

Site Report (FY2019)

Japan:	Toyo Tire Corp.	Sendai Plant Kuwana Plant Hyogo Manufacturing Complex Tire Technical Center Automotive Parts Technical Center Corporate Technology Center Headquarters
	Fukushima Rubber Co., Ltd.	
	Toyo Soflan Co., Ltd.	
	Ayabe Toyo Rubber Co., Ltd.	
	Orient Machinery Co., Ltd.	
US:	TOYO AUTOMOTIVE PARTS (USA), INC.	
	TOYO TIRE NORTH AMERICA MANUFACTURING INC.	
China:	TOYO AUTOMOTIVE PARTS (GUANGZHOU) CO., LTD.	
	TOYO TIRE ZHANGJIAGANG CO., LTD.	
	TOYO TIRE (ZHUCHENG) CO., LTD.	
Malaysia:	SILVERSTONE BERHAD	
	TOYO TYRE MALAYSIA SDN BHD	
Thailand:	TOYO RUBBER CHEMICAL PRODUCTS (THAILAND) LIMITED	

Period:

January - December, 2018 Energy consumption, CO2 emissions, SOx load, NOx load,

Water withdrawal, Water discharge, Water quality load, Water pollution,

Waste, Recycled waste, Reused waste

April - March, 2018 VOC emissions, PRTR substances (Handled, Emitted, Transferred)

*Number of employees: as of the end of December, 2018

*VOC emissions: the total for substances for which at least 1 ton is used annually at each business site.

*PRTR substances: "class 1 chemical substances" are those of which at least 1 ton is used annually at each production facility, and "designated class 1 chemical substances" are those of which at least 0.5 ton is used annually at each production facility.

The data on water discharge from the Toyo Tire Corporation Hyogo Manufacturing Complex and on waste from Ayabe Toyo Rubber Co., Ltd. includes the amounts from their respective neighboring facilities of other companies (the amount of water discharge / waste for joint treatment, respectively).

Toyo Tire Corp.

Number of Employees 4,138
(Temporary Employees) (487)

1. Sendai Plant

Location	Iwanuma-shi, Miyagi Japan		
Products	Automobile tires		
Energy consumption	1,989.5 (1000GJ)		
CO2 emissions	124.1 (1000t-CO2)		
VOC emissions	216.9 (t)		
SOx load	0.12 (t)		
NOx load	99.2 (t)		
Water withdrawal	1,241.6 (1000t)		
Water discharge	801.1 (1000t)		
Water quality load	• BOD	1.88 (t)	
	• COD	5.70 (t)	
Water pollution	• pH	Max. 8.00 Min. 7.10 Ave. 7.50	*Regulation of the law 5.8~8.6
	• BOD	Max. 3.70 (mg/L) Min. 0.50 (mg/L) Ave. 1.60 (mg/L)	*Regulation of the law 120
	• COD	Max. 6.00 (mg/L) Min. 3.80 (mg/L) Ave. 4.70 (mg/L)	*Regulation of the law 120
	• SS	Max. 15.0 (mg/L) Min. 2.00 (mg/L) Ave. 8.30 (mg/L)	*Regulation of the law 150
Waste	4,859.6 (t)		
Recycled waste	4,859.6 (t)		
Reused waste	62.2 (t)		
PRTR substances	• Handled	1,266.9 (kg)	
	• Emitted	10.6 (kg)	
	• Transferred	19.1 (kg)	

2. Kuwana Plant

Location	Toin-cho, Inabe-gun, Mie Japan			
Products	Automobile tires, automotive parts			
Energy consumption			1,791.9 (1000GJ)	
CO2 emissions			130.1 (1000t-CO2)	
VOC emissions			325.9 (t)	
SOx load			1.08 (t)	
NOx load			77.5 (t)	
Water withdrawal			968.3 (1000t)	
Water discharge			387.1 (1000t)	
Water quality load	• BOD		0.46 (t)	
	• COD		0.81 (t)	
Water pollution	• pH	Max.	7.70	*Regulation of the ordinance 6.0~8.0
		Min.	7.20	
		Ave.	7.40	
	• BOD	Max.	2.00 (mg/L)	*Regulation of the pollution prevention agreement with local governments 8
		Min.	<1 (mg/L)	
		Ave.	1.60 (mg/L)	
	• COD	Max.	5.00 (mg/L)	*Regulation of the pollution prevention agreement with local governments 8
		Min.	<1 (mg/L)	
		Ave.	2.70 (mg/L)	
	• SS	Max.	5.00 (mg/L)	*Regulation of the pollution prevention agreement with local governments 10
		Min.	<2 (mg/L)	
		Ave.	3.00 (mg/L)	
Waste			6,036.2 (t)	
Recycled waste			6,036.2 (t)	
Reused waste			0.00 (t)	
PRTR substances	• Handled		1,601.6 (kg)	
	• Emitted		132.5 (kg)	
	• Transferred		67.6 (kg)	

3. Hyogo Manufacturing Complex

Location	Inami-cho, Kako-gun, Hyogo Japan			
Products	Automotive parts			
Energy consumption			60.1 (1000GJ)	
CO2 emissions			4.55 (1000t-CO2)	
VOC emissions			18.9 (t)	
SOx load			0.00 (t)	
NOx load			0.55 (t)	
Water withdrawal			181.3 (1000t)	
Water discharge			104.8 (1000t)	
Water quality load	• BOD		0.24 (t)	
	• COD		0.32 (t)	
Water pollution	• pH	Max.	8.50	*Regulation of the law 5.8~8.6
		Min.	7.80	
		Ave.	8.10	
	• BOD	Max.	4.20 (mg/L)	*Regulation of the law 100
		Min.	1.70 (mg/L)	
		Ave.	2.30 (mg/L)	
	• COD	Max.	5.10 (mg/L)	*Regulation of the law 100
		Min.	2.30 (mg/L)	
		Ave.	3.50 (mg/L)	
	• SS	Max.	2.70 (mg/L)	*Regulation of the law 90
		Min.	1.00 (mg/L)	
		Ave.	1.60 (mg/L)	
Waste			186.2 (t)	
Recycled waste			186.2 (t)	
Reused waste			0.00 (t)	
PRTR substances	• Handled		21.3 (kg)	
	• Emitted		16.1 (kg)	
	• Transferred		0.00 (kg)	

4. Tire Technical Center

Location	Itami-shi, Hyogo Japan
Energy consumption	19.6 (1000GJ)
CO2 emissions	2.41 (1000t-CO2)
Water withdrawal	8.47 (1000t)
Waste	524.5 (t)
Recycled waste	524.5 (t)
Reused waste	0.00 (t)

5. Automotive Parts Technical Center

Location	Miyoshi-shi, Aichi Japan
Energy consumption	12.1 (1000GJ)
CO2 emissions	1.64 (1000t-CO2)
Water withdrawal	11.6 (1000t)
Waste	50.0 (t)
Recycled waste	50.0 (t)
Reused waste	0.00 (t)

6. Corporate Technology Center

Location Kawanishi-shi, Hyogo Japan

Energy consumption	17.3 (1000GJ)
CO2 emissions	1.75 (1000t-CO2)
Water withdrawal	7.46 (1000t)
Waste	76.9 (t)
Recycled waste	76.9 (t)
Reused waste	0.00 (t)

7. Headquarters

Location Itami-shi, Hyogo Japan

Energy consumption	6.65 (1000GJ)
CO2 emissions	0.53 (1000t-CO2)
Water withdrawal	6.91 (1000t)
Waste	41.1 (t)
Recycled waste	41.1 (t)
Reused waste	0.00 (t)

Fukushima Rubber Co., Ltd.

Location	Fukushima-shi, Fukushima Japan		
Products	Automobile tires, automotive parts		
Number of Employees (Temporary Employees)	159	(25)
Energy consumption	59.3	(1000GJ)	
CO2 emissions	6.04	(1000t-CO2)	
VOC emissions	0.83	(t)	
SOx load	2.51	(t)	
NOx load	5.84	(t)	
Water withdrawal	336.1	(1000t)	
Water discharge	346.9	(1000t)	
Water quality load	• BOD	1.47 (t)	
	• COD	1.15 (t)	
Water pollution	• pH	Max. 7.60	*Regulation of the law 5.8~8.6
		Min. 7.10	
		Ave. 7.40	
	• BOD	Max. 12.0 (mg/L)	*Regulation of the law 25
		Min. 1.60 (mg/L)	
		Ave. 4.40 (mg/L)	
	• COD	Max. 5.90 (mg/L)	*Regulation of the law 40
		Min. 1.10 (mg/L)	
		Ave. 3.40 (mg/L)	
	• SS	Max. 26.0 (mg/L)	*Regulation of the law 70
		Min. 1.40 (mg/L)	
		Ave. 4.80 (mg/L)	
Waste	256.6	(t)	
Recycled waste	256.6	(t)	
Reused waste	0.00	(t)	
PRTR substances	• Handled	80.8 (kg)	
	• Emitted	0.00 (kg)	
	• Transferred	0.17 (kg)	

Toyo Soflan Co., Ltd.

Location	Miyoshi-shi, Aichi Japan		
Products	Automotive parts		
Number of Employees (Temporary Employees)	41	(6)	
Energy consumption	11.8	(1000GJ)	
CO2 emissions	1.28	(1000t-CO2)	
VOC emissions	6.46	(t)	
SOx load	-	(t)	*not yet measured
NOx load	-	(t)	*not yet measured
Water withdrawal	4.73	(1000t)	
Water quality load	• BOD	-	(t)
	• COD	-	(t)
Water pollution	• pH	Max.	7.60
		Min.	6.70
		Ave.	7.30
	• BOD	Max.	22.0 (mg/L)
		Min.	0.80 (mg/L)
		Ave.	5.70 (mg/L)
	• COD	Max.	22.0 (mg/L)
		Min.	3.30 (mg/L)
		Ave.	10.3 (mg/L)
	• SS	Max.	23.0 (mg/L)
		Min.	1.00 (mg/L)
		Ave.	5.80 (mg/L)
Waste		26.4	(t)
Recycled waste		26.4	(t)
Reused waste		0.00	(t)
PRTR substances	• Handled	3.35	(kg)
	• Emitted	2.89	(kg)
	• Transferred	0.46	(kg)

Ayabe Toyo Rubber Co., Ltd.

Location	Ayabe-shi, Kyoto Japan		
Products	Automotive parts		
Number of Employees (Temporary Employees)	49	(17)	
Energy consumption	14.3	(1000GJ)	
CO2 emissions	1.51	(1000t-CO2)	
VOC emissions	4.41	(t)	
SOx load	0.00	(t)	
NOx load	0.01	(t)	
Water withdrawal	25.9	(1000t)	
Water quality load	• BOD	0.06	(t)
	• COD	0.02	(t)
Water pollution	• pH	Max. 8.20	*Regulation of the law 5.8~8.6
		Min. 6.50	
		Ave. 7.40	
	• BOD	Max. 6.00 (mg/L)	*Regulation of the law 25
		Min. ND (mg/L)	/ND : less than the lower quantitative limit
		Ave. 3.80 (mg/L)	
	• COD	Max. 4.20 (mg/L)	*Regulation of the law 120
		Min. ND (mg/L)	/ND : less than the lower quantitative limit
		Ave. 1.30 (mg/L)	
	• SS	Max. 5.00 (mg/L)	*Regulation of the law 90
		Min. ND (mg/L)	/ND : less than the lower quantitative limit
		Ave. 1.20 (mg/L)	
Waste		139.5	(t)
Recycled waste		139.5	(t)
Reused waste		0.00	(t)
PRTR substances	• Handled	3.99	(kg)
	• Emitted	2.55	(kg)
	• Transferred	1.44	(kg)

Orient Machinery Co., Ltd.

Location	Itami-shi, Hyogo Japan* Iwanuma-shi, Miyagi Japan *HQ		
Products	Mechanical equipment, tire mold		
Number of Employees (Temporary Employees)	193	(22)
Energy consumption	6.11	(1000GJ)	
CO2 emissions	0.83	(1000t-CO2)	
VOC emissions	-	(t)	
SOx load	-	(t)	*not yet measured
NOx load	-	(t)	*not yet measured
Water withdrawal	2.88	(1000t)	
Water quality load	• BOD	-	(t) *not yet measured
	• COD	-	(t) *not yet measured
Water pollution	• pH	Max. -	*not yet measured
		Min. -	
		Ave. -	
	• BOD	Max. -	(mg/L) *not yet measured
		Min. -	(mg/L)
		Ave. -	(mg/L)
	• COD	Max. -	(mg/L) *not yet measured
		Min. -	(mg/L)
		Ave. -	(mg/L)
	• SS	Max. -	(mg/L) *not yet measured
		Min. -	(mg/L)
		Ave. -	(mg/L)
Waste	27.8	(t)	
Recycled waste	23.7	(t)	
Reused waste	0.00	(t)	
PRTR substances	• Handled	-	(kg)
	• Emitted	-	(kg)
	• Transferred	-	(kg)

TOYO AUTOMOTIVE PARTS (USA), INC.

Location	Kentucky, U.S.A		
Products	Automotive parts		
Number of Employees (Temporary Employees)	281	(0)
Energy consumption	147.1	(1000GJ)	
CO2 emissions	11.25	(1000t-CO2)	
Water withdrawal	20.5	(1000t)	
Waste	1,781.4	(t)	

※Including data of TMM (USA). INC. in the same site

TOYO TIRE NORTH AMERICA MANUFACTURING INC.

Location	Georgia, U.S.A.		
Products	Automobile tires		
Number of Employees (Temporary Employees)	1,782	(360)
Energy consumption	1,662.9	(1000GJ)	
CO2 emissions	137.7	(1000t-CO2)	
Water withdrawal	370.9	(1000t)	
Water discharge	113.4	(1000t)	
Waste	8,983.6	(t)	

東洋橡塑（広州）有限公司

(TOYO AUTOMOTIVE PARTS (GUANGZHOU) CO., LTD.)

Location	Guangzhou, China
Products	Automotive parts
Number of Employees (Temporary Employees)	316 (0)
Energy consumption	45.5 (1000GJ)
CO2 emissions	6.04 (1000t-CO2)
Water withdrawal	16.6 (1000t)
Water quality load	• BOD 0.05 (t)
	• COD 0.21 (t)
Waste	341.4 (t)

通伊欧輪胎張家港有限公司

(TOYO TIRE ZHANGJIAGANG CO.,LTD.)

Location	Jiangsu, China
Products	Automobile tires
Number of Employees (Temporary Employees)	371 (0)
Energy consumption	229.5 (1000GJ)
CO2 emissions	23.3 (1000t-CO2)
SOx load	0.00 (t)
NOx load	0.07 (t)
Water withdrawal	35.1 (1000t)
Water discharge	21.3 (1000t)
Water quality load	• BOD 0.79 (t)
	• COD 1.46 (t)
Waste	509.2 (t)

通伊欧輪胎（諸城）有限公司

(TOYO TIRE (ZHUCHENG) CO.,LTD.)

Location	Shandong, China
Products	Automobile tires
Number of Employees (Temporary Employees)	550 (2)
Energy consumption	266.7 (1000GJ)
CO2 emissions	28.4 (1000t-CO2)
Water withdrawal	86.1 (1000t)
Waste	865.8 (t)

SILVERSTONE BERHAD

Location	Perak, Malaysia
Products	Automobile tires
Number of Employees (Temporary Employees)	1,240 (0)
Energy consumption	437.5 (1000GJ)
CO2 emissions	42.6 (1000t-CO2)
Water withdrawal	232.1 (1000t)
Water quality load	174.1 (1000t)
Water pollution	1,345.4 (t)

TOYO TYRE MALAYSIA SDN BHD

Location	Perak, Malaysia
Products	Automobile tires
Number of Employees (Temporary Employees)	1,578 (0)
Energy consumption	563.2 (1000GJ)
CO2 emissions	66.2 (1000t-CO2)
Water withdrawal	179.4 (1000t)
Water quality load	53.9 (1000t)
Water pollution	4,357.8 (t)

TOYO RUBBER CHEMICAL PRODUCTS (THAILAND) LIMITED

Location	Ayutthaya, Thailand
Products	Automotive parts
Number of Employees (Temporary Employees)	31 (0)
Energy consumption	2.13 (1000GJ)
CO2 emissions	0.28 (1000t-CO2)
Water withdrawal	1.10 (1000t)
Water quality load	0.88 (1000t)
Water pollution	1.45 (t)