

Technical Requirement for Environmental Products

The Certificable Technical Requirement for Environmental Labelling Products

Low Pollution Light Weight Vehicles

HBC 8—2001

1 Scope

This technical requirement specifies the basic requirements, technical contents and test methods for environmental labelling products of low pollution light weight vehicles.

This technical requirement shall apply to environmental labelling product certification for light weight vehicles that the maximum design speed is ≥ 50 km/h, and powered by spark-ignition engine or compression ignition engine.

This technical requirement will expired on Dec. 31, 2003.

2 Standards cited

Provisions in the following standards are cited in this technical requirement, and therefore form the provisions of the standard.

GB 5181—1985 Automotive emission—Terms and definitions

GB/T 15089—1994 Motor vehicles—Classification

GB 18352.2—2001 Limits and measurement methods for pollution emitted by light-duty vehicles

In case of the criteria above are revised, the latest version should be applied.

3 Definition

3.1 Light weight vehicles

Light weight vehicles refer to vehicles that the maximum weight does not exceed 3.5t and belong to type M1, M2 and N1.

3.2 Vehicle of type M1

It refers to vehicles for carrying passengers that have not more than 8 seats except the driver's seat and at least 4 wheels, or vehicles with 3 wheels and the nominal maximum total weight exceeding 1t.

3.3 Vehicle of type M2

It refers to vehicles for carrying passengers that have more than 8 seats except the driver's seat and the nominal maximum total weight do not exceed 5t.

3.4 Vehicle of type N1

It refers to vehicles for carrying cargo that have at least 4 wheels, or vehicles with 3 wheels and the nominal maximum total weight do not exceed 3.5t.

3.5 Reference mass (RM)

Reference mass means mass of the entire vehicle with all equipments plus 100kg.

3.6 Gross vehicle mass (GVM)

Gross vehicle mass refers to the maximum mass of vehicle allowed by technique specified by automobile manufacturer.

3.7 The first kind of vehicle

It means vehicle of type M1 with accommodation of no more than 6 persons (including the driver) and GVM $\leq 2.5t$, i.e. it generally refers to cars.

3.8 The second kind of vehicle

All light weight vehicles except the first kind of vehicle with the range of use in this standard.

3.9 Particulate matter (PM)

Particulate matter refers to solid or liquid particles collected on filters from diluted exhaust with a maximum temperature of 52°C by the described sampling method.

3.10 Gaseous pollutants

Gaseous pollutants refer to carbon monoxide (CO), hydrocarbon (HC) and nitrogen oxide (NO_x). Hydrocarbon is expressed in equivalence of carbon (C), and C-H ratio is 1:1.85; nitrogen oxide is expressed in equivalence of nitrogen dioxide (NO₂).

3.11 Emissions (pollutants)

As for vehicle powered by spark-ignition engine, it means gaseous pollutant released from vent-pipe; as for vehicle powered by compression ignition engine, it means gaseous pollutant and particulate matter released from vent-pipe.

3.12 Gaseous fuel

It refers to liquefied petroleum gas (LPG) or natural gas (NG).

3.13 Double-fuel vehicles

It refers to vehicles that use both gasoline and one kind of gaseous fuel.

3.14 Single-fuel vehicles

It refers to vehicle with no more than 15L gasoline tank capacity; and it may use gasoline or one kind of gaseous fuel (LPG or NG), however, only in the case of emergency or starting engine that it uses gasoline.

4 Basic requirements

4.1 Products should conform with the requirements of national standards for light weight vehicles.

4.2 Pollutant emission of products should meet the requirement in GB 18352.2-2001.

4.2 Pollutant emission of the company should be obliged to conform with pollutant emission standards nationally or locally.

5 Technical contents

5.1 The requirements for vehicle pollutant emission are listed in table 1.

5.2 As for double-fuel vehicles, it should check the exhaust pollutants of the two kinds of fuel, respectively. Standards in table 1 should be applied to.

5.3 As for single-fuel vehicles, it should check the exhaust pollutants of gaseous fuel. Standards in table 1 should be applied to.

5.4 CFCs are not allowed to be used in air conditioners of the vehicles.

5.5 Asbestos fibre products do not allowed to be used in automotive brakes and clutch plates.

6 Test

6.1 Test for exhaust pollutants in technical contents should be conducted according to annex C of GB 18352.2-2001.

6.2 Requirements specified in 5.4, 5.5 in technical contents should be verified by the way of field inspection.

Table 1 Standards for test of labelling product certification Unit: g/km

Vehicle style	Reference mass RM/kg	Limitation						
		Carbon monoxide (CO) L ₁		Hydrocarbon + nitrogen oxide (HC+NO _x) L ₂			Particulate matter (PM) L ₃	
		Spark-ignition engine	Compression ignition engine	Spark-ignition engine	Non-direct-spray compression ignition engine	Direct-spray compression ignition engine	Non-direct-spray compression ignition engine	Direct-spray compression ignition engine
The first kind of vehicle	Entire	2.2	1.0	0.5	0.7	0.9	0.08	0.10
The second kind of vehicle	RM ≤ 1250	2.2	1.0	0.5	0.7	0.9	0.08	0.10
	1250 < RM ≤ 1700	4.0	1.25	0.6	1.0	1.3	0.12	0.14
	RM > 1700	5.0	1.5	0.7	1.2	1.6	0.17	0.20

Annotations:

This technical requirement has been prepared by Department of science and technology, standards of State Environment Protection Administration.

The State Environment Protection Administration keeps the right of interpretation for this technical requirement.