

**NATIONAL STANDARD OF THE
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**Greenhouse Gases – Quantitative Methods and Requirements
of Product Carbon Footprint – Road Vehicle Products**

温室气体 产品碳足迹量化方法与要求 道路车辆产品

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Foreword

This Document was drafted as per the rules specified in GB/T 1.1-2020 Directives for Standardization – Part 1: Rules for the Structure and Drafting of Standardizing Documents.

Please note some contents of this Document are not involved patents. The issuing agency of this Document shall not assume the responsibility to identify these patents.

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Introduction

This Document outlines the requirements for carbon footprint accounting for road vehicle products arose from accounting principles, quantification methods, and carbon footprint reporting. It is expected to achieve the following:

- Provide quantification requirements for the carbon footprint of road vehicle products;
- product carbon footprint performance tracking and communication for road vehicles;
- Prevent the transfer of carbon emissions from one stage of the road vehicle lifecycle to

another or between product lifecycles;

potential opportunities for carbon emission reduction;

and reporting for road vehicle products;

production and manufacturing methods, raw material selection, transportation, recycling, and other end-of-life stages;

and plans throughout the road vehicle product lifecycle, and timely identify low-carbon supply chains;

--- Provide a basis for relevant decision-makers to determine more low-carbon road vehicle technology routes;

--- Provide reliable carbon footprint information for road vehicle products.

1 Scope

This Document specifies the quantification objectives, quantification range, list analysis, impact assessment, result explanation, product carbon footprint reporting, and product carbon footprint declaration for road vehicle products.

This Document applies to the accounting and reporting of carbon emissions from complete vehicles, trailers, motorcycles, components, and materials. Other types of products may refer to this Document for implementation.

2 Normative References

The provisions in following documents become the essential provisions of this Document through reference in this Document. For the dated documents, only the versions with the dates indicated are applicable to this Document; for the undated documents, only the latest version (including all the amendments) is applicable to this Document.

3 Terms and Definitions

3.1 Road vehicle products

Complete vehicle products such as automobiles, trailers, and motorcycles used on roads, vehicle parts (including new parts, remanufactured parts, and recycled parts from scrapped motor vehicles), and materials (including virgin automotive materials and recycled materials, etc.).

3.2 Biomass

Biologically derived materials, excluding materials embedded in geological structures and materials transformed into fossils.

NOTE 1: Includes organic matter (living and dead), such as trees, crops, grasses, tree litter, algae, animals, excrement, and biological waste.

NOTE 2: In this document, biomass does not include peat.

3.3 Biogenic carbon

Carbon that is derived from biomass.

3.4 Fossil carbon

Carbon that is contained in fossil materials.

EXAMPLE: Coal, oil and natural gas, and peat.

3.5 Product system

A collection of unit processes that possess basic flow and product flow, have one or more specific functions at the same time, and can simulate the product lifecycle.

3.6 Life cycle

3.7 Life cycle assessment; LCA

A compilation and assessment of the inputs, outputs, and potential environmental impacts of a product system throughout its entire life cycle.

3.8 Functional unit

A benchmark unit that is used to quantify the functions of a product system.

3.9 Declared unit

A benchmark unit that is used to quantify a portion of a product's carbon footprint.

3.10 System boundary

A set of criteria that is used to determine which unit processes are part of the product system.

3.11 Benchmarking boundary

To ensure the comparability of carbon footprint results for different automotive products, a fixed accounting boundary is established.

NOTE: With technological advancements and cost control, the benchmarking boundary for products will continuously expand towards the system boundary as standards are updated, ultimately achieving complete uniformity.

3.12 Activity data