

Environmental

Standard		Topics of data disclosure	Performance							Note(s) /Omission(s)
SDGs	Disclosure		Unit	2017	2018	2019	2020	2021	2022	
Sustainability resources										
Material Management										
<b>Goal 12</b>	<b>กลุ่มธุรกิจผลิตยางมะตอย</b>									
<b>Disclosure 301-1</b>	All materials used	Tons	NA	NA	NA	517,394	509,619	<b>411,331.75</b>	Note (5)	
	Non-renewable materials	Tons	•	•	•	616,734	509,107	<b>410,886.25</b>	Note (5)	
	Renewable materials	Tons	NA	NA	NA	NA	NA	<b>NA</b>		
	<b>Disclosure 301-2</b>	Recycled input materials used	Tons	NA	NA	NA	660	712	<b>445.5</b>	Note (5)
		The rate of use of materials that can be reused or recycled	%	NA	NA	NA	0.13	0.14	<b>0.11</b>	Note (5)
	<b>Disclosure 301-3</b>	Reclaimed products and their packaging materials	Tons	NA	NA	NA	NA	NA	<b>NA</b>	
		The rate of materials products and their packaging materials	%	NA	NA	NA	NA	NA	<b>NA</b>	
	Energy									
Energy Management										
<b>Goal 7</b>	<b>Disclosure 302</b>	Policy and guidelines on environment management: Energy	Yes/No	•	•	•	•	•	•	
		Principle, standard or practice guidelines on environment management that the Group implements and refers to such as ISO 50001, LEED	Yes/No	•	•	•	•	•	•	
		Plan to reduce electricity and/or fuel consumption	Yes/No	•	•	•	•	•	•	
		Target on reducing electricity and/or fuel consumption	Yes/No	•	•	•	•	•	•	
Asphalt Business (Thailand)										
<b>Disclosure 302-1</b>	Energy consumption within the organization	Gigajoule	270,880	251,387	210,975	215,138	190,249	<b>162,818.40</b>	Note (2)	
<b>Disclosure 302-1</b>	Non-renewable fuel sources	Gigajoule	NA	251,387	210,975	215,138	190,249	<b>162,818.40</b>	Note (2)	
<b>Disclosure 302-1</b>	Renewable fuel sources	Gigajoule	NA	0	0	0	0	<b>0</b>	Note (2)	
<b>Disclosure 302-1</b>	Electrical Consumption	Gigajoule	NA	0	0	0	0	<b>0</b>	Note (2)	
	Renewable fuel sources	%	NA	0.00%	0.00%	0.00%	0.00%	<b>0</b>		
<b>Disclosure 302-2</b>	Energy consumption outside of the organization	Gigajoule	NA	NA	NA	NA	NA	<b>NA</b>		
<b>Disclosure 302-3</b>	Energy intensity ratio for the production unit	Gigajoule/production unit	0.5	0.51	0.45	0.4	0.36	<b>0.31</b>	Note (2)	
<b>Disclosure 302-4</b>	Total energy consumption reduction (electricity and/or fuel)	Gigajoule	NA	NA	40,412	36,249	24,889	<b>52,320</b>	Note (1)	
<b>Disclosure 302-5</b>	Reductions in energy requirements of products and services	Gigajoule	NA	NA	NA	NA	NA	<b>NA</b>		
Construction Business										
<b>Disclosure 302-1</b>	Energy consumption within the organization	Gigajoule	NA	NA	NA	NA	109,894	<b>67,831.00</b>	Note (6)	
<b>Disclosure 302-1</b>	Non-renewable fuel sources	Gigajoule	NA	NA	NA	NA	102,876	<b>62,160.08</b>	Note (6)	
<b>Disclosure 302-1</b>	Renewable fuel sources	Gigajoule	NA	NA	NA	NA	3,181	<b>2,133.92</b>	Note (6)	
<b>Disclosure 302-1</b>	Electrical Consumption	Gigajoule	NA	NA	NA	NA	3,837	<b>3,537.00</b>	Note (6)	
	Renewable fuel sources	%	NA	NA	NA	NA	2.89%	<b>0.03</b>	Note (6)	
<b>Disclosure 302-2</b>	Energy consumption outside of the organization	Gigajoule	NA	NA	NA	NA	NA	<b>NA</b>		
<b>Disclosure 302-3</b>	Energy intensity ratio for the production unit	Gigajoule/production unit	NA	NA	NA	NA	0.7	<b>1</b>	Note (6)	
<b>Disclosure 302-4</b>	Total energy consumption reduction (electricity and/or fuel)	Gigajoule	NA	NA	NA	NA	NA	<b>NA</b>		
<b>Disclosure 302-5</b>	Reductions in energy requirements of products and services	Gigajoule	NA	NA	NA	NA	NA	<b>NA</b>		

Standard		Topics of data disclosure	Performance						Note(s) /Omission(s)	
SDGs	Disclosure		Unit	2017	2018	2019	2020	2021		2022
<b>Environmental</b>										
<b>Water</b>										
<b>Water Management</b>										
<b>Goal 6</b>	<b>Asphalt Business (Thailand)</b>									
	<b>Disclosure 303</b>	Water policy and guidelines on environment management	Yes/No	•	•	•	•	•	•	
		Principle, standard or practice guidelines on environment management that the Group implements and refers to such as ISO/DIS 24526 ISO 14046	Yes/No	•	•	•	•	•	•	
		Plan to reduce water consumption	Yes/No	•	•	•	•	•	•	
		Target on reduction of water consumption	Yes/No	•	•	•	•	•	•	
	<b>Disclosure 303-3</b>	Total water withdrawal	Mega liters	89.02	62.38	54.92	48.77	47.41	<b>37.35</b>	
		• Total Surface water	Mega liters	NA	NA	NA	NA	NA	<b>NA</b>	
		• Surface water (Freshwater ≤1,000 mg/L Total Dissolved Solids)	Mega liters	NA	NA	NA	NA	NA	<b>NA</b>	
		• Surface water (Other water >1,000 mg/L Total Dissolved Solids)	Mega liters	NA	NA	NA	NA	NA	<b>NA</b>	
		• Total Groundwater	Mega liters	53.3	32.4	30	24.7	23.9	<b>20.11</b>	Note (4)
		• Groundwater (Freshwater ≤1,000 mg/L Total Dissolved Solids)	Mega liters	32.5	16.4	16.9	12.8	12.8	<b>11.85</b>	Note (4)
		• Groundwater (Other water >1,000 mg/L Total Dissolved Solids)	Mega liters	20.8	16.1	13.1	11.8	11.2	<b>8.27</b>	Note (4)
		• Total third-party water	Mega liters	35.7	29.9	24.9	24.1	23.5	<b>17.24</b>	Note (4)
		• Third-party water (Freshwater ≤1,000 mg/L Total Dissolved Solids)	Mega liters	35.7	29.9	24.9	24.1	23.5	<b>17.24</b>	Note (4)
		• Third-party water (Other water >1,000 mg/L Total Dissolved Solids)	Mega liters	0	0	0	0	0	<b>0</b>	Note (4)
	<b>Disclosure 303-4, Disclosure 306-1</b>	Total water discharge	Mega liters	0	0	0	0	0	<b>2.78</b>	Note (2)
		<b>Disclosure 303-4</b>	The amount of effluent divided by discharge source							
	• Surface water		Mega liters	NA	NA	NA	NA	NA	<b>2.78</b>	Note (4)
	• Groundwater		Mega liters	NA	NA	NA	NA	NA	<b>0</b>	Note (4)
	• Sea water		Mega liters	NA	NA	NA	NA	NA	<b>0</b>	Note (4)
	• Water to another organization		Mega liters	NA	NA	NA	NA	NA	<b>0</b>	Note (4)
	The amount of effluent is classified by type of discharge water									
	• Total Dissolved Solids ≤ 1,000 mg/l		Mega liters	NA	NA	NA	NA	NA	<b>1.74</b>	Note (4)
	• Total Dissolved Solids > 1,000 mg/l		Mega liters	NA	NA	NA	NA	NA	<b>1.04</b>	Note (4)
	<b>Disclosure 303-5</b>	Total recycled water discharge	Mega liters	9.68	8.18	4.25	3.58	2.6	<b>2.78</b>	Note (4)
		Water consumption	Mega liters	98.7	70.6	59.2	52.3	50	<b>40.14</b>	Note (4)
		Water consumption intensity ratio	Cubic meters/ production unit	0.18	0.14	0.13	0.1	0.09	<b>0.08</b>	Note (4)
	The rate of water withdrawal per unit of total production	Cubic meters/ production unit	0.16	0.13	0.12	0.09	0.09	<b>0.07</b>	Note (4)	

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Standard		Topics of data disclosure	Performance							Note(s) /Omission(s)
SDGs	Disclosure		Unit	2017	2018	2019	2020	2021	2022	
<b>Greenhouse Gas Emissions</b>										
<b>Greenhouse Gas Emissions Management</b>										
<b>Goal 13</b>	<b>Disclosure 305</b>	Policy and guidelines on environment management: Greenhouse gas emissions	Yes/No	•	•	•	•	•	•	
		Principle, standard or practice on environment that the Group implements and references	Yes/No	•	•	•	•	•	•	
		Plan for greenhouse gas emissions reduction	Yes/No	•	•	•	•	•	•	
		Target set for greenhouse gas emissions reduction	Yes/No	•	•	•	•	•	•	
<b>Asphalt Business (Thailand)</b>										
		Total greenhouse gas emissions reduction	Tons of CO <sub>2</sub> equivalent	21,942.00	20,415.00	17,814.00	17,275.95	15,150.72	<b>12,996.45</b>	Note (2)
	<b>Disclosure 305-1</b>	• Direct (Scope 1) GHG emissions	Tons of CO <sub>2</sub> equivalent	19,166.00	18,309.00	15,749.00	15,160.50	13,352.82	<b>11,367.65</b>	Note (2)
	<b>Disclosure 305-2</b>	• Indirect (Scope 2) GHG emissions	Tons of CO <sub>2</sub> equivalent	2,776.00	2,106.00	2,065.00	2,115.45	1,797.90	<b>1,628.80</b>	Note (2)
	<b>Disclosure 305-3</b>	• Other indirect (Scope 3) GHG emissions	Tons of CO <sub>2</sub> equivalent	NA	NA	NA	NA	NA	<b>NA</b>	
	<b>Disclosure 305-4</b>	GHG emissions intensity (Scopes 1&2)	Tons of CO <sub>2</sub> equivalent per ton of production	0.04	0.041	0.038	0.032	0.029	<b>0.02</b>	Note (2), (7)
	<b>Disclosure 305-5</b>	Reduction of GHG emissions from base year 2020	Tons of CO <sub>2</sub> equivalent	NA	NA	NA	NA	2,125	<b>4,279.50</b>	
			%	NA	NA	NA	NA	0.12	<b>0.25</b>	
	<b>Disclosure 305-6</b>	Emissions of ozone-depleting substances (ODS)	-	NA	NA	NA	NA	NA	<b>NA</b>	
<b>Quantitative targets on significant air emissions</b>										
	<b>Disclosure 305-7</b>	• Nitrogen Oxide (NOx)	Kilogram	NA	5,278.67	3,505.07	3,856.48	8,067.00	<b>7,365.11</b>	Note (4)
	<b>Disclosure 305-7</b>	• Sulfur Oxide (SOx)	Kilogram	NA	12,955.67	8,390.40	5,503.33	7,576.00	<b>2,805.95</b>	Note (4)
	<b>Disclosure 305-7</b>	• Carbon Monoxide (CO)	Kilogram	NA	4,035.47	3,799.86	3,756.71	22,469.00	<b>4,208.40</b>	Note (4)
		• Total Suspended Particulate (TSP)	Kilogram	NA	1,475.93	1,619.44	1,248.66	929	<b>450.23</b>	Note (4)
		• Nitrogen Oxide (NOx)	Kilogram/ production unit	NA	0.011	0.008	0.007	0.015	<b>0.01</b>	Note (4)
		• Sulfur Oxide (SOx)	Kilogram/ production unit	NA	0.026	0.018	0.01	0.014	<b>0.01</b>	Note (4)
		• Carbon Monoxide (CO)	Kilogram/ production unit	NA	0.008	0.008	0.007	0.042	<b>0.01</b>	Note (4)
		• Total Suspended Particulate (TSP)	Kilogram/ production unit	NA	0.003	0.003	0.002	0.002	<b>0</b>	Note (4)

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Standard		Topics of data disclosure	Performance							Note(s) /Omission(s)
SDGs	Disclosure		Unit	2017	2018	2019	2020	2021	2022	
<b>Marine Business</b>										
		Total greenhouse gas emissions reduction	Tons of CO <sub>2</sub> equivalent	NA	NA	NA	58,083.41	57,054.20	<b>54,699.00</b>	
	<b>Disclosure 305-1</b>	• Direct (Scope 1) GHG emissions	Tons of CO <sub>2</sub> equivalent	NA	NA	NA	58,083.41	57,054.20	<b>54,699.00</b>	
	<b>Disclosure 305-2</b>	• Indirect (Scope 2) GHG emissions	Tons of CO <sub>2</sub> equivalent	NA	NA	NA	0	0	<b>0</b>	
	<b>Disclosure 305-3</b>	• Other indirect (Scope 3) GHG emissions	Tons of CO <sub>2</sub> equivalent	NA	NA	NA	NA	NA	<b>NA</b>	
	<b>Disclosure 305-4</b>	GHG emissions intensity (Scopes 1&2)	Tons of CO <sub>2</sub> equivalent per ton of production	NA	NA	NA	1.1	1.1	<b>1.1</b>	
	<b>Disclosure 305-5</b>	Reduction of GHG emissions from base year 2020	Tons of CO <sub>2</sub> equivalent	NA	NA	NA	NA	NA	<b>NA</b>	
			%	NA	NA	NA	NA	NA	<b>NA</b>	
	<b>Disclosure 305-6</b>	Emissions of ozone-depleting substances (ODS)	NA	NA	NA	NA	NA	NA	<b>NA</b>	
<b>Goal 13</b>	<b>Quantitative targets on significant air emissions</b>									
	<b>Disclosure 305-7</b>	• Nitrogen Oxide (NOx)	Kilogram	NA	NA	NA	NA	NA	<b>NA</b>	
	<b>Disclosure 305-7</b>	• Sulfur Oxide (SOx)	Kilogram	NA	NA	NA	NA	NA	<b>NA</b>	
	<b>Disclosure 305-7</b>	• Carbon Monoxide (CO)	Kilogram	NA	NA	NA	NA	NA	<b>NA</b>	
		• Total Suspended Particulate (TSP)	Kilogram	NA	NA	NA	NA	NA	<b>NA</b>	
		• Nitrogen Oxide (NOx)	Kilogram/ production unit	NA	NA	NA	NA	NA	<b>NA</b>	
		• Sulfur Oxide (SOx)	Kilogram/ production unit	NA	NA	NA	NA	NA	<b>NA</b>	
		• Carbon Monoxide (CO)	Kilogram/ production unit	NA	NA	NA	NA	NA	<b>NA</b>	
		• Total Suspended Particulate (TSP)	Kilogram/ production unit	NA	NA	NA	NA	NA	<b>NA</b>	
<b>Construction Business</b>										
		Total greenhouse gas emissions reduction	Tons of CO <sub>2</sub> equivalent	NA	NA	NA	NA	3,290.00	<b>5,547.95</b>	Note (6)
	<b>Disclosure 305-1</b>	• Direct (Scope 1) GHG emissions	Tons of CO <sub>2</sub> equivalent	NA	NA	NA	NA	2,885.00	<b>5,056.80</b>	Note (6)
	<b>Disclosure 305-2</b>	• Indirect (Scope 2) GHG emissions	Tons of CO <sub>2</sub> equivalent	NA	NA	NA	NA	404	<b>491.14</b>	Note (6)
	<b>Disclosure 305-3</b>	• Other indirect (Scope 3) GHG emissions	Tons of CO <sub>2</sub> equivalent	NA	NA	NA	NA	NA	<b>NA</b>	
	<b>Disclosure 305-4</b>	GHG emissions intensity (Scopes 1&2)	Tons of CO <sub>2</sub> equivalent per ton of production	NA	NA	NA	NA	NA	<b>0.08</b>	Note (6)
	<b>Disclosure 305-5</b>	Reduction of GHG emissions from base year 2020	Tons of CO <sub>2</sub> equivalent	NA	NA	NA	NA	NA	<b>NA</b>	
			%	NA	NA	NA	NA	NA	<b>NA</b>	
	<b>Disclosure 305-6</b>	Emissions of ozone-depleting substances (ODS)	NA	NA	NA	NA	NA	NA	<b>NA</b>	

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Standard		Topics of data disclosure	Performance							Note(s) /Omission(s)	
SDGs	Disclosure		Unit	2017	2018	2019	2020	2021	2022		
		<b>Quantitative targets on significant air emissions</b>									
	<b>Disclosure 305-7</b>	• Nitrogen Oxide (NOx)	Kilogram	NA	NA	NA	NA	NA	NA	NA	
	<b>Disclosure 305-7</b>	• Sulfur Oxide (SOx)	Kilogram	NA	NA	NA	NA	NA	NA	NA	
	<b>Disclosure 305-7</b>	• Carbon Monoxide (CO)	Kilogram	NA	NA	NA	NA	NA	NA	NA	
		• Total Suspended Particulate (TSP)	Kilogram	NA	NA	NA	NA	NA	NA	NA	
		• Nitrogen Oxide (NOx)	Kilogram/ production unit	NA	NA	NA	NA	NA	NA	NA	
		• Sulfur Oxide (SOx)	Kilogram/ production unit	NA	NA	NA	NA	NA	NA	NA	
		• Carbon Monoxide (CO)	Kilogram/ production unit	NA	NA	NA	NA	NA	NA	NA	
		• Total Suspended Particulate (TSP)	Kilogram/ production unit	NA	NA	NA	NA	NA	NA	NA	
<b>Effluents, Waste and Pollution</b>											
<b>Effluents, Waste and Pollution Management</b>											
<b>Goal 12</b>	<b>Disclosure 306</b>	Policy and guidelines on environment management: Effluents, waste and pollution	Yes/No	•	•	•	•	•	•	•	
		Principle, standard or practice guidelines on environment management that the Group implements and references	Yes/No	•	•	•	•	•	•	•	
		Plan to reduce effluents, waste, and pollution	Yes/No	•	•	•	•	•	•	•	
		Target on reduction of effluents, waste, and pollution	Yes/No	•	•	•	•	•	•	•	
<b>Goal 12</b>	<b>Asphalt Business (Thailand)</b>										
	<b>Disclosure 306-1</b>	• Total water discharge, by quality and destination	Million cubic meters	0	0	0	0	0	0	2.78	Note (2)
	<b>Disclosure 306-2</b>	• Total waste, by type and method	Ton	367	431	405	461.32	247.28	268.05		Note (3)
		- Total weight of hazardous waste	Ton	NA	NA	NA	212.2	93.52	174.01		Note (3)
		* Sorting	Ton	NA	NA	NA	0	0	0		Note (3)
		* Storage	Ton	NA	NA	NA	0	0.07	0.12		Note (3)
		* Reuse	Ton	NA	NA	NA	0	0	4.25		Note (3)
		* Recycle	Ton	NA	NA	NA	194.8	93.45	169.64		Note (3)
		* Recovery	Ton	NA	NA	NA	0	0	0		Note (3)
		* Treatment	Ton	NA	NA	NA	0	0	0		Note (3)
		* Incineration	Ton	NA	NA	NA	0.9	0	0		Note (3)
* Disposal		Ton	NA	NA	NA	16.5	0	0		Note (3)	

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Standard		Topics of data disclosure	Performance							Note(s) /Omission(s)
SDGs	Disclosure		Unit	2017	2018	2019	2020	2021	2022	
		<b>- Total weight of non-hazardous waste</b>	Ton	NA	NA	NA	249.12	153.76	<b>94.04</b>	Note (3)
		* Sorting	Ton	NA	NA	NA	218.44	85.46	<b>33.48</b>	Note (3)
		* Storage	Ton	NA	NA	NA	0	0	<b>0</b>	Note (3)
		* Reuse	Ton	NA	NA	NA	0	0	<b>0.01</b>	Note (3)
		* Recycle	Ton	NA	NA	NA	0	40.05	<b>32.98</b>	Note (3)
		* Recovery	Ton	NA	NA	NA	0	0	<b>0</b>	Note (3)
		* Treatment	Ton	NA	NA	NA	0	0	<b>0</b>	Note (3)
		* Incineration	Ton	NA	NA	NA	0	0	<b>0</b>	Note (3)
		* Disposal	Ton	NA	NA	NA	30.68	28.25	<b>27.57</b>	Note (3)
<b>Marine Business</b>										
		<b>- Total weight of hazardous waste</b>								
		* Recycle	Cubic meters	NA	NA	NA	NA	0	<b>0</b>	
		* Treatment	Cubic meters	NA	NA	NA	NA	0	<b>0</b>	
		* Incineration with out energy recovery	Cubic meters	NA	NA	NA	NA	0	<b>0</b>	
		* Disposal	Cubic meters	NA	NA	NA	NA	1.71	<b>0.69</b>	
		<b>- Total weight of non-hazardous waste</b>								
		* Recycle	Cubic meters	NA	NA	NA	NA	92.44	<b>85.84</b>	
		* Treatment	Cubic meters	NA	NA	NA	NA	120.73	<b>122.89</b>	
		* Incineration with out energy recovery	Cubic meters	NA	NA	NA	NA	3.18	<b>1.02</b>	
		* Disposal	Cubic meters	NA	NA	NA	NA	30.9	<b>30.25</b>	
	<b>Disclosure 306-3</b>	<b>• Total volume of recorded significant spills of asphalt and chemicals</b>	Ton	NA	NA	NA	<b>1.78</b>	<b>31.81</b>	<b>20.09</b>	Note (3)
		<b>- From Tipco Asphalt's own operations</b>	Ton	NA	NA	NA	<b>1.78</b>	<b>3.81</b>	<b>3.40</b>	Note (3)
		* Total number of recorded significant asphalt and Non asphalt spills less than 200 kg./time	Times	NA	NA	NA	NA	12.00	<b>8.00</b>	Note (3)
		* Total quantity of significant asphalt spills less than 200 kg./time	Ton	NA	NA	NA	NA	0.81	<b>0.61</b>	Note (3)
		* Total number of recorded significant asphalt and Non asphalt spills between 200-20,000 kg./time	Times	NA	NA	NA	3.00	4.00	<b>3.00</b>	Note (3)
		* Total quantity of significant asphalt and Non asphalt spills between 200-20,000 kg./time	Ton	NA	NA	NA	1.78	3.00	<b>2.79</b>	Note (3)
		* Total number of recorded significant asphalt and Non asphalt spills more than 20,000 kg./time	Times	NA	NA	NA	0.00	0.00	<b>0.00</b>	Note (3)
		* Total quantity of significant asphalt and Non asphalt spills more than 200-20,000 kg./time	Ton	NA	NA	NA	0.00	0.00	<b>0.00</b>	Note (3)

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Standard		Topics of data disclosure	Performance							Note(s) /Omission(s)
SDGs	Disclosure		Unit	2017	2018	2019	2020	2021	2022	
Goal 12	Disclosure 306-3	<b>- From external unit (distribution): Delivery via trucks</b>	Ton	NA	NA	NA	0.00	28.00	<b>16.69</b>	Note (3)
		* Total number of recorded significant asphalt spills less than 200 kg./time	Times	NA	NA	NA	NA	0.00	<b>1.00</b>	Note (3)
		* Total quantity of significant asphalt spills less than 200 kg./time	Ton	NA	NA	NA	NA	0.00	<b>0.02</b>	Note (3)
		* Total number of recorded significant asphalt spills between 200-20,000 kg./time	Times	NA	NA	NA	0.00	1.00	<b>1.00</b>	Note (3)
		* Total quantity of significant asphalt spills between 200-20,000 kg./time	Ton	NA	NA	NA	0.00	3.00	<b>16.67</b>	Note (3)
		* Total number of recorded significant asphalt spills more than 20,000 kg./time	Times	NA	NA	NA	0.00	1.00	<b>0.00</b>	Note (3)
		* Total quantity of significant asphalt spills more than 20,000 kg./time	Ton	NA	NA	NA	0.00	25.00	<b>0.00</b>	Note (3)
		<b>Asphalt Business (Thailand)</b>								
	Disclosure306-1	Waste generation and significant waste-related impacts	Yes/No	•	•	•	•	•	•	
	Disclosure306-2	Management of significant wasterelated impacts	Yes/No	•	•	•	•	•	•	
		<b>• Total waste</b>	Ton	NA	NA	NA	443.92	247.28	<b>268.05</b>	Note (3)
	Disclosure306-3	<b>- Waste generated</b>	Ton	367	431	405	461.32	247.28	<b>268.05</b>	Note (3)
		* Hazardous waste	Ton	NA	NA	NA	212.20	93.52	<b>174.01</b>	Note (3)
		* Non-hazardous waste	Ton	NA	NA	NA	249.12	153.76	<b>94.04</b>	Note (3)
	Disclosure306-4	<b>- Waste diverted from disposal</b>	Ton	NA	NA	NA	413.24	219.03	<b>240.48</b>	Note (3)
		* Hazardous waste	Ton	NA	NA	NA	194.80	93.52	<b>174.01</b>	Note (3)
		* Non-hazardous waste	Ton	NA	NA	NA	218.44	125.51	<b>66.48</b>	Note (3)
	Disclosure306-5	<b>- Waste directed to disposal</b>	Ton	NA	NA	NA	48.08	28.25	<b>27.57</b>	Note (3)
		* Hazardous waste	Ton	NA	NA	NA	17.40	0.00	<b>0.00</b>	Note (3)
		* Non-hazardous waste	Ton	NA	NA	NA	30.68	28.25	<b>27.57</b>	Note (3)
	Disclosure306-4	<b>- Hazardous waste diverted from disposal</b>	Ton	NA	NA	NA	194.80	93.52	<b>174.01</b>	Note (3)
		Onsite								Note (3)
		* Reused	Ton	NA	NA	NA	0.00	0.00	<b>4.25</b>	Note (3)
		* Recycle	Ton	NA	NA	NA	0.00	0.00	<b>0.00</b>	Note (3)
		* Other recovery operations	Ton	NA	NA	NA	0.00	0.00	<b>0.00</b>	Note (3)
		Offsite								Note (3)
		* Reused	Ton	NA	NA	NA	0.00	0.00	<b>0.00</b>	Note (3)
		* Recycle	Ton	NA	NA	NA	194.80	93.45	<b>169.64</b>	Note (3)
		* Other recovery operations	Ton	NA	NA	NA	0.00	0.07	<b>0.12</b>	Note (3)
	Disclosure306-4	<b>- Non-hazardous waste diverted from disposal</b>	Ton	NA	NA	NA	218.44	125.51	<b>66.48</b>	Note (3)
		Onsite								Note (3)
		* Reused	Ton	NA	NA	NA	0.00	0.00	<b>0.01</b>	Note (3)
		* Recycle	Ton	NA	NA	NA	0.00	0.00	<b>0.00</b>	Note (3)
		* Other recovery operations	Ton	NA	NA	NA	0.00	0.00	<b>0.00</b>	Note (3)
		Offsite								Note (3)
		* Reused	Ton	NA	NA	NA	0.00	0.00	<b>0.00</b>	Note (3)
		* Recycle	Ton	NA	NA	NA	0.00	40.05	<b>32.98</b>	Note (3)
		* Other recovery operations	Ton	NA	NA	NA	218.44	85.46	<b>33.48</b>	Note (3)

**Environmental**

Standard		Topics of data disclosure	Performance							Note(s) /Omission(s)
SDGs	Disclosure		Unit	2017	2018	2019	2020	2021	2022	
Goal 12	Disclosure306-5	<b>- Hazardous waste directed to disposal</b>	Ton	NA	NA	NA	0.00	-	<b>0.00</b>	Note (3)
		Onsite								Note (3)
		* Incineration with energy recovery	Ton	NA	NA	NA	0.00	0.00	<b>0.00</b>	Note (3)
		* Incineration without energy recovery	Ton	NA	NA	NA	0.00	0.00	<b>0.00</b>	Note (3)
		* Landfilling	Ton	NA	NA	NA	0.00	0.00	<b>0.00</b>	Note (3)
		* Other recovery operations	Ton	NA	NA	NA	0.00	0.00	<b>0.00</b>	Note (3)
		Offsite								Note (3)
		* Incineration with energy recovery	Ton	NA	NA	NA	0.00	0.00	<b>0.00</b>	Note (3)
		* Incineration without energy recovery	Ton	NA	NA	NA	0.00	0.00	<b>0.00</b>	Note (3)
		* Landfilling	Ton	NA	NA	NA	0.00	0.00	<b>0.00</b>	Note (3)
	* Other recovery operations	Ton	NA	NA	NA	0.00	0.00	<b>0.00</b>	Note (3)	
	Disclosure306-5	<b>- Non-hazardous waste directed to disposal</b>	Ton	NA	NA	NA	30.68	28.25	<b>27.57</b>	Note (3)
		Onsite								Note (3)
		* Incineration with energy recovery	Ton	NA	NA	NA	0.00	0.00	<b>0.00</b>	Note (3)
		* Incineration without energy recovery	Ton	NA	NA	NA	0.00	0.00	<b>0.00</b>	Note (3)
		* Landfilling	Ton	NA	NA	NA	0.00	0.00	<b>0.00</b>	Note (3)
		* Other recovery operations	Ton	NA	NA	NA	0.00	0.00	<b>0.00</b>	Note (3)
		Offsite								Note (3)
		* Incineration with energy recovery	Ton	NA	NA	NA	0.00	0.00	<b>0.00</b>	Note (3)
		* Incineration without energy recovery	Ton	NA	NA	NA	0.00	0.00	<b>0.00</b>	Note (3)
* Landfilling		Ton	NA	NA	NA	30.68	28.25	<b>27.57</b>	Note (3)	
* Other recovery operations	Ton	NA	NA	NA	0.00	0.00	<b>0.00</b>	Note (3)		
<b>Marine Business</b>										
Disclosure306-3	<b>- Waste generated</b>	Cubic meters	NA	NA	NA	NA	248.96	<b>240.69</b>		
	* Hazardous waste	Cubic meters	NA	NA	NA	NA	1.71	<b>0.69</b>		
	* Non-hazardous waste	Cubic meters	NA	NA	NA	NA	247.25	<b>240.00</b>		
Disclosure306-4	<b>- Waste diverted from disposal</b>	Cubic meters	NA	NA	NA	NA	213.17	<b>208.73</b>		
	* Hazardous waste	Cubic meters	NA	NA	NA	NA	0.00	<b>0.00</b>		
	* Non-hazardous waste	Cubic meters	NA	NA	NA	NA	213.17	<b>208.73</b>		
Disclosure306-5	<b>- Waste directed to disposal</b>	Cubic meters	NA	NA	NA	NA	35.79	<b>31.96</b>		
	* Hazardous waste	Cubic meters	NA	NA	NA	NA	1.71	<b>0.69</b>		
	* Non-hazardous waste	Cubic meters	NA	NA	NA	NA	34.08	<b>31.27</b>		
Disclosure306-4	<b>- Hazardous waste diverted from disposal</b>	Cubic meters	NA	NA	NA	NA	0.00	<b>0.00</b>		
	Onsite									
	* Reused	Cubic meters	NA	NA	NA	NA	0.00	<b>0.00</b>		
	* Recycle	Cubic meters	NA	NA	NA	NA	0.00	<b>0.00</b>		
	* Other recovery operations	Cubic meters	NA	NA	NA	NA	0.00	<b>0.00</b>		
	Offsite									
	* Reused	Cubic meters	NA	NA	NA	NA	0.00	<b>0.00</b>		
* Recycle	Cubic meters	NA	NA	NA	NA	0.00	<b>0.00</b>			
* Other recovery operations	Cubic meters	NA	NA	NA	NA	0.00	<b>0.00</b>			



Environmental

Standard		Topics of data disclosure	Performance							Note(s) /Omission(s)	
SDGs	Disclosure		Unit	2017	2018	2019	2020	2021	2022		
Goal 12	Disclosure306-4	<b>- Non-hazardous waste diverted from disposal</b>	Cubic meters	NA	NA	NA	NA	213.17	<b>208.73</b>		
		Onsite									
		* Reused	Cubic meters	NA	NA	NA	NA	0.00	<b>0.00</b>		
		* Recycle	Cubic meters	NA	NA	NA	NA	0.00	<b>0.00</b>		
		* Other recovery operations	Cubic meters	NA	NA	NA	NA	0.00	<b>122.89</b>		
		Offsite									
		* Reused	Cubic meters	NA	NA	NA	NA	0.00			
		* Recycle	Cubic meters	NA	NA	NA	NA	92.44	<b>85.84</b>		
		* Other recovery operations	Cubic meters	NA	NA	NA	NA	120.73	<b>0.00</b>		
		Disclosure306-5	<b>- Hazardous waste directed to disposal</b>	Cubic meters	NA	NA	NA	NA	1.71	<b>0.69</b>	
			Onsite								
			* Incineration with energy recovery	Cubic meters	NA	NA	NA	NA	0.00	<b>0.00</b>	
			* Incineration without energy recovery	Cubic meters	NA	NA	NA	NA	0.00	<b>0.00</b>	
			* Landfilling	Cubic meters	NA	NA	NA	NA	0.00	<b>0.00</b>	
	* Other recovery operations		Cubic meters	NA	NA	NA	NA	0.00	<b>0.00</b>		
	Offsite										
	* Incineration with energy recovery		Cubic meters	NA	NA	NA	NA	0.00	<b>0.00</b>		
	* Incineration without energy recovery		Cubic meters	NA	NA	NA	NA	0.00	<b>0.00</b>		
	* Landfilling		Cubic meters	NA	NA	NA	NA	1.71	<b>0.69</b>		
	* Other recovery operations		Cubic meters	NA	NA	NA	NA	0.00	<b>0.00</b>		
	Disclosure306-5		<b>- Non-hazardous waste directed to disposal</b>	Cubic meters	NA	NA	NA	NA	34.08	<b>31.27</b>	
			Onsite								
			* Incineration with energy recovery	Cubic meters	NA	NA	NA	NA	0.00	<b>0.00</b>	
		* Incineration without energy recovery	Cubic meters	NA	NA	NA	NA	0.00	<b>1.02</b>		
		* Landfilling	Cubic meters	NA	NA	NA	NA	0.00	<b>0.00</b>		
		* Other recovery operations	Cubic meters	NA	NA	NA	NA	0.00	<b>0.00</b>		
		Offsite									
		* Incineration with energy recovery	Cubic meters	NA	NA	NA	NA	0.00	<b>0.00</b>		
* Incineration without energy recovery		Cubic meters	NA	NA	NA	NA	3.18	<b>0.00</b>			
* Landfilling		Cubic meters	NA	NA	NA	NA	30.90	<b>30.25</b>			
* Other recovery operations		Cubic meters	NA	NA	NA	NA	0.00	<b>0.00</b>			

Note :

NA (Not Available): No data collected

(1) Total energy consumption reduction (electricity and/or fuel) in 2019-2020 as compared to baseline year 2018 and total energy consumption reduction in 2021-2022 as compared to baseline year 2020

(2) Covered the head office and 5 asphalt plants, namely the Nakhon Ratchasima factory, Phitsanulok factory, Rayong factory, Suratthani factory , and Phra Pradaeng warehouse (Assurance statement)

(3) Covered the 5 asphalt plants, namely the Nakhon Ratchasima factory, Phitsanulok factory, Rayong factory, Suratthani factory , and Phra Pradaeng warehouse (Assurance statement)

(4) Covered the head office and 5 asphalt plants, namely the Nakhon Ratchasima factory, Phitsanulok factory, Rayong factory, Suratthani factory , and Phra Pradaeng warehouse.

(5) Covered the 5 asphalt plants, namely the Nakhon Ratchasima factory, Phitsanulok factory, Rayong factory, Suratthani factory , and Phra Pradaeng warehouse.

(6) Covered then Thai Slurry Seal Company Limited

(7) The improvement values of emission factor in 2020-2021 according to emission factor in 2022