

●Environmental Data for Individual Plants and Group Companies in FY2025

IBIDEN Engineering Co., Ltd

< Wastewater Measurement >

Item	Unit	National standard	City standard	Voluntary standard	Average	Maximum	Note
pH	-	5.0~9.0	5.0~9.0	5.0~9.0	7.5	7.7	
BOD	mg / L	600	600	600	1	3	
SS	mg / L	600	600	600	3	10	
Copper and copper compounds	mg / L	3	3	3	0.01	0.01	
Lead and lead compounds	mg / L	0.1	0.1	0.1	0.01	0.02	
Chromium	mg / L	2	2	2	0.02	0.02	
Hexavalent chromium	mg / L	0.5	0.5	0.5	0.02	0.02	
Fluorine and fluorine compounds	mg / L	8	8	8	0.1	0.1	
Cyanide compounds	mg / L	1	1	1	0.0	0.0	
1・1・1 Trichloroethane	mg / L	3	3	3	0.0005	0.0005	
1・1・2 Trichloroethane	mg / L	0.06	0.06	0.06	0.0006	0.0006	
1.3 Dichloropropanes	mg / L	0.02	0.02	0.02	0.0002	0.0002	
1・2 Dichloroethane	mg / L	0.04	0.04	0.04	0.0004	0.0004	
1・1 Dichloroethylene	mg / L	1	1	1	0.002	0.002	
Cis- 1・2 Dichloroethylene	mg / L	0.4	0.4	0.4	0.004	0.004	
Trichloroethylene	mg / L	0.3	0.3	0.3	0.002	0.002	
Tetrachloroethylene	mg / L	0.1	0.1	0.1	0.0005	0.0005	
Dichloromethane	mg / L	0.2	0.2	0.2	0.002	0.002	
Carbon tetrachloride	mg / L	0.2	0.2	0.2	0.0002	0.0002	
Cadmium and cadmium compounds	mg / L	0.03	0.03	0.03	0.003	0.003	
Phenol	mg / L	5	5	5	0.1	0.1	
n-H mineral oils	mg / L	5	5	5	1	1	
Arsenic and arsenic compounds	mg / L	0.1	0.1	0.1	0.01	0.01	
Alkyl mercury	mg / L	Not detected	Not detected	Not detected	Not detected	Not detected	
Organic phosphorus	mg / L	1	1	1	0.01	0.01	
Polyhalogenated biphenyl	mg / L	0.003	0.003	0.003	0.0005	0.0005	
Zinc and zinc compounds	mg / L	2	2	2	0.033	0.080	
Manganese and manganese compounds	mg / L	10	10	10	0.013	0.040	
Benzene	mg / L	0.1	0.1	0.1	0.001	0.001	
Boron and boron compounds	mg / L	10	10	10	0.1	0.1	
1,4-dioxane	mg / L	0.5	0.5	0.5	0.05	0.05	

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IBIDEN Bussan Co., Ltd

<Wastewater Measurement >

Item	Unit	National standard	City standard	Voluntary standard	Average	Maximum	Note
pH	-	5.8~8.6	5.8~8.6	6.1~8.3	7.4	7.9	
BOD	mg / L	160	100	80	5	22	
COD	mg / L	160	160	128	6.8	16.0	
SS	mg / L	200	90	72	3.8	11.0	
n-H mineral oils	mg / L	10	10	8	1	1	
Nitrogen	mg / L	120	120	25	3.4	7.6	
Phosphorus	mg / L	16	16	7.5	0.07	0.08	

<Air Measurement>

Item	Equipment	Unit	National standard	City standard	Voluntary standard	Average	Maximum	Note
Soot	Boiler No.1	g/m ³ N	0.3	0.3	0.24	0.007	0.009	
NOx	Boiler No.1	ppm	180	180	144	65	78	
SOx	Boiler No.1	K-value	11.5	11.5	9.2	2.2	2.4	

IBIDEN Jushi Co., Ltd

<Air Measurement>

Item	Equipment	Unit	National standard	City standard	Voluntary standard	Average	Maximum	Note
Soot	Boiler No.1	g/m³N	0.3	0.3	0.24			No measurements were taken as it is currently out of operation.
	Boiler No.3	g/m³N	0.3	0.3	0.24	0.0045	0.006	
NOx	Gas Turbine	ppm	70	70	65	43.5	49	
	Boiler No.1	ppm	180	180	144			No measurements were taken as it is currently out of operation.
	Boiler No.3	ppm	180	180	144	54.5	58	
SOx	Boiler No.1	m³N/h	0.81	0.81	1.65			No measurements were taken as it is currently out of operation.
	Boiler No.3	m³N/h	0.81	0.81	0.65	0.01	0.01	

●Environmental Data for Individual Plants and Group Companies in FY2025

IBIDEN Philippines, Inc.

<Wastewater Measurement >

Item	Unit	Industrial park standard	Voluntary standard	Average	Maximum	Note
pH	-	6.0～9.5	6.2～9.3	7.7	8.2	
BOD	mg / L	500	400	16	36	
COD	mg / L	800	700	54	208	
SS	mg / L	350	280	8	24	
Copper	mg / L	1.0	0.8	0.04	0.15	
Lead	mg / L	0.10	0.08	0.05	0.05	
Cyanide compounds	mg / L	0.2	0.16	0.02	0.05	
Nickel	mg / L	1.0	0.8	0.02	0.04	
Color	mg / L	150	120	5	5	
Oil & Grease	mg / L	5	4	2	5	
Iron (Dissolved)	mg / L	7.5	6.0	0.11	0.21	
Manganese (Dissolved)	mg / L	2.0	1.6	0.14	0.56	
クロロイド	mg / L	450	360	123	274	
ホウ素	mg / L	4.0	3.2	0.81	1.30	
硫酸塩	mg / L	550	440	157	384	
硫酸態窒素(硝酸塩)	mg / L	14	11	3	7	
NH3-N アンモニア性窒素	mg / L	25	20	0	2	
リン酸塩	mg / L	15	12	0.30	1.70	
フッ化物	mg / L	2.0	1.6	0.65	1.30	
トリクロロエチレン	mg / L	9.0	7.2	0.00	0.00	

<Air Measurement>

Item	Unit	National standard	Voluntary standard	Average	Maximum	Note
NOx	mg/m ³	500	400	37	43	
SOx	mg/m ³	500	400	9	14	

<Noise Measurement>

Time	Unit	National standard	Voluntary standard	Average	Maximum	Note
Morning (5am - 9am)	mg/m ³	65	58	59	60	Managed within an industrial park and compliant with
Daytime (9am - 6 pm)	mg/m ³	70	63	59	60	Managed within an industrial park and compliant with
Evening (6 pm - 10 pm)	mg/m ³	65	58	59	61	Managed within an industrial park and compliant with
Nighttime (10 pm - 5 am)	mg/m ³	60	54	59	59	Managed within an industrial park and compliant with

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IBIDEN Electronics Malaysia Sdn. Bhd.

< Wastewater Measurement>

Item	Unit	National standard	Voluntary standard	Average	Maximum	Note
pH	-	5.5～9.0	6.2～8.3	7.2	7.9	
BOD	mg / L	50	50	6	16	
COD	mg / L	200	100	14	54	
Total Suspended Solids, TSS	mg / L	100	100	6	91	
Copper	mg / L	1	0.5	0.14	0.76	
Lead	mg / L	0.5	0.5	0.0	0.0	
Chromium (Hexavalent)	mg / L	0.05	0.05	0.00	0.00	
Cyanide compounds	mg / L	0.1	0.1	0.00	0.04	
Nickel	mg / L	1	1	0.01	0.08	
Color	ADMI	200	200	2.5	20.0	
Oil & Grease	mg / L	10	10	1.47	7.00	
Iron (Dissolved)	mg / L	5	5	0.43	2.35	
Manganese (Dissolved)	mg / L	1	1	0.13	0.76	
Formaldehyde	mg / L	2	2	0.00	0.00	

<Noise Measurement>

Time	Unit	National standard	Voluntary standard	Average	Maximum	Note
Daytime (7am - 10 pm)	mg/m ³	75	75	62	67	
Nighttime (10 pm - 7 am)	mg/m ³	75	75	52	56	

●Environmental Data for Individual Plants and Group Companies in FY2025

IBIDEN Fine Ceramics (Suzhou) Co.,Ltd.

< Wastewater Measurement>

測定項目	Unit	Industrial park standard		Voluntary standard	Average	Maximum	Note
PH	-	6～9		6～9	7.5	8.3	
COD	mg / L	500		500	39.0	69.0	
SS	mg / L	400		400	19.5	22.0	
NH3-N	mg / L	45		45	12.5	18.9	
TP	mg / L	8		8	1.0	1.4	
TN	mg / L	70		70	11.7	19.9	
petroleum	mg / L	20		20	1.6	4.4	

●Environmental Data for Individual Plants and Group Companies in FY2025

IBIDEN Graphite Korea Co., Ltd.

<Air Measurement>

Item	Unit	National regulations	Voluntary standard	Average	Maximum	Note
NOx	ppm	150	150	5.6	35.6	
SOx	ppm	200	200	0.6	41.6	
PM	mg/m ³	30	30	1.6	4.8	

●Environmental Data for Individual Plants and Group Companies in FY2025

IBIDEN Hungary Kft.

< Wastewater Measurement>

Item	Unit	National standard	Industrial park standard	Voluntary standard	Average	Maximum	Note
pH	-	6.5～10.0	6.5～10.0	6.5～10.0	8.1	8.1	
Electrical conductivity	μS/ cm	2,500	2,500	2,500	596	696	
Available chlorine	mg / L	30	30	30	0.0	0.0	
COD	mg / L	1,000	1,000	1,000	80	80	
BOD	mg / L	500	500	500	35	41	
Total inorganic nitrogen	mg / L	120	120	120	10	11	
Total nitrogen	mg / L	150	150	150	16	17	
Ammonium	mg / L	100	100	100	9	11	
Total phosphorus	mg / L	20	20	20	1	1	
Sulphate	mg / L	400	400	400	15	15	
Organic solvent extract (grav.)	mg / L	50	50	50	3	4	
Phenols	mg / L	10	10	10	0.03	0.04	
Iron	mg / L	20	20	20	0.15	0.22	
Manganese	mg / L	5	5	5	0.02	0.02	
Sulphide	mg / L	1	1	1	0.01	0.01	
Total dissolved solid	mg / L	2,500	2,500	2,500	377	386	
Total solids	mg / L	2,500	2,500	2,500	233	298	
Fluoride	mg / L	50	50	50	0	1	
Tars	mg / L	5	5	5	2	2	

IBIDEN Mexico, S.A. de C.V.

< Wastewater Measurement>

Item	Unit	Industrial park standard	Voluntary standard	Average	Maximum	Note
pH	-	6.0~9.0	6.0~9.0	8.0	8.5	In response to changes in industrial park standards
Temperature	°C	35	20 - 35	24	31	Modification of Industrial Park Standards
COD	mg/L		600	71	144	Review of Voluntary Standards
BOD	mg/L	300	300	47	100	In response to changes in industrial park standards
Total Suspended Solids, TSS	mg/L	100	100	13	22	Modification of Industrial Park Standards
Total Nitrogen, Kjeldahl	mg/L		30	10.0	10.0	
Total Nitrogen	mg/L		30	0.7	1.4	
Total phosphorous	mg/L		20	1.1	2.1	
Oils and greases (Organic solvent extract)	mg/L	15	15	5.4	6.0	
Settleable solids (10 min)	mg/L	1	1	0.00	0.00	
Total arsenic	mg/L	0.2	0.2	0.01	0.01	
Total cadmium	mg/L	0.05	0.05	0.01	0.01	In response to changes in industrial park standards
Total cyanide	mg/L	2	2	0.03	0.03	
Total copper	mg/L	4	4	2.20	2.20	
Hexavalent chromium	mg/L	0.5	0.5	0.10	0.10	In response to changes in industrial park standards
Total Mercury	mg/L	0.005	0.005	0.003	0.004	In response to changes in industrial park standards
Total Niquel	mg/L	2	2	1.1	1.1	
Total Lead	mg/L	0.5	0.5	0.11	0.11	
Total Zinc	mg/L	10	10	5.5	5.5	
Fecal coliforms	NMP/L	10,000	10,000	6.2	23	In response to changes in industrial park standards
Electrical conductivity	mS/cm	3,500	1,500	621	894	Modification of Industrial Park Standards
Total dissolved solids (total salt 600°C)	mg/L	1,500	1,000	455	789	Modification of Industrial Park Standards
Sulfates	mg/L	250	35	13.9	29.0	Modification of Industrial Park Standards
Active substances to methylene blue	mg/L	0.5	0.5	0.15	0.29	In response to changes in industrial park standards
Phenols	mg/L	0.3	0.3	0.02	0.05	In response to changes in industrial park standards
Total phosphate	mg/L		10.0	3.34	6.43	In response to changes in industrial park standards
Free chlorine	mg/L	1,000	1000	75.9	137.9	In response to changes in industrial park standards
Natural pigment	m-1	3	3	0.4	0.5	
Water Toxicity	TU	2	2	1	1	

<Air Measurement>

Item	Unit	Industrial park standard	Voluntary standard	Average	Maximum	Note
Carbon monoxide	ppm	500	500	51	128	
NOx	ppm	375	375	1.9	7.1	
Mercury	ppm	0.025	0.025	0.001	0.001	
Soot	mg/m ³	1500	1500	2.5	9.1	
CO2 from electric consumption	ton	25,000		9,234	20,639	

<Noise Measurement>

Place	Unit	Industrial park standard	Voluntary standard	Average	Maximum	Note
North (Morning)	dB	68	68	57	57	
North (Night)	dB	68	65	61	61	
South (Morning)	dB	68	68	67	67	
South (Night)	dB	68	65	59	59	
East (Morning)	dB	68	68	60	60	
East (Night)	dB	68	65	58	58	
West (Morning)	dB	68	68	54	54	
West (Night)	dB	68	68	61	61	