

# Data on KUBOTA Domestic Production Plants and Offices

Item	Unit	Hanshin plant (Mukogawa)	Hanshin plant (Amagasaki)	Hanshin plant (Shin-yodogawa factory)	Keiyo plant (Funabashi)	Keiyo plant (Ichikawa)	Hirakata plant	Okajima plant	Sakai plant	Sakai Rinkai plant	Utsunomiya plant	Tsukuba plant	Kyuhoji business center	Ryugasaki plant	Shiga plant																											
<b>INPUT</b>																																										
Energy	Electricity	10,000 kWh	4,487	447,392	2,919	291,014	242	23,330	5,049	486,819	662	65,970	5,229	510,908	6,756	656,124	3,626	354,191	1,889	184,018	835	82,248	3,530	344,740	248	24,333	356	35,453	371	35,855												
	Coal/Coke	t	12,193	367,022	0	0	0	0	24,728	744,298	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0											
	Town gas	1,000 m <sup>3</sup>	4,439	182,460	3,531	145,145	0	0	2,284	93,870	0	0	4,971	204,296	1,816	74,642	2,563	105,331	872	35,849	1,032	42,404	2,455	100,902	182	7,472	259	10,647	889	36,538												
	Kerosene	kL	4,543	166,741	8	302	161	5,920	12,223	448,589	19	713	142	5,215	2	81	0	0	0	0	573	21,028	1,047	38,409	17	624	26	948	0	0												
	Light oil	kL	0	0	0	0	16	610	189	7,236	45	1,736	528	20,186	88	3,350	805	30,747	1,229	46,948	0	0	0	0	0	0	3	122	0	0												
	Heavy oil, LPG, etc.			794		1,807		241		20,282				18		138		30,728		3,786		0		0		1,236		470		0												
	Total			1,164,409		438,267		30,101		1,801,095				70,580				740,623		620,998		270,601		145,681		484,051		33,665		47,639		72,393										
Water usage	10,000 m <sup>3</sup>	97.5	21.2	2.6	127.8	1.7	21.1	17.4	15.4	6.1	28.5	18.4	1.3	3.1	31.5																											
<b>OUTPUT</b>																																										
CO <sub>2</sub> emission	t-CO <sub>2</sub>	76,131	17,864	1,318	136,364	2,818	30,693	55,578	22,476	12,014	6,755	21,159	1,376	1,998	3,170																											
Atmospheric exhaust gas	Main smoke and soot generating facilities		Melting furnaces				Heating furnaces				Drying furnaces				Melting furnaces				Heating furnaces				Melting furnaces				Drying furnaces				Boilers				Boilers				Boilers			
	SOx	Regulation of volume and K-value regulation: m <sup>3</sup> /h	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value								
	NOx	Regulation of volume: m <sup>3</sup> /h, Concentration regulation: ppm	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value								
	Soot and dust	g/m <sup>3</sup> N	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value	Regulation value	Measured value								
Drainage	Public water areas	pH	Regulated value	Measured value	Regulated value	Measured value	Regulated value	Measured value	Regulated value	Measured value	Regulated value	Measured value	Regulated value	Measured value	Regulated value	Measured value	Regulated value	Measured value	Regulated value	Measured value	Regulated value	Measured value	Regulated value	Measured value	Regulated value	Measured value	Regulated value	Measured value	Regulated value	Measured value	Regulated value	Measured value	Regulated value	Measured value								
		BOD	mg/L	30	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—								
		COD	mg/L	20	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—								
		Nitrogen	mg/L	40	4.50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—								
		Phosphorus	mg/L	1	ND	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—								
		Hexavalent chromium	mg/L	0.35	ND	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—								
		Lead	mg/L	0.1	ND	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—								
		Regulation value of COD volume	kg/day	113	12.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—								
	Regulation value of nitrogen volume	kg/day	110	16.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—									
	Regulation value of phosphorus volume	kg/day	14	0.208	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—									
	Sewerage	pH	Regulated value	Measured value	Regulated value	Measured value	Regulated value	Measured value	Regulated value	Measured value	Regulated value	Measured value	Regulated value	Measured value	Regulated value	Measured value	Regulated value	Measured value	Regulated value	Measured value	Regulated value	Measured value	Regulated value	Measured value	Regulated value	Measured value	Regulated value	Measured value	Regulated value	Measured value	Regulated value	Measured value	Regulated value	Measured value								
		BOD	mg/L	300	3	300	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—								
		COD	mg/L	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—								
SS		mg/L	300	2	300	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—									
Waste		Volume of discharge	t	12,840	3,397	947	28,422	164	5,095	33,336	1,246	890	265	2,086	324	253	673																									
Resource recovery rate	%	98	100	83	99	99	99	100	100	97	99	100	98	100	98																											

## Results of PRTR Reporting (All numerals after the first 2 digits are rounded off) Unit: kg/year (dioxins: mg-TEQ/year)

Name of plant or office	Name of substance	Number specified in Cabinet Order	Release volume					Transfer volume	
			Atmosphere	Public water areas	Soil	On-site landfills	Sewerage	Transfers to off-site	
Hanshin plant (Mukogawa)	Ethylbenzene	40	3,100	0	0	0	0	61	
	Xylene	63	7,000	0	0	0	0	90	
	1, 3, 5-trimethylbenzene	224	1,800	0	0	0	0	0	
	Toluene	227	53,000	0	0	0	0	1,500	
	Lead and its compounds	230	0	0	0	0	0	7,800	
	Nickel	231	3.2	0	0	0	0	120	
	Phenol	266	0	0	0	0	0	0	
Hanshin plant (Marushima)	Ethylbenzene	40	6,800	0	0	0	0	0	
	Xylene	63	22,000	0	0	0	0	0	
	Toluene	227	31,000	0	0	0	0	0	
	Nickel	231	0.7	0	0	0	0	16	
Hanshin plant (Amagasaki)	Chromium and chromium (III) compounds	68	0	0	0	0	0	3,000	
	Toluene	227	1,900	0	0	0	0	0	
	Nickel	231	3.0	0	0	0	0	110	
	Boron and its compounds	304	0	0	0	0	0	1,500	
	Manganese and its compounds	311	0.7	0	0	0	0	9,000	
Hanshin plant (Nagasu)	Molybdenum and its compounds	346	0	0	0	0	0	0	
	Ethylbenzene	40	2,000	0	0	0	0	0	
Shin-yodogawa factory	Xylene	63	2,500	0	0	0	0	0	
	Toluene	227	2,900	0	0	0	0	0	
	Bisphenol A type epoxy resin (liquid)	30	0	0	0	0	0	0	
	Xylene	63	1,800	0	0	0	0	0	
	Cobalt and its compounds	100	0	0	0	0	0	140	
	Styrene	177	11,000	0	0	0	0	0	

Name of plant or office	Name of substance	Number specified in Cabinet Order	Release volume					Transfer volume	
			Atmosphere	Public water areas	Soil	On-site landfills	Sewerage	Transfers to off-site	
Keiyo plant (Funabashi)	Ethylbenzene	40	40,000	0	0	0	0	0	
	Xylene	63	69,000	0	0	0	0	0	
	Chromium and chromium (III) compounds	68	0	0	0	0	0	390	
	Toluene	227	120,000	0	0	0	0	0	
	Lead and its compounds	230	0	0	0	0	0	15,000	
	Nickel	231	0	0	0	0	0	24	
	Phenol	266	0	0	0	0	0	0	
	Manganese and its compounds	311	0	0	0	0	0	25,000	
	Ethylbenzene	40	12,000	0	0	0	0	0	
	Xylene	63	51,000	0	0	0	0	0	
Keiyo plant (Ichikawa)	Toluene	227	12,000	0	0	0	0	0	
	Xylene	63	1,800	0	0	0	0	0	
Keiyo plant (Gyotoku processing center)	Manganese and its compounds	311	0	0	0	0	0	50	
	Ethylbenzene	40	1,100	0	0	0	0	7,500	
Hirakata plant	Xylene	63	1,900	0	0	0	0	16,000	
	Chromium and chromium (III) compounds	68	0	0	0	0	0	14,000	
	Cobalt and its compounds	100	0	0	0	0	0	0	
	1, 3, 5-trimethylbenzene	224	64	0	0	0	0	420	
	Toluene	227	2,200	0	0	0	0	16,000	
	Lead and its compounds	230	0	0	0	0	0	2,700	
	Nickel	231	0	0	0	0	0	11	
	Boron and its compounds	304	0	0	0	0	0	0	
	Manganese and its compounds	311	0	0	0	0	0	12,000	
	Molybdenum and its compounds	346	0	0	0	0	0	0	

Name of plant or office	Name of substance	Number specified in Cabinet Order	Release volume					Transfer volume	
			Atmosphere	Public water areas	Soil	On-site landfills	Sewerage	Transfers to off-site	
Okajima plant	Bisphenol A type epoxy resin (liquid)	30	0	0	0	0	0	1,700	
	Ethylbenzene	40	1,700	0	0	0	0	570	
	Xylene	63	13,000	0	0	0	0	4,300	
	Chromium and chromium (III) compounds	68	0	0	0	0	0	9,200	
	Phenol	266	0	0	0	0	0	0	
	Manganese and its compounds	311	0	0	0	0	0	33,000	
	Water-soluble zinc compounds	1	0	0	0	0	0	14	
Sakai plant	2-aminoethanol	16	0	0	0	0			



# Data on KUBOTA Domestic Production Subsidiaries

Item	Unit	Kubota-C.I. (Sakai)	Kubota-C.I. (Odawara)	Kubota-C.I. (Tochigi)	Kubota Air Conditioner (Tochigi)	Kubota Precision Machinery	Nippon Plastic Industry (Head office and plant)
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## INPUT

Energy		Unit	Kubota-C.I. (Sakai)		Kubota-C.I. (Odawara)		Kubota-C.I. (Tochigi)		Kubota Air Conditioner (Tochigi)		Kubota Precision Machinery		Nippon Plastic Industry (Head office and plant)	
			Volume of use	Calorific conversion (GJ)	Volume of use	Calorific conversion (GJ)	Volume of use	Calorific conversion (GJ)	Volume of use	Calorific conversion (GJ)	Volume of use	Calorific conversion (GJ)	Volume of use	Calorific conversion (GJ)
	Electricity	10,000 kWh	3,354	325,116	3,031	293,857	711	68,457	217	21,585	1,242	120,757	1,086	103,355
	Coal/Coke	t	0	0	0	0	0	0	0	0	0	0	0	0
	Town gas	1,000 m <sup>3</sup>	197	8,079	39	1,591	0	0	167	6,866	877	36,043	81	3,342
	Kerosene	kL	24	895	0	0	4	153	3	106	2	83	1	53
	Light oil	kL	0	0	39	1,508	19	734	0	0	10	390	0	0
	Heavy oil, LPG, etc.			1,347		220		144,380		1,459		583		533
	Total			335,437		297,176		213,725		30,017		157,855		107,283

<b>Water usage</b>	10,000 m <sup>3</sup>	5.0	36.9	31.9	6.9	2.0	17.5
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## OUTPUT

<b>CO<sub>2</sub> emission</b>	t-CO <sub>2</sub>	12,498	11,747	12,771	1,280	6,316	5,094
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Atmospheric exhaust gas	Main smoke and soot generating facilities			Diesel engines			Boilers			-			-			
	Unit	Regulation content	Regulated value	Measured value	Regulation content	Regulated value	Measured value	Regulation content	Regulated value	Measured value	Regulation content	Regulated value	Measured value	Regulation content	Regulated value	Measured value
SOx	Regulation of volume and K-value regulation: m <sup>3</sup> /h							K-value regulation	2.6	1.1	K-value regulation	2.3	0.059			
NOx	Regulation of volume: m <sup>3</sup> /h, Concentration regulation: ppm							Concentration regulation	950	720	Concentration regulation	180	100			
Soot and dust	g/m <sup>3</sup> N							Concentration regulation	0.1	0.012	Concentration regulation	0.3	0.005			
		No smoke and soot generating facilities			No smoke and soot generating facilities									No smoke and soot generating facilities		

Drainage	Public water areas	Unit	Regulated value		Measured value		Regulated value		Measured value		Regulated value		Measured value		Regulated value		Measured value	
			Regulation content	Regulated value	Measured value	Regulation content	Regulated value	Measured value	Regulation content	Regulated value	Measured value	Regulation content	Regulated value	Measured value	Regulation content	Regulated value	Measured value	
	pH	—	—	—	5.8—8.6	7.9	5.8—8.6	8.1	5.8—8.6	7.5	—	—	—	—	5.8—8.6	7.3		
	BOD	mg / L	—	—	60	ND	20	1.4	30	3.6	—	—	—	160	ND			
	COD	mg / L	—	—	60	ND	—	—	30	—	—	—	—	160	1.1			
	Nitrogen	mg / L	—	—	120	0.2	60	0.95	20	—	—	—	—	120	—			
	Phosphorus	mg / L	—	—	16	0.07	8	0.16	2	—	—	—	—	16	—			
	Hexavalent chromium	mg / L	—	—	0.5	ND	0.1	ND	0.1	ND	—	—	—	0.5	—			
	Lead	mg / L	—	—	0.1	ND	0.1	ND	0.1	ND	—	—	—	0.1	ND			
	Regulation value of COD volume	kg/day	—	—	—	—	—	—	—	—	—	—	—	—	—			
	Regulation value of nitrogen volume	kg/day	—	—	—	—	—	—	—	—	—	—	—	—	—			
	Regulation value of phosphorus volume	kg/day	—	—	—	—	—	—	—	—	—	—	—	—	—			
	Sewerage	pH	—	5.7—8.7	7.5	—	—	—	—	—	—	—	—	—	—	—		
		BOD	mg / L	300	1	—	—	—	—	—	—	—	—	—	—	—		
		COD	mg / L	—	3	—	—	—	—	—	—	—	—	—	—	—		
		SS	mg / L	300	ND	—	—	—	—	—	—	—	—	—	—	—		

<b>Waste</b>	Volume of discharge	t	146	152	199	169	491	62
	Resource recovery rate	%	100	100	99	100	98	94

## Results of PRTR Reporting

(All numerals after the first 2 digits are rounded off) Unit: kg/year (dioxins: mg-TEQ/year)

Name of plant or office	Name of substance	Number specified in Cabinet Order	Release volume				Transfer volume	
			Atmosphere	Public water areas	Soil	On-site landfills	Sewerage	Transfers to off-site
Kubota-C.I. (Sakai)	Xylene	63	0.7	0	0	0	0	25
	Organotin compounds	176	8.8	0	0	0	0	0
	Toluene	227	15	0	0	0	0	0.9
Kubota-C.I. (Odawara)	Lead and its compounds	230	17	0	0	0	0	0
	Organotin compounds	176	10	0	0	0	0	1.0
Kubota-C.I. (Tochigi)	Lead and its compounds	230	35	0	0	0	0	37
	Lead and its compounds	230	0	0	0	0	0	300
Kubota-C.I. (Ishizu-nishi factory)	Lead and its compounds	230	1.4	0	0	0	0	0
Kubota Air Conditioner (Tochigi)	Xylene	63	1,300	0	0	0	0	340
	Toluene	227	1,000	0	0	0	0	280
Nippon Plastic Industry (Head office and plant)	Lead and its compounds	230	0	0	0	0	0	90