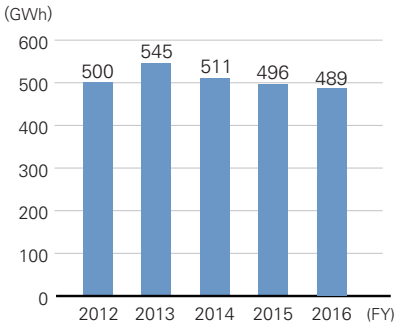
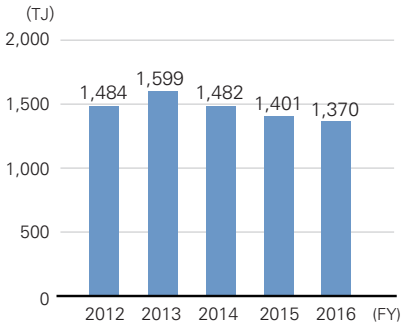
Changes in energy use by type (all YKK Group facilities in Japan)

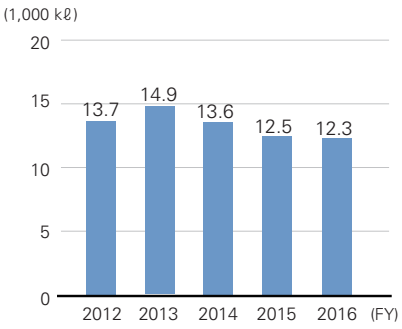
Electric power



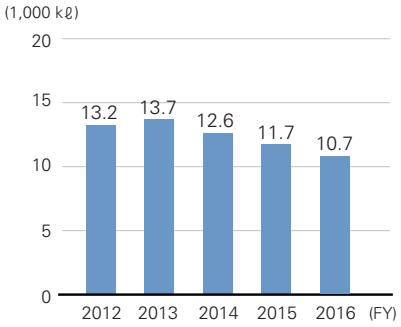
Fuel total (energy equivalent)



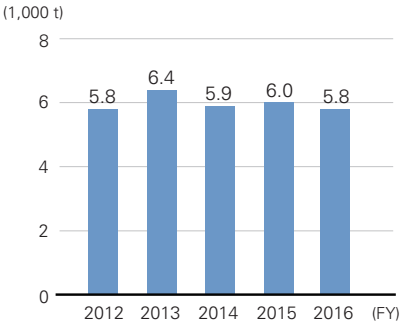
Heavy fuel oil A



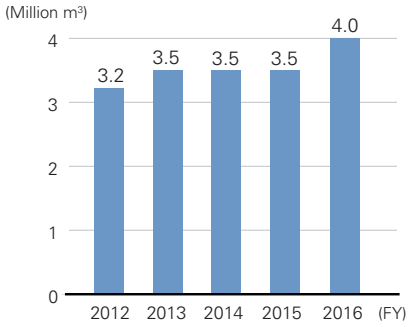
Kerosene



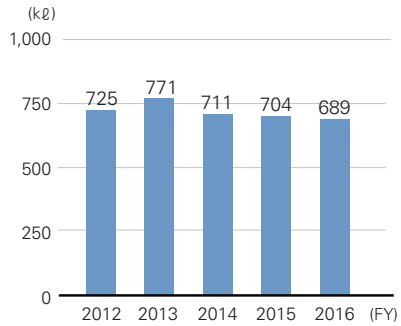
LPG



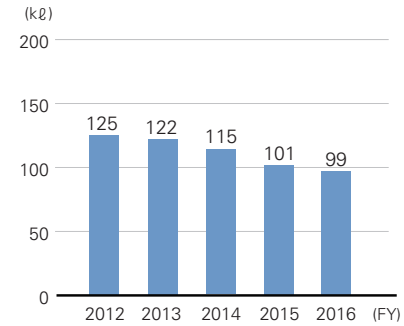
Natural gas



Light oil

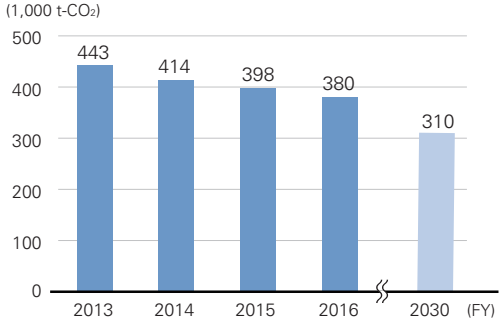


Gasoline

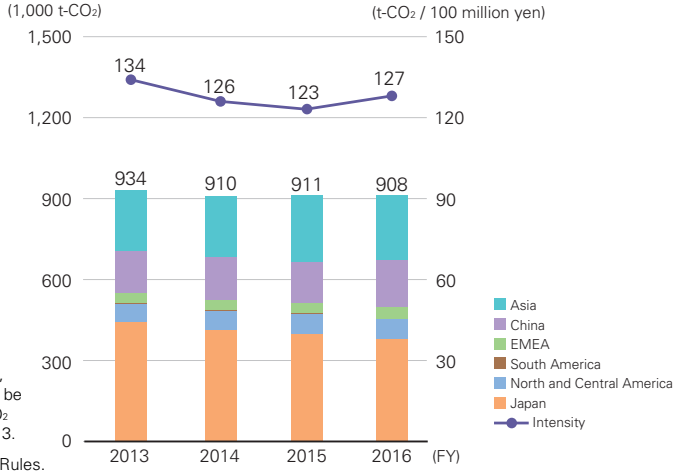


Change in CO_2 emissions (all YKK Group facilities)

CO_2 emissions performance
(all YKK Group facilities in Japan)



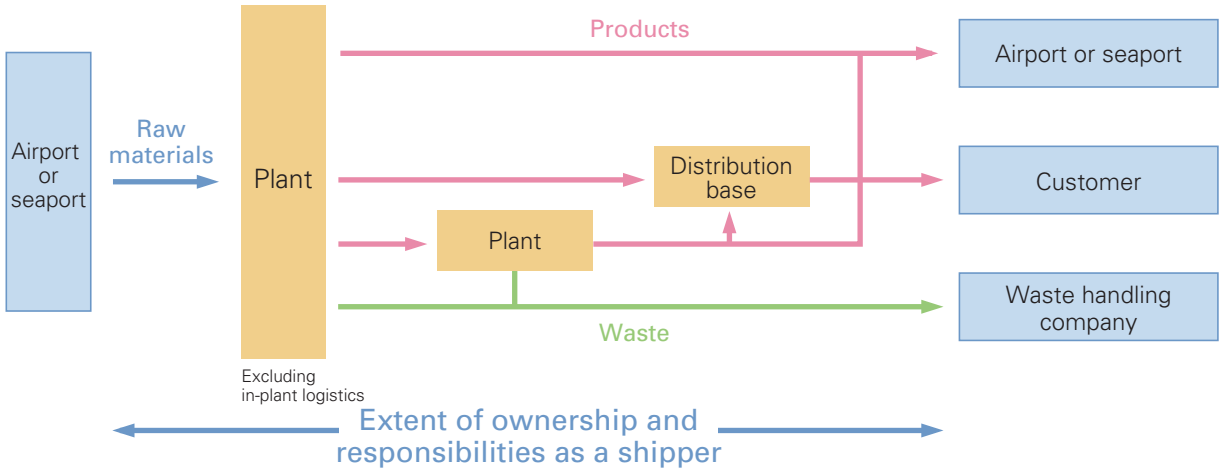
Total CO_2 emissions
(all YKK Group facilities in Japan and overseas)



Note: Based on the YKK Group's Greenhouse Gas (GHG) Calculation Rules, which require the most recent official conversion factor for CO_2/kWh be used (the factor changes to reflect market changes). The Group's CO_2 emissions in fiscal 2016 were down 14.3% compared with fiscal 2013.

Please see page 25 for the YKK Group Greenhouse Gas (GHG) Calculation Rules.

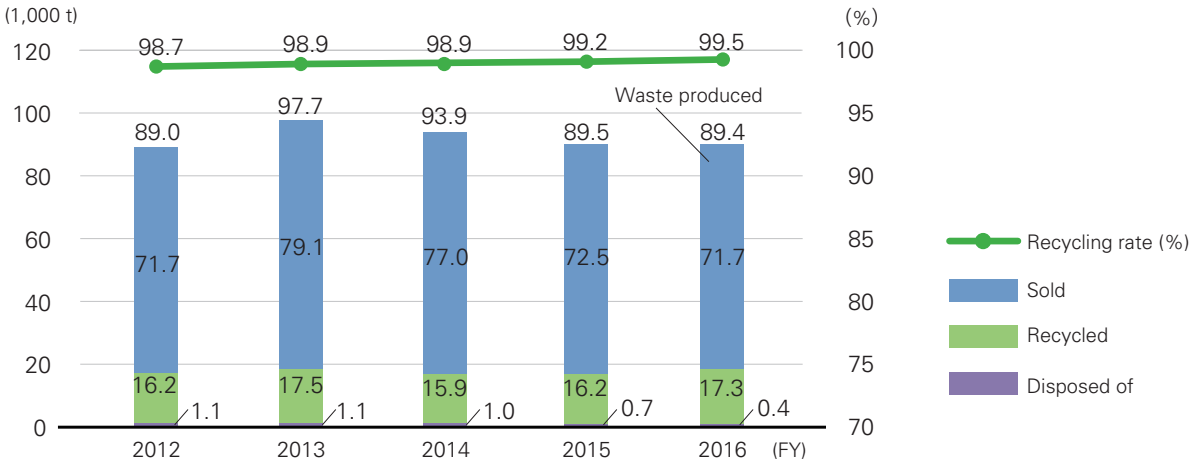
Extent of responsibility and results related to transportation amounts as a shipper



	Fiscal 2016	Specified shipper
YKK	12.38 million ton-km	No
YKK AP	185.84 million ton-km	Yes

Specified shipper: A company that consigns cargo transport of 30 million ton-km or more a year within its business operations

Changes in waste production and recycling rate (all YKK Group facilities in Japan)



Environmental data for YKK Group main production bases in Japan (fiscal 2016 results)

	Electric power (1,000 kWh)	Fuel (GJ)	CO_2 (t-CO_2)	Total emissions (t)	Amount recycled (t)	Recycling rate (%)	Amount of water used (1,000 m^3)
YKK Corporation Kurobe Plant	86,821	162,927	65,346	5,213	5,213	100.0	4,278
YKK Corporation Kurobe Makino Plant	29,508	22,764	19,968	1,864	1,864	100.0	780
YKK AP Inc. Kurobe Plant	99,490	493,494	95,328	17,483	17,483	100.0	4,598
YKK AP Inc. Kurobe Ekko Plant	18,161	27,415	12,824	3,765	3,765	100.0	523
YKK AP Inc. Kurobe Ogyu Plant	16,163	15,564	11,045	2,438	2,437	100.0	166
YKK AP Inc. Namerikawa Plant	12,858	26,322	11,046	2,713	2,696	99.4	160
YKK AP Inc. Tohoku Plant	80,138	232,430	59,324	19,078	18,874	98.9	3,014
YKK AP Inc. Shikoku Plant	45,039	179,669	38,817	8,378	8,378	100.0	770
YKK AP Inc. Kyushu Plant	48,431	168,101	35,559	10,074	10,042	100.0	1,847

Atmosphere

Equipment	Plant	Soot and dust [g/Nm^3]					Nitrogen oxides [ppm]				
		National emissions standard	Municipal agreed value	Voluntary emissions standard	Highest value measured in fiscal 2016	Assessment	National emissions standard	Municipal agreed value	Voluntary emissions standard	Highest value measured in fiscal 2016	Assessment
Boilers	Tohoku	0.25	0.20	0.19	0.046	Acceptable	230	230	225	83	Acceptable
	Kurobe	0.30	0.15	0.05	Below 0.01	Acceptable	180	160	100	80	Acceptable
	Shikoku	0.10	–	0.01	Below 0.0047	Acceptable	150	–	75	36	Acceptable
	Kyushu	0.30	–	0.020	Below 0.01	Acceptable	180	–	120	89	Acceptable
Foundry melting furnaces	Tohoku	0.30	0.10	0.09	0.029	Acceptable	200	200	195	63	Acceptable
	Kurobe	0.20	–	0.15	0.02	Acceptable	180	–	120	55	Acceptable
	Shikoku	0.20	–	0.02	0.006	Acceptable	200	–	100	66	Acceptable
	Kyushu	0.30	0.30	0.19	0.03	Acceptable	200	170	120	35	Acceptable
Foundry heat treatment furnaces	Tohoku	0.25	–	0.23	Below 0.001	Acceptable	160	160	155	120	Acceptable
Foundry holding furnaces	Kurobe	0.25	–	0.13	Below 0.01	Acceptable	180	–	130	95	Acceptable
	Shikoku	0.25	–	0.03	0.012	Acceptable	180	–	170	110	Acceptable
	Kyushu	0.20	0.01	0.008	Below 0.005	Acceptable	150	150	120	50	Acceptable
Extrusion heat treatment furnaces	Tohoku	0.25	–	0.23	Below 0.001	Acceptable	180	180	175	52	Acceptable
	Kurobe	0.20	–	0.1	Below 0.04	Acceptable	180	–	90	64	Acceptable
	Shikoku	0.20	–	0.02	0.0092	Acceptable	180	–	90	37	Acceptable
	Kyushu	0.2–0.25	0.03	0.02	Below 0.01	Acceptable	180	150	100	59	Acceptable
Surface treatment drying furnaces	Tohoku	0.25	–	0.23	0.001	Acceptable	230	230	225	41	Acceptable
	Kurobe	0.20	–	0.10	Below 0.01	Acceptable	230	–	50	38	Acceptable
	Shikoku	0.20	–	0.02	Below 0.0066	Acceptable	230	–	115	37	Acceptable
	Kyushu	0.20	0.01	0.008	Below 0.005	Acceptable	230	150	100	14	Acceptable

Water quality

Unit: mg/ℓ (except pH)

Item	Plant	National water emission standard	Prefectural water emission standard	Municipal agreed value	Voluntary management standard	Highest value measured in fiscal 2016	Assessment
pH	Tohoku	5.8~8.6*1	5.8~8.6*1	6.5~8.5	6.6~8.1	Min. 6.6 Max. 8.3	Acceptable (Exceeded the voluntary management standard)
	Saitama MADO (window)	5.8~8.6*1	5.8~8.6*1	–	6.1~8.3	Min. 6.9 Max. 7.4	Acceptable
	Kurobe	5.0~9.0*2	5.0~9.0*2	5.8~8.6*1	6.2~7.8	Min. 7.2 Max. 7.8	Acceptable
	Shikoku	5.8~8.6*1	5.8~8.6	–	6.0~8.4	Min. 6.9 Max. 7.7	Acceptable
	Kyushu	5.0~9.0*2	5.0~9.0	5.8~8.6	6.0~8.0	Min. 6.5 Max. 7.4	Acceptable
BOD	Tohoku	120*1	120	20	13.3	10.5	Acceptable
	Saitama MADO (window)	120*1	25	–	3.4	1.2	Acceptable
	Kurobe	120*1	20	15	4	5.9	Acceptable (Exceeded the voluntary management standard)
	Shikoku	120*1	30	–	20	17.0	Acceptable
COD	Kurobe	120*2	–	20	10	8.0	Acceptable
	Saitama MADO (window)	–	160	–	16	7.3	Acceptable
	Shikoku	120*2	25	–	15	13.2	Acceptable
	Kyushu	120*2	120	20	15	13.4	Acceptable
Suspended solids	Tohoku	150	150	20	4.1	4.0	Acceptable
	Saitama MADO (window)	150	60	–	6	3.9	Acceptable
	Kurobe	150	90	–	10	14.0	Acceptable (Exceeded the voluntary management standard)
	Shikoku	150	25	-	5	3.0	Acceptable
	Kyushu	150	30	20	9	3.0	Acceptable
Oil	Tohoku	5	5	1	1	0.5	Acceptable
	Saitama MADO (window)	5	5	–	–	Below 0.5	N/A
	Kurobe	5	–	3	Below 0.5	Below 0.5	Acceptable
	Shikoku	5	3	–	2	1.0	Acceptable
	Kyushu	5	5	5	1	0.8	Acceptable
Cyanide	Kurobe	1	–	–	Below 0.01	Below 0.01	Acceptable
Nitrogen	Saitama MADO (window)	–	120	–	30	33.3	Acceptable (Exceeded the voluntary management standard)
	Shikoku	–	60	–	25	17.3	Acceptable
	Kyushu	–	60	–	30	13.0	Acceptable
Phosphorus	Saitama MADO (window)	–	16	–	4	1.7	Acceptable
	Shikoku	–	8	–	0.8	0.08	Acceptable
	Kyushu	–	8	–	0.5	0.04	Acceptable
Hexavalent chromium compounds	Kurobe	0.5	–	0.1	Below 0.02	Below 0.02	Acceptable

* 1 Standard when discharging into rivers * 2 Standard when discharging into ocean

Groundwater inspections (Kurobe area)

	Substance	Unit	Environmental standard*	Measurement results Fiscal 2016	Assessment
Volatile organic compounds	Dichloromethane	mg/l	0.02 or less	Below 0.002	Acceptable
	Carbon tetrachloride	mg/l	0.002 or less	Below 0.0002	Acceptable
	1,1-Dichloroethylene	mg/l	0.02 or less	Below 0.002	Acceptable
	Cis-1,2-Dichloroethylene	mg/l	0.04 or less	Below 0.004	Acceptable
	1,1,1-Trichloroethane	mg/l	1 or less	Below 0.0005	Acceptable
	Trichloroethylene	mg/l	0.03 or less	Below 0.002	Acceptable
	Tetrachloroethylene	mg/l	0.01 or less	Below 0.0005	Acceptable
Heavy metals	Cadmium	mg/l	0.01 or less	Below 0.001	Acceptable
	Cyanide	mg/l	Not detected	Below 0.1	Acceptable
	Lead	mg/l	0.01 or less	Below 0.005	Acceptable
	Hexavalent chromium	mg/l	0.05 or less	Below 0.005	Acceptable
	Selenium	mg/l	0.01 or less	Below 0.002	Acceptable
	Fluorine	mg/l	0.8 or less	Below 0.1	Acceptable
	Boron	mg/l	1 or less	Below 0.1	Acceptable

* Environmental standard: Keeping the amount less than this standard is desirable for preservation of human health and protection of the human environment

Noise

Unit: db

Plant	Type	Prefectural standard	Municipal agreement on pollution control	Voluntary standard	Highest value measured in fiscal 2016	Assessment
Tohoku	Daytime (8:00 a.m. - 7:00 p.m.)	–	55	55	54.2	Acceptable
Tohoku	Morning (6:00 a.m. - 8:00 a.m.) Evening (7:00 p.m. - 10:00 p.m.)	–	50	50	49.5	Acceptable
Tohoku	Night-time (10:00 p.m. - 6:00 a.m.)	–	45	45	44.9	Acceptable
Kurobe	Daytime (8:00 a.m. - 7:00 p.m.)	70	60	60	59	Acceptable
Kurobe	Morning (6:00 a.m. - 8:00 a.m.) Evening (7:00 p.m. - 10:00 p.m.)	65	55	55	55	Acceptable
Kurobe	Night-time (10:00 p.m. - 6:00 a.m.)	63	50	50	50	Acceptable
Shikoku	Daytime (8:00 a.m. - 7:00 p.m.)	70	70	65	59	Acceptable
Shikoku	Morning (6:00 a.m. - 8:00 a.m.) Evening (7:00 p.m. - 10:00 p.m.)	65	65	60	56	Acceptable
Shikoku	Night-time (10:00 p.m. - 6:00 a.m.)	60	65	60	54	Acceptable

Note: The Kyushu Plant is outside the designated area

Dioxins

Equipment	Plant	Atmosphere (unit: ng/TEQ/m³N)		Assessment	Water quality (unit: pg-TEQ/m³N)		Assessment
		Emissions standard	Highest value measured in fiscal 2016		Emissions standard	Highest value measured in fiscal 2016	
Aluminum melting furnaces	Tohoku	5	0.00047	Acceptable	–	–	–
	Kurobe	5	0	Acceptable	–	–	–
	Shikoku	5	0.0004	Acceptable	–	–	–
	Kyushu	5	0.0093	Acceptable	–	–	–
Biomass boiler	Tohoku	5	0.039	Acceptable	–	–	–

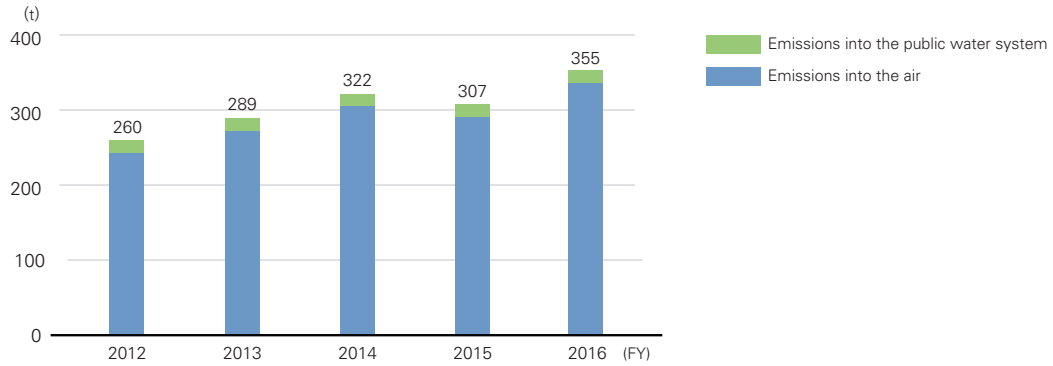
PRTR calculations (YKK Group main production bases in Japan)

Period: April 2016–March 2017 Unit: t (Dioxins: mg-TEQ)

Substance number	Substance	Volume handled	Atmospheric emissions	Public water emissions	Soil emissions (kg/y)	Landfill volume (kg/y)	Transfer amount to sewer system (kg/y)	Transfer amount (kg/y)	Consumption (kg/y)	Transformed amount (kg/y)
1	Zinc compounds (water-soluble)	3.18	0.00	0.03	0	0	0	0.00	0.58	2.51
31	Antimony	4.52	0.00	0.00	0	0	0	0.12	4.40	0.00
53	Ethylbenzene	36.04	34.64	0.00	0	0	0	0.02	0.00	1.38
80	Xylene	154.08	25.91	0.00	0	0	0	0.05	18.99	90.73
87	Chromium and trivalent chromium compounds	1.75	0.00	0.00	0	0	0	0.06	1.69	0.00
88	Hexavalent chromium	42.11	0.00	0.00	0	0	0	4.18	37.41	0.52
132	Cobalt and cobalt compounds	11.44	0.30	0.83	0	0	0	0.96	9.49	0.00
144	Inorganic cyanide compounds	27.60	0.06	0.03	0	0	0	0.25	5.08	22.19
232	N,N-dimethylformamide	172.44	172.44	0.00	0	0	0	0.00	0.00	0.00
258	Hexamethylenetetramine	1.37	0.00	0.00	0	0	0	1.14	0.21	0.02
259	Tetramethylthiuram disulfide	3.04	0.00	0.00	0	0	0	0.47	2.57	0.00
277	Triethylamine	9.40	7.87	1.47	0	0	0	0.00	0.06	0.00
296	1,2,4-Trimethylbenzene	103.28	1.82	0.00	0	0	0	0.01	6.66	94.79
300	Toluene	101.94	96.00	0.00	0	0	0	0.03	0.00	2.75
308	Nickel	284.59	0.00	0.08	0	0	0	277.36	3.80	0.00
309	Nickel compounds	27.69	0.00	2.15	0	0	0	2.48	23.06	0.00
355	Bis(2-ethylhexyl)phthalate	419.24	0.00	0.00	0	0	0	3.13	416.11	0.00
405	Boron compounds	14.98	0.06	10.72	0	0	0	2.25	1.95	0.00
412	Manganese and manganese compounds	359.50	0.00	0.00	0	0	0	308.27	26.92	0.00
438	Methylnaphthalene	127.36	0.69	0.00	0	0	0	1.08	0.00	125.59
448	Methylenebis (4,1-phenylene) diisocyanate	262.07	0.00	0.00	0	0	0	0.86	260.06	1.15
461	Triphenyl phosphate	9.14	0.00	0.00	0	0	0	0.00	9.14	0.00
243	Dioxins (mg-TEQ)	0.00	0.13	0.00	0	0	0	0.00	0.00	0.00

Notes: 1. Calculations for substances of which we handle 1 t or more per year (0.5 t or more per year for Class I Designated Chemical Substances, with the exception of dioxins) at our domestic plants
2. Consumption: the amount consumed as a raw material and the amount contained in products or the amount sold and recycled
3. Transformed amount: the amount that has been transformed into other substances by incineration, reactive processing and other methods

Emissions of PRTR Substances (excluding dioxin) (YKK Group main production bases in Japan)



Major overseas bases: environmental data

Region	Base	FY	CO_2 emission ($t\text{-}CO_2$/year)	Waste (t/year)	Water used (m^3/year)	Wastewater					Exhaust gas	
						Displacement (m^3/year)	BOD (mg/L: annual average)	COD (mg/L: annual average)	Cyanides (mg/L: annual average)	Chromium (mg/L: annual average)	NOx (kg/year)	SOx (kg/year)
North & Central America	YKK (U.S.A.) INC. Macon Plant	2016	29,602	1,697	371,563	349,739	190	168	N.D.	N.D.	28	93
		2015	30,739	1,779	382,885	345,256	190	127	N.D.	0.03	26	86
		2014	28,023	1,619	382,986	370,951	152	134	N.D.	0.03	177	90
		2013	27,742	1,771	369,804	351,018	130	179	N.D.	0.03	200	67
		2012	27,728	1,827	416,261	383,058	–	–	–	–	34	113
	YKK AP AMERICA INC. Dublin Plant	2016	25,454	2,914	220,784	176,627	49	–	N.D.	0.15	169	–
		2015	23,178	2,146	195,551	156,440	–	–	N.D.	0.14	160	–
		2014	23,216	1,986	211,578	169,262	–	–	N.D.	0.11	163	–
		2013	21,229	1,600	191,739	158,045	–	–	N.D.	0.05	196	–
		2012	20,690	1,579	163,454	130,763	–	–	N.D.	0.11	175	–
	YKK EL SALVADOR S.A. DE C.V.	2016	1,466	101	47,002	51,424	75	264	–	N.D.	563	–
		2015	1,540	137	53,802	42,510	77	233	–	0.02	597	–
		2014	1,544	145	62,202	51,054	74	214	–	0.01	586	–
		2013	1,599	118	68,769	55,015	66	159	–	0.02	587	–
		2012	1,496	163	64,489	–	84	224	–	N.D.	529	–
South America	YKK DO BRASIL LTDA. Fastening Plant	2016	1,808	852	74,377	56,214	142	267	0.12	N.D.	70	100
		2015	1,795	1,029	94,429	68,623	97	219	0.02	N.D.	83	156
		2014	1,841	1,196	111,814	106,994	84	211	0.02	N.D.	52	91
		2013	1,977	2,592	124,640	103,640	60	169	0.07	N.D.	62	87
		2012	2,309	1,301	149,746	148,477	73	164	0.28	0.09	–	–
	YKK ARGENTINA S.A.	2016	944	116	24,259	20,393	20	125	N.D.	N.D.	76	–
		2015	996	177	18,916	23,954	9	90	0.05	0.05	136	–
		2014	1,076	221	21,829	27,665	6	87	0.01	0.05	197	–
		2013	1,062	188	25,007	31,060	9	100	0.10	0.10	185	–
		2012	979	151	25,305	32,860	14	120	0.22	0.10	124	–
EMEA	YKK METAL VE PLASTIK, URUNLERI SANAYI VE TICARET A.S. Cerkezkoy Plant	2016	6,495	973	211,152	177,666	–	431	0.02	0.01	2,091	–
		2015	5,908	811	243,295	209,113	–	354	0.02	0.01	2,013	–
		2014	6,070	604	212,513	167,589	–	489	0.04	0.05	1,766	–
		2013	5,582	572	214,833	159,000	–	517	0.02	0.05	2,062	–
		2012	5,512	510	230,488	185,696	–	316	0.03	0.25	3,158	–
	YKK ITALIA S.P.A	2016	5,577	405	217,205	217,205	28	78	0.02	0.05	2,122	–
		2015	6,039	501	275,337	275,052	–	45	N.D.	N.D.	2,281	–
		2014	7,382	448	289,492	289,492	–	37	N.D.	N.D.	2,764	–
		2013	7,060	406	275,052	275,052	10	52	N.D.	N.D.	–	–
		2012	9,872	359	317,774	317,774	14	43	N.D.	N.D.	–	–
	YKK MEDITERRANEO S.P.A.	2016	6,648	1,060	104,800	97,375	32	49	0.01	–	2,250	–
		2015	6,686	1,113	97,100	89,560	26	43	0.02	–	2,103	–
		2014	7,811	1,161	111,720	104,149	46	64	0.02	–	2,118	–
		2013	7,233	1,155	117,510	105,952	63	76	0.01	–	1,968	–
		2012	6,798	1,147	103,440	94,645	39	71	0.01	–	1,862	–
China	SHANGHAI YKK ZIPPER CO., LTD. Minhang Plant	2016	21,377	1,907	501,404	440,283	–	125	–	–	600	–
		2015	21,852	1,624	581,630	487,009	–	170	–	–	596	–
		2014	21,770	1,513	640,027	455,697	–	299	–	–	3,422	–
		2013	23,067	1,543	632,744	487,099	–	290	–	–	3,445	–
		2012	22,861	1,236	609,119	547,787	–	301	–	–	4,049	–
	YKK AP (SUZHOU) CO., LTD.	2016	10,768	1,674	109,481	97,991	–	123	–	0.001	237	41
		2015	8,241	1,998	100,913	97,216	–	106	–	0.001	179	31
		2014	10,878	2,666	136,589	155,357	–	83	–	0.01	341	–
		2013	11,648	2,425	143,792	143,402	–	86	–	0.02	249	–
		2012	11,657	2,004	113,917	111,278	–	131	–	–	348	–
	DALIAN YKK ZIPPER CO., LTD.	2016	22,789	1,623	321,028	314,608	6	32	0.02	–	8,880	–
		2015	22,959	1,422	269,489	225,518	16	83	0.003	–	8,080	–
		2014	24,351	1,161	273,413	269,291	19	65	0.002	–	8,754	–
		2013	24,455	1,117	292,370	225,518	19	65	0.002	–	8,233	–
		2012	22,340	994	310,423	233,232	–	60	0.027	–	8,718	–
Asia	YKK VIETNAM CO., LTD.	2016	15,196	1,417	395,972	316,778	21	50	0.040	0.01	3,000	–
		2015	9,191	1,566	490,052	392,042	29	61	0.007	0.011	2,957	–
		2014	8,893	1,676	477,414	381,931	50	138	0.008	0.003	2,839	–
		2013	7,524	1,214	413,754	383,024	32	87	–	N.D.	2,292	–
		2012	5,899	911	292,385	163,477	57	178	–	N.D.	1,496	–
	PT.YKK ZIPPER INDONESIA	2016	15,982	1,151	363,276	201,385	17	57	0.006	0.021	154	111
		2015	15,261	2,090	369,321	169,551	24	82	0.006	0.014	193	139
		2014	18,711	991	319,878	215,302	39	87	0.006	0.006	197	142
		2013	19,656	1,150	322,829	322,829	25	58	0.010	N.D.	277	201
		2012	17,762	818	276,995	276,995	47	121	0.046	0.02	–	–
	YKK TAIWAN CO., LTD. Chung-Li Plant	2016	40,438	3,061	721,145	596,065	7	77	0.090	0.03	4,690	1,241
		2015	40,554	3,324	753,623	753,623	8	56	0.027	N.D.	5,004	2,784
		2014	42,405	3,436	900,069	900,069	6	55	N.D.	N.D.	7,026	2,691
		2013	43,716	3,295	882,263	882,263	5	85	N.D.	0.04	7,045	2,696
		2012	40,905	2,754	1,021,835	1,021,835	7	96	–	0.02	–	–

Overseas bases	Total volume	2016	527,904t	47,718t	10,288,000m^3	7,334,000m^3
	Unit volume*		163.8t-CO_2	14.8t	3,200m^3	2,300m^3
	Sales		322.3 billion yen			

* Per 100 million yen

Guidelines for Calculating and Reporting Fiscal 2016 GHG Emissions from YKK Group Bases in Japan

The YKK Group hereby establishes its guidelines to ensure the appropriate calculation and reporting of greenhouse gas (GHG) emissions from its bases in Japan. Specifically, the Group shall calculate its GHG emissions based on the Monitoring and Reporting Guidelines Ver. 4.2 of the Japanese Voluntary Emissions Trading Scheme (JVETS) announced on October 5, 2010, while also adopting benchmark figures set forth in Japan's Energy Conservation Law for the per-unit calorific value and CO_2 emission coefficient.
Detailed rules for calculating GHG emissions from the YKK Group's bases in Japan follow.

1. List the Group's bases of operations along with the outline of each base's business activities
2. List the scope of calculation, identify persons responsible for calculation and reporting, specify type of business activities and minor emission sources in a summary calculation table for each base
3. Prepare a calculation report for each base Formulas used for calculating CO_2 emissions are presented below.

3.1 Fuel usage
CO_2 emissions (t-CO_2) = fuel consumption (unit) × per-unit energy value (GJ/unit) × CO_2 emission coefficient (t-C/GJ) × 44/12

3.2 Use of electricity purchased from utilities
CO_2 emissions (t-CO_2) = electricity consumption (kWh) × CO_2 emission coefficient (t-CO_2/kWh)

3.3 Use of heat (hot or cold water) supplied by heat suppliers
CO_2 emissions (t-CO_2) = heat consumption (GJ) × CO_2 emission coefficient (t-CO_2/GJ)

3.4 Use of fuel recycled from waste (fuel oil produced from waste oil)
CO_2 emissions (t-CO_2) = oil consumption (kl) × CO_2 emission coefficient (t-CO_2/kl)

3.5 Emissions from industrial process
CO_2 emissions (t-CO_2) = Material consumption (t) × CO_2 emission coefficient of said material (t-CO_2/t)

Emission sources	List all bases of operations and facilities (including inactive facilities) during the fiscal year as subject to calculation.
	Assign a unique emission source number to each emission source as an individual unit of equipment. However, assign emission source numbers for gas cylinders used in industrial processes and CO_2 fire extinguishers by unit area. In addition, number transportation vehicles used within plant premises by type of fuel used.
Activity data	Base activity data on figures presented on purchasing slips and do not round up or down. However, figures for fuel consumption (presented in liters or kilograms) can be rounded up to the first decimal place when required by inhouse accounting systems. Total the CO_2 emissions from each base to obtain the emissions for the overall YKK Group, and round off the result to the nearest whole number.
Activity data of office facilities	In cases where the accurate assessment of activity data is not readily available, calculate such data from utility costs based on nationwide average unit prices.
Fuel	Calculate per-unit calorific value of fuel using benchmark figures stipulated by the Energy Conservation Law.
Gasoline and light oil	Vehicles used for sales activities and those used for external transportation are not subject to calculation. However, in cases where it is difficult to determine if vehicle use is restricted to in-plant transportation, such vehicles are included in the scope of calculation.
Waste oil	The CO_2 emission coefficient for fuel oil recycled from waste oil (and used interchangeably with Heavy Oil A) is 2.63 t-CO_2/kl as stipulated in Japan's Act on Promotion of Global Warming Countermeasures.
LPG	In cases where the volume of LPG consumption is recorded by the supplier in cubic meters, a coefficient for converting the volume into metric tons must be obtained from said supplier. However, if such a coefficient is not available, convert figures into metric tons using the coefficient in the Guidelines for Preparing Periodic Reports stipulated by the Energy Conservation Law.
Utility gas	To accurately assess the consumption of gaseous fuel, convert figures measured using utility gas meters into the volume of gas at a standard temperature. Based on data announced by Japan Meteorological Agency, this conversion is performed using annual average temperatures (rounded off to the nearest whole number) at each location, thereby adjusting the volume of gas consumption. Per-unit calorific value is based on figures listed in the Guidelines for Preparing Periodic Reports stipulated by the Energy Conservation Law.
Electricity	The CO_2 emission coefficient for electricity is based on each utility's actual emission coefficient announced by the Ministry of the Environment. In cases where figures for the fiscal year under review are not available, use the most recent available fiscal year figures.
Industrial process	Subject to calculation
Biomass	Although listed as an emission source, biomass is excluded from calculation because it is deemed to be "carbon neutral."
Minor emission sources	Minor emission sources defined by JVETS guidelines can be excluded from calculation. These sources include: 1) Sources of emissions that account for less than 0.1% of the total emissions from the plant or office facility. 2) Sources of emissions smaller than the following figures: A plant or office facility whose emissions amount to 1,000 t-CO_2 or more: 10 t-CO_2 A plant of office facility whose emissions amount to less than 1,000 t-CO_2: 1 t-CO_2
	Minor emission sources may include LPG gas cylinders for hot-water supply systems, CO_2 and acetylene gas cylinders, emergency power generation systems, fire extinguishing pumps, CO_2 fire extinguishing systems and equipment. They can be listed on calculation reports when meeting any of the above-mentioned criteria.

4. Consolidate reports of each base into the YKK Group Calculation Report.
5. Personnel in charge of calculation
   - Whenever persons in charge of either the preparation or the authorization of reports are changed, new persons must be appointed and trained appropriately.
   - Persons in charge of the preparation of Periodic Reports stipulated by the Energy Conservation Law appointed at Designated Energy Management Factories shall concurrently serve as persons either in charge of the preparation or the authorization of the above report.