

Ascertaining CO2 Emissions in the Supply Chain (FY2016)

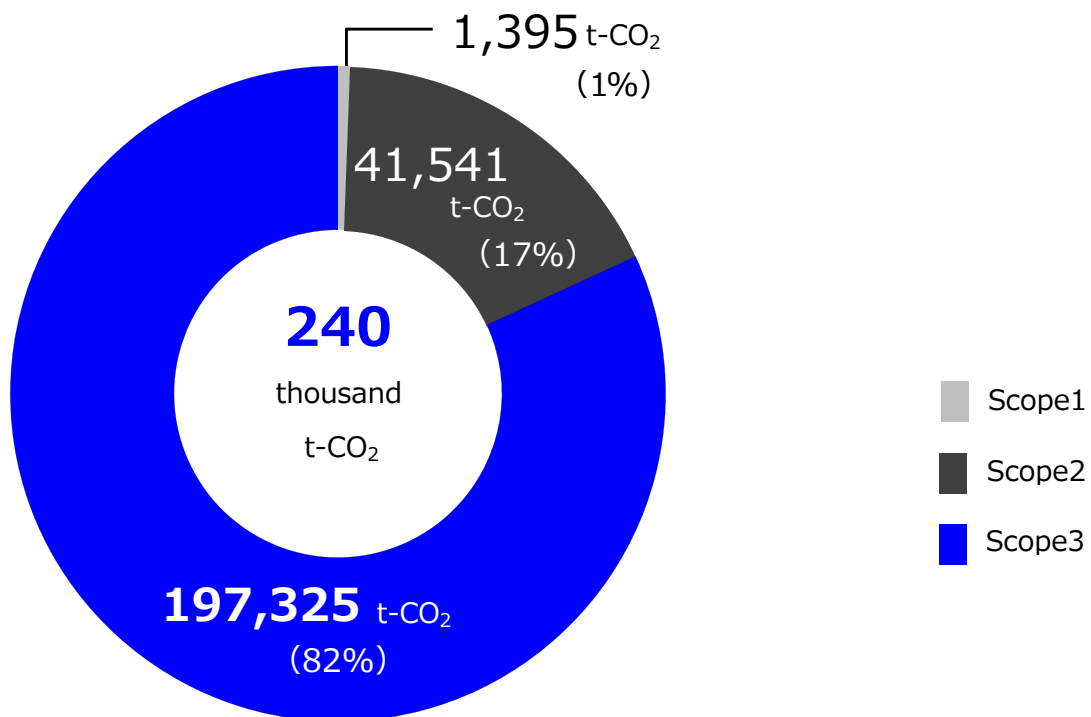
In 2017, we received support from the Ministry of the Environment in calculating supply chain emissions and also calculated indirect emissions (Scope 3) for FY2016. As a result, we verified that among Scope 3 emissions, Category 1 emissions (emissions generated from the extraction and production of all products and services that have been purchased or acquired) accounted for a large proportion of the total. Moving forward, we will work to improve the accuracy of our calculations and further reduce CO2 emissions.

< Scope Emissions and the ratio >

Scope 1 Direct greenhouse gas emissions from the use of fuel, etc. : **1,395 t-CO₂**

Scope 2 Indirect greenhouse gas emissions generated due to the use of purchased electricity or heat :
41,541t-CO₂

Scope 3 Indirect greenhouse gas emissions related to business activities in the supply chain :
197,325t-CO₂



< CO2 Emissions by Scope and Category /Ratio /Calculation method >

Site Covered : Tamron Group

Scope and Category	CO ₂ emissions (t-CO ₂)	Ratio (%)	Calculation method
Scope 1 (Direct emissions)	1,395	1%	—
Scope 2 (Indirect emissions)	41,541	17%	—
Scope 3 (Supply chain)	197,325	82%	—
Category 1 Purchased goods and services	112,203	46.7%	Amount of activity: Amount of purchased raw materials, packaging materials, advertising expenses, and consumables Unit: Calculated by the emissions unit of each item (Emission factor database for calculating organizational GHG emissions throughout the supply chain ver. 2.4)
Category 2 Capital goods	50,939	21.2%	Amount of activity: Amount of capital investment by all consolidated subsidiaries Unit: Calculated by the emissions unit (Emission factor database for calculating organizational GHG emissions throughout the supply chain ver. 2.4)
Category 3 Fuel-and-energy-related activities	2,365	1.0%	Amount of activity: Amount of purchased electricity and fuels (monetary amount) Unit: Calculated by the emissions unit of each type (CFP COMMUNICATION PROGRAM DB ver1.01)
Category 4 Upstream transportation and distribution	13,720	5.7%	Amount of activity: Amount of domestic and overseas shipment of purchased materials and services from supplier Unit: Calculated by the emissions unit of each transportation type (Emission factor database for calculating organizational GHG emissions throughout the supply chain ver. 2.4) Trucks: Specific fuel consumption using the improved ton/kilo method Airplanes: Simplified calculation tool issued by Policy Research Institute for Land, Infrastructure, Transport and Tourism

Scope and Category	CO ₂ emissions (t-CO ₂)	Ratio (%)	Calculation method
Category 5 Waste generated in operations	3,644	1.5%	Amount of activity: Emissions of each type of waste. Unit: Calculated by the emissions unit of each type (Emission factor database for calculating organizational GHG emissions throughout the supply chain ver. 2.4)
Category 6 Business travel	328	0.1%	Amount of activity:Transport expenses paid by transportation means Unit: Calculated by the emissions unit per transportation means (Emission factor database for calculating organizational GHG emissions throughout the supply chain ver. 2.4)
Category 7 Employee commuting	8,393	3.5%	Amount of activity: Transportation expenses paid to employees. Unit: Calculated by the emissions unit per transportation means (Emission factor database for calculating organizational GHG emissions throughout the supply chain ver. 2.4)
Category 8 Upstream leased assets	50	0.0%	Amount of activity: Leased buildings such as sales offices Unit: Calculated by the emissions unit of the sales area (Emission factor database for calculating organizational GHG emissions throughout the supply chain ver. 2.4)
Category 9 Downstream transportation and distribution	-	-	Not covered (We have not burdened transportation expenses after delivery to the agents.)
Category 10 Processing of sold products	-	-	Not covered (There is no processing after product delivery.)

Scope and Category	CO ₂ emissions (t-CO ₂)	Ratio (%)	Calculation method
Category 11 Use of sold products	1,274	0.5%	Amount of activity: Lifetime power consumption of products (total of annual sales numbers) Unit: Calculated by the emissions unit of the power consumption described in the product specifications (Emission factor database for calculating organizational GHG emissions throughout the supply chain ver. 2.4)
Category 12 End of life treatment of sold products	4,409	1.8%	Amount of activity: Emissions from the product itself and container packaging materials Unit: Calculated by the emissions unit of each type (Emission factor database for calculating organizational GHG emissions throughout the supply chain ver. 2.4)
Category 13 Downstream leased assets	-	-	Not covered (There are no leased assets.)
Category 14 Franchises	-	-	Not covered (Business type is not franchise type.)
Category 15 Investments	-	-	Not covered (We are not engaged in investment and financial services activities.)