

# Kyocera Group Site Information

## Kyocera Corporation Kagoshima Sendai Plant



### Profile

Location	1810 Taki-cho, Satsumasendai, Kagoshima
Products manufactured	Ceramic components, electronic devices, semiconductor components, cutting tools, etc.
Number of employees	3,360
Land area	180,652m <sup>2</sup>
Total floor space	140,519m <sup>2</sup>

### Environmental Performance

Items	Units		FY 2006		FY 2007	
	Amount	Specific consumption	Amount	Specific consumption	Amount	Specific consumption
Electricity	kWh	kWh/M Yen	186,724,249	2,337	191,018,238	2,154
Fuel (LPG, kerosene, diesel fuel)	kℓ (crude-oil based)	kℓ/M Yen	12,925	0.16	11,892	0.13
CO <sub>2</sub>	t-CO <sub>2</sub>	t-CO <sub>2</sub> /M Yen	101,872	1.09	97,290	0.98
Water	m <sup>3</sup>	m <sup>3</sup> /M Yen	1,578,319	18.9	1,526,729	16.5
Industrial waste emissions	kg	kg/M Yen	1,805,820	21.6	1,814,850	19.7
Effluent	m <sup>3</sup>	m <sup>3</sup> /M Yen	2,079,082	24.0	2,106,677	23.2

#### Comments

Our electricity consumption increased due to the installation of a high-efficiency turbo refrigerator but we were able to reduce our fuel consumption. We also reduced CO<sub>2</sub> emissions.  
As for industrial waste disposals, the amount increased but we improved our specific consumption per net sales by installing a fluoride nitric acid waste liquid treatment system and a CVD waste liquid treatment system.  
We improved our specific consumption per net sales for all items compared to the last year.

### Air related

Items	Facility	Legal standard	Internal criteria	Self-management standard	Performance for FY 2007		
					Ave	Max	Measurement frequency
Soot and dust (g/Nm <sup>3</sup> )	Firing oven (GF oven No. 2)	0.25	0.20	0.19	<0.005	<0.005	Twice/year
	Shuttle oven (No. 1)	0.25	0.20	0.07	<0.005	<0.005	Twice/year
	Waste incinerator	0.15	0.12	0.11	0.008	0.010	Twice/year
NOx (ppm)	Firing oven (Shuttle No. 1)	180	144	137	31	33	Twice/year
	Boiler (13 plant R-1)	150	120	114	85	95	Twice/year
	Boiler (Energy building R-2)	150	120	114	55	55	Twice/year
SOx (Nm <sup>3</sup> /h)	N/A			—			

### Air emission: total impact (units: tons)

Items	Total emission	
	FY 2006	FY 2007
NOx	16.75	13.59
SOx	N/A	

#### Comments

Less than self-management standards, no incidents exceeded standards.

### Water quality (units: mg/ℓ)

Items	Legal standard	Internal criteria	Self-management standard	Performance for FY 2007		
				Ave	Max	Measurement frequency
Hydrogen ion concentration (pH)	5.8~8.6	6.2~8.2	6.5~7.8	7.1	7.4	Once/month
Biochemical oxygen demand (BOD)	30	10	9.5	3.2	6.4	Once/month
Chemical oxygen demand (COD)	—	10	9.5	3.3	4.6	Once/month
Suspended solid (SS)	70	5	4.8	1.1	1.6	Once/month
N-hexane extracts weight	5	1	0.95	<0.5	<0.5	Once/month
Phenols content	5	0.5	0.48	<0.01	<0.01	Once/year
Copper content	3	1	0.95	0.04	0.06	Once/month
Zinc content	2	1	0.95	0.02	0.05	Once/month
Dissolved iron content	10	5	4.8	0.03	0.11	Once/month
Dissolved manganese content	10	5	4.8	0.11	0.26	Once/month
Coliform group number (colonies/ ml)	3,000	350	93	12	27	Once/month
Nitrogen content	60	60	60	7.2	12	Once/month
Phosphorous content	8	8	7	0.18	0.28	Once/month

### Water pollution: total impact (units: tons)

Items	Total emission	
	FY 2006	FY 2007
Chemical oxygen demand (COD)	6.86	7.05
Biochemical oxygen demand (BOD)	7.48	6.84
Nitrogen	10.40	15.38
Phosphorous	0.37	0.38

#### Comments

Less than self-management standards, no incidents exceeded standards.

### Bad odors

No incidents exceeded standards.

### Noise and vibration

No incidents exceeded standards.

### PRTR substances (units: tons)

Number	Substance	Handled amounts	Releases to			Transfers to		Other amounts		
			Air	Water	Soil	Waste	Sewage	Recycled	Consumption	Removed by process
16	2-amino ethanol	5.5	5.4	0	0	0	0	0	0.1	0
43	Ethylene glycol	1.6	0	0	0	0	0	0	1.5	0.1
63	Xylene	2.8	0.3	0	0	2.4	0	0	0	0.1
64	Silver and its water-soluble compounds	3.0	0	0	0	0	0	0.1	2.9	0
68	Chrome and trivalent chrome compounds	58.9	0	0	0	0.7	0	10	48.2	0
100	Cobalt and its composites	20.3	0	0.3	0	1.8	0	0.4	17.8	0
108	Inorganic cyanide compounds (except complex salts and cyanates)	5.5	0	0	0	0	0	0	5.5	0
179	Dioxins (mg-TEQ)	0.8	0	0	0	0.1	0	0.7	0	0
207	Copper water-soluble salts (except complex salts)	1.1	0	0	0	0	0	1.1	0	0
227	Toluene	440.1	101.2	0	0	12.8	0	0	326.1	0
230	Lead and its compounds	2.1	0	0	0	0.1	0	0	2.0	0
231	Nickel	78.5	0	0.2	0	7.0	0	0.9	70.4	0
232	Nickel compounds	5.6	0	0.2	0	0	0	4.9	0.5	0
243	Barium and its water-soluble compounds	8.3	0	0	0	0.2	0	1.7	6.4	0
270	di-ne-butyl phthalate	37.9	0	0	0	0.6	0	6.8	30.3	0.2
272	bis (2-ethylhexyl) phthalate	22.0	0	0	0	1.1	0	4.9	15.9	0.1
304	boron and its compounds	1.7	0	0.4	0	0	0	1.0	0.3	0
309	poly (oxyethylene) alkyl ether	4.6	0	0	0	0	0	1.0	3.6	0
311	Manganese and its compounds	6.4	0	0	0	0.8	0	0.3	5.3	0
346	Molybdenum and its compounds	18.8	0	0.2	0	0.7	0	3.2	14.7	0
Target chemical substances total		724.7	106.9	1.3	0	28.2	0	36.3	551.5	0.5

#### Comments

We reduced the handled amount of bis (2-ethylhexyl) phthalate by 3.4 tons by reducing the content of this substance in our products.