO2 Emissions

* CO2 emissions per unit of production is calculated using adjusted production volume (parent company in Japan only.)

(Notification submitted to Japan's Ministry of Economy, Trade and Industry)

DIC Group (In Japan)

Fiscal year	2010	2011	2012	2013	2014	2015	2016	2017	2018
CO2 emissions (1,000 tons)	260,235	258,429	229,718	244,377	255,114	250,720	242,194	244,395	231,820
CO2 emissions per unit of production (kg/ton)	226	234	226	232	244	219	225	222	213

Notes: CO2 emissions per unit of production is the volume of CO2 emitted per ton of production.

DIC Group (Overseas)

Fiscal year	2010	2011	2012	2013	2014	2015	2016	2017	2018
CO2 emissions (1,000 tons)	426,741	388,730	415,176	478,578	402,342	408,091	417,184	390,346	386,143
CO2 emissions per unit of production (kg/ton)	314	365	357	414	388	403	398	375	369

Notes: CO2 emissions per unit of production is the volume of CO2 emitted per ton of production.

DIC Group (Global)

Fiscal year	2010	2011	2012	2013	2014	2015	2016	2017	2018
CO2 emissions (1,000 tons)	686,976	647,159	644,893	722,955	657,456	658,811	659,378	634,741	617,964
CO2 Scope1 emissions (1,000 tons)	323,216	303,123	265,205	292,245	267,660	279,019	281,221	274,920	268,634
CO2 Scope2 emissions (1,000 tons)	363,760	344,036	379,688	430,710	396,327	386,201	386,479	370,531	360,582
CO2 marginal power supply evaluation (t)	-	-	-	-	-6,530	-6,409	-8,322	-10,710	-11,252
CO2 emissions per unit of production (kg/ton)	274	299	296	327	316	305	311	296	289
CO2 emission index	-	-	-	100	97	93	95	91	88

Notes: CO2 emissions per unit of production is the volume of CO2 emitted per ton of production.

CO2 emission index compares the change in emissions per unit of production with 2013 as the base year.

Table 7 Water Consumption and Wastewater Emissions

DIC Group (In Japan)

Fiscal year	2010	2011	2012	2013	2014	2015	2016	2017	2018
Water consumption (1,000 m ³)	15,199	14,291	14,362	14,542	12,458	30,663	30,513	32,327	31,022
Water consumption per unit of production (m ³ /ton)	14	15	15	15	14	34	34	36	34
Waste water emissions (1,000 m ³)	11,749	11,822	11,461	11,577	11,298	26,039	28,168	31,025	29,694
Waste water emissions per unit of production (m ³ /ton)	11	12	12	12	12	29	31	33	32

DIC Group (Global)

Fiscal year	2010	2011	2012	2013	2014	2015	2016	2017	2018
Water consumption (1,000 m ³)	-	-	-	25,055	23,176	40,926	41,528	41,308	55,098
Water consumption per unit of production (m ³ /ton)	-	-	-	12	12	21	21	21	28
Waste water emissions (1,000 m ³)	-	-	-	14,930	14,363	29,396	37,593	38,822	43,049
Waste water emissions per unit of production (m ³ /ton)	-	-	-	7	7	15	19	20	22

Table 8 Emissions of PRTR and JCIA Chemicals

DIC Group (In Japan)

Fiscal year	2010	2011	2012	2013	2014	2015	2016	2017	2018
PRTR and JCIA chemicals (tons)	997	759	567	466	367	394	397	396	394
Emissions per unit of production (kg/ton)	0.951	0.772	0.611	0.495	0.405	0.442	0.439	0.425	0.426