Environmental Data by Location (main domestic Group members)

Akebono Brake Yamagata Manufacturing Co., Ltd. Production item: Disc brake pads and Clutch facings

Acquired the ISO14001 certification in March 2000

◆ **Air**
(Air Pollution Control Law and Prefectural ordinances)

Substances	Unit	Standard	FY2016		FY2017	
		Regulatory Limit	Maximum Emissions	Average Emissions	Maximum Emissions	Average Emissions
Dust and soot	g/m³N	0.1	0.032	0.026	0.016	0.015
NOx	ppm	950	760	755	920	775
SOx	m³N/h	7.91	—	0.7	—	0.7

◆ **Water**
(Water Pollution Control Law and Prefectural ordinances)

Substances	Unit	Average Daily Emissions during Operative Period	Average Daily Emissions	FY2016		FY2017	
				Maximum Emissions	Average Emissions	Maximum Emissions	Average Emissions
pH	—	5.8～8.6	—	7.3	7.0	7.2	7.1
BOD	mg/l	25	20	6.8	3.8	4.8	2.1
Suspended solids	mg/l	60	50	4.2	3.0	9.8	4.5
Oil (n-hexane extract)	mg/l	5	—	4.5	2.0	4.4	2.5
Colon bacilli	Number/cm³	—	3,000	—	1,700	—	0
Ammonia, ammonium compound, nitrite and nitrates	mg/l	100	—	10	5.5	18	4.3

◆ Emission Volume of PRTR Designated Chemical Substances

Unit: kg/Year

Name of Substance	Amount Handled		Amount Emitted				Amount Transported				Amount Removed through Proper Removal Methods		Amount Consumed (Attached to Products)	
			Atmosphere		Rivers		Landfill		Recycled					
	FY2016	FY2017	FY2016	FY2017	FY2016	FY2017	FY2016	FY2017	FY2016	FY2017	FY2016	FY2017	FY2016	FY2017
Antimony and its compounds	24,300	22,700	0	0	0	0	0	0	2,900	2,700	0	0	21,400	20,000
Xylene	7,900	8,300	500	100	0	0	0	0	0	0	7,400	8,200	0	0
Chromium and Trivalent chromium compounds	8,900	15,500	0	0	0	0	0	0	1,100	1,900	0	0	7,800	13,600
Hexamethylene tetramine	57,400	58,100	0	0	0	0	0	0	6,900	7,000	50,500	51,100	0	0
Triethylamine	1,400	1,400	0	1,400	0	0	0	0	0	0	1,400	0	0	0
Toluene	3,700	2,700	3,700	2,700	0	0	0	0	0	0	0	0	0	0
Phenol	13,500	13,600	0	0	0	0	0	0	1,600	1,600	11,900	12,000	0	0
Manganese and its compounds	8,600	7,800	0	0	0	0	0	0	1,000	900	0	0	7,600	6,900
Molybdenum and its compounds	4,200	4,700	0	0	0	0	0	0	500	600	0	0	3,700	4,100
Total	129,900	134,800	4,200	4,200	0	0	0	0	14,000	14,700	71,200	71,300	40,500	44,600

Environmental Data by Location (main domestic Group members)

Akebono Brake Fukushima Manufacturing Co., Ltd. Production item: Drum brake linings, Disc brake pads and clutch facings

Acquired the ISO14001 certification in March 2000

◆ **Air**
(Air Pollution Control Law and Prefectural ordinances)

Substances	Unit	Standard	FY2016		FY2017	
		Regulatory Limit	Maximum Emissions	Average Emissions	Maximum Emissions	Average Emissions
Dust and soot	g/m³N	—	0.008	0.008	0.078	0.036
NOx	ppm	—	50	39	51	44
SOx	m³N/h	0.87	0.005	0.0043	0.006	0.0043

◆ **Water**
(Water Pollution Control Law and Prefectural ordinances)

Substances	Unit	Average Daily Emissions during Operative Period	Average Daily Emissions	FY2016		FY2017	
				Maximum Emissions	Average Emissions	Maximum Emissions	Average Emissions
pH	—	5.8〜8.6	—	7.4	7.2	7.5	7.0
BOD	mg/l	40	—	2.4	1.6	2.2	1.5
Suspended solids	mg/l	70	—	19	11	20	11
Oil (n-hexane extract)	mg/l	10	—	less than 1.0	less than 1.0	less than 1.0	less than 1.0

◆ Emission Volume of PRTR Designated Chemical Substances

Unit: kg/Year

Name of Substance	Amount Handled		Amount Emitted				Amount Transported				Amount Removed through Proper Removal Methods		Amount Consumed (Attached to Products)	
			Atmosphere		Rivers		Landfill		Recycled					
	FY2016	FY2017	FY2016	FY2017	FY2016	FY2017	FY2016	FY2017	FY2016	FY2017	FY2016	FY2017	FY2016	FY2017
Antimony and its compounds	48,200	44,400	0	0	0	0	0	0	7,200	6,600	0	0	41,000	37,800
Chromium and Trivalent chromium compounds	19,000	16,900	0	0	0	0	0	0	2,900	2,500	0	0	16,100	14,400
Hexamethylene tetramine	51,500	45,500	0	0	0	0	0	0	4,000	3,200	47,500	42,300	0	0
Toluene	3,800	3,100	3,800	3,100	0	0	0	0	0	0	0	0	0	0
Phenol	14,600	12,700	0	0	0	0	0	0	1,100	900	13,500	11,800	0	0
Molybdenum and its compounds	3,100	3,300	0	0	0	0	0	0	400	500	0	0	2,700	2,800
Boron compounds	1,800	1,600	0	0	0	0	0	0	300	200	0	0	1,500	1,400
Other	9,100	8,900	0	0	0	0	0	0	1,200	1,100	0	0	7,900	7,800
Total	151,100	136,400	3,800	3,100	0	0	0	0	17,100	15,000	61,000	54,100	69,200	64,200

Figures presented above exclude substances for which the annual handling volume is less than 1 ton. However, nickel compounds and other substances designated as Class I specified compounds are included, if their annual handling volume amounts to 500 kg or more.

Environmental Data by Location (main domestic Group members)

Akebono Brake Iwatsuki Manufacturing Co., Ltd. Production items: Disc brakes, Drum brakes and Bullet train disc brakes

Acquired the ISO14001 certification in March 2002

◆Air
(Air Pollution Control Law and Prefectural ordinances)

Substances	Unit	Standard	FY2016		FY2017	
		Regulatory Limit	Maximum Emissions	Average Emissions	Maximum Emissions	Average Emissions
Dust and soot	g/m³N	0.3	Not applicable, since heavy oil-fed boilers have been abolished.		Not applicable, since heavy oil-fed boilers have been abolished.	
NOx	ppm	180				
SOx	m³N/h	0.95				

◆Water
(Water Pollution Control Law and Prefectural ordinances)

Substances	Unit	Average Daily Emissions during Operative Period	Average Daily Emissions	Maximum Emissions	Average Emissions	Maximum Emissions	Average Emissions
pH	—	5.8〜8.6	—	7.3	7.2	7.6	7.3
BOD	mg/l	25	20	24	15	22	12
COD	mg/l	—	—	28	15.2	25	14.6
Suspended solids	mg/l	60	50	12	5.8	10	3.0
Oil (n-hexane extract)	mg/l	5	—	Not detected	Not detected	Not detected	Not detected
Total nitrogen	mg/l	120	60	58	40	59	50
Total phosphorus	mg/l	16	—	1.5	0.4	0.4	0.2
Colon bacilli	Number/cm³	—	3,000	730	218	1,770	201
Total chromium	mg/l	2	—	Not detected	Not detected	Not detected	Not detected
Fluorine	mg/l	8	—	Not detected	Not detected	Not detected	Not detected
Zinc	mg/l	2	—	0.9	0.4	0.7	0.4

◆ Emission Volume of PRTR Designated Chemical Substances

Unit: kg/Year

Name of Substance	Amount Handled		Amount Emitted				Amount Transported				Amount Removed through Proper Removal Methods		Amount Consumed (Attached to Products	
			Atmosphere		Rivers		Landfill		Recycled					
	FY2016	FY2017	FY2016	FY2017	FY2016	FY2017	FY2016	FY2017	FY2016	FY2017	FY2016	FY2017	FY2016	FY2017
Nickel compounds	10,800	13,300	0	0	0	0	0	0	5,900	7,100	0	0	4,900	6,200
Total	10,800	13,300	0	0	0	0	0	0	5,900	7,100	0	0	4,900	6,200

Figures presented above exclude substances for which the annual handling volume is less than 1 ton. However, nickel compounds and other substances designated as Class I specified compounds are included, if their annual handling volume amounts to 500 kg or more.
In step with the enactment of the Sixth Total Emission Control Standards, regulatory limits for emissions at the Hanyu facilities (total nitrogen and total phosphorus) and Iwatsuki facilities (COD, total nitrogen and total phosphorus) were revised.
Accordingly, regulatory limits presented above are as of fiscal 2009.

Environmental Data by Location (main domestic Group members)

Akebono Brake Industry Co., Ltd. Headquarters (Hanyu-City, Saitama Prefecture)

Acquired the ISO14001 certification in March 2003

◆Air
(Air Pollution Control Law and Prefectural ordinances)

Substances	Unit	Standard: Regulatory Limit	FY2016: Maximum Emissions	FY2016: Average Emissions	FY2017: Maximum Emissions	FY2017: Average Emissions
Dust and soot	g/m³N	0.05	less than 0.001	less than 0.001	less than 0.001	less than 0.001
NOx	ppm	600	195	192	196	189
SOx	m³N/h	0.63	—	—	—	—

◆Water
(Water Pollution Control Law and Prefectural ordinances)

Substances	Unit	Standard: Average Daily Emissions during Operative Period	Standard: Average Daily Emissions	FY2016: Maximum Emissions	FY2016: Average Emissions	FY2017: Maximum Emissions	FY2017: Average Emissions
pH	—	5.8〜8.6	—	8.1	7.8	8.3	7.0
BOD	mg/l	25	20	0.5	0.5	1.7	0.5

Akebono Brake Industry Co., Ltd. Tatebayashi Foundry Production item: Casting parts for brakes

Acquired the ISO14001 certification in March 2010

◆Air
(Air Pollution Control Law and Prefectural ordinances)

Substances	Unit	Standard: Regulatory Limit	FY2016: Maximum Emissions	FY2016: Average Emissions	FY2017: Maximum Emissions	FY2017: Average Emissions
Dust and soot	g/m³N	0.2	—	less than 0.0009	—	less than 0.0009

Environmental Data by Location (main domestic Group members)

Akebono Brake Sanyo Manufacturing Co., Ltd. Kibi Daiichi Plant Production items: Drum brakes

Acquired the ISO14001 certification in May 2001

Akebono Brake Sanyo Manufacturing Co., Ltd. Kibi Daini Plant Production items: Wheel cylinders

Acquired the ISO14001 certification in March 2003

◆Air
(Air Pollution Control Law and Prefectural ordinances)

Substances	Unit	Standard	FY2016		FY2017	
		Regulatory Limit	Maximum Emissions	Average Emissions	Maximum Emissions	Average Emissions
Dust and soot	g/m³N	—	—		—	
NOx	ppm	—				
SOx	m³N/h	—				

◆Water
(Pollution Control Agreement in Soja city)

Substances	Unit	Maximum Daily Emissions during Operative Period	Average Daily Emissions	FY2016 Maximum Emissions	FY2016 Average Emissions	FY2017 Maximum Emissions	FY2017 Average Emissions
pH	—	—	6.0〜8.0	7.8	7.6	7.8	7.6
BOD	mg/l	15	6	1.4	0.5	1.5	0.2
COD	mg/l	15	8	7.9	3.5	4.2	3.2
Suspended solids	mg/l	30	10	3.0	0.8	3.0	1.5
Oil (n-hexane extract)	mg/l	2	1	0	0	0	0
Total nitrogen	mg/l	5	3	1.5	0.88	2.5	1.1
Total phosphorus	mg/l	2	2	0.16	0.07	0.2	0.1
Colon bacilli	Number/cm³	—	—	0	0	0	0

◆ Emission Volume of PRTR Designated Chemical Substances

Unit: kg/Year

Name of Substance	Amount Handled		Amount Emitted				Amount Transported				Amount Removed through Proper Removal Methods		Amount Consumed (Attached to Products)	
			Atmosphere		Rivers		Landfi ll		Recycled					
	FY2016	FY2017	FY2016	FY2017	FY2016	FY2017	FY2016	FY2017	FY2016	FY2017	FY2016	FY2017	FY2016	FY2017
Chlorobenzene	2,090	2,000	2,090	2,000	0	0	0	0	0	0	0	0	0	0
Toluene	1,860	1,900	1,860	1,900	0	0	0	0	0	0	0	0	0	0
Total	3,950	3,900	3,950	3,900	0	0	0	0	0	0	0	0	0	0