



National Environmental Protection Standards of  
the People's Republic of China

HJ 311-2017

Replace HJ/T 311—2006

---

**Technical requirement for environmental labeling products**  
**Gas cooking appliances**

Issued on December 11, 2017

Coming in force as of March 1, 2018

---

**Issued by the Ministry of Environmental Protection**

Contents

Foreword..... III

1 Applicable Scope..... 1

2 Normative References ..... 1

3 Terms and Definitions ..... 2

4 Basic Requirements..... 2

5 Technical Contents ..... 2

6 Test Methods ..... 3

**This document is a translation of a Chinese original. In case of dispute, the original document should be taken as authoritative.**

## Foreword

This standard is formulated for the purposes of implementing the Environment Protection Law of the People's Republic of China, reducing adverse impacts of gas cooking appliances on the environment and human health in the process of production and use.

This standard identifies environmental protection requirements for design and production process, use, packaging and instructions of gas cooking appliances.

This standard revises the Technical Requirement for Environmental Labeling Products— Gas Cooking Appliances (HJ/T 311—2006) with the following main changes:

- adjust the applicable scope;
- add the term and definition of gas cooking appliance;
- add the requirement for environmental design;
- add the requirement for production process;
- adjust the limits for NO<sub>x</sub>, CO and thermal efficiency;
- add noise limit;
- add the requirement for packaging materials;
- add requirements for making public of product information.

The development of this standard is under the organization of the Department of Science and Technology and Standards of the Ministry of Environmental Protection.

This standard is drafted mainly by the Environmental Development Center of the Ministry of Environmental Protection.

This standard was approved by the Ministry of Environmental Protection on December 11, 2017.

This standard takes effect as of March 1, 2018.

This standard shall be interpreted by the Ministry of Environmental Protection.

The previous versions replaced by this standard are HJ/T 311-2006 and HJBZ 19-1997.

# Technical requirement for environmental labeling products

## Gas Cooking Appliances

### 1 Applicable Scope

This standard stipulates the terms and definitions, basic requirements, technical contents and test methods for gas cooking appliance environmental labeling products.

This standard is applicable to domestic gas cooking appliances using urban gas, defined in Domestic Gas Cooking Appliances (GB 16410), and commercial gas cooking appliances defined in Minimum Allowable Values of Energy Efficiency and Energy Efficiency Grades for Commercial Gas Cooking Appliances (GB 30531). The gas cooking appliances using the gas category other than those specified in the Classification and Essential Property of City Gas (GB/T 13611) may refer to this standard.

This standard does not apply to the gas cooking appliances used in moving transportation vehicles.

### 2 Normative References

The contents of this standard quote the provisions of the following documents. The valid version of any quoted document without a marked date shall be applicable to this standard.

GB 16410	Domestic Gas Cooking Appliances
GB 30531	Minimum Allowable Values of Energy Efficiency and Energy Efficiency Grades for Commercial Gas Cooking Appliances
GB 30720	Minimum Allowable Values of Energy Efficiency and Energy Efficiency Grades for Domestic Gas Cooking Appliances
GB/T 13611	Classification and Essential Property of City Gas
GB/T 16288	Marking of Plastic Products
GB/T 18455	Package Recycling Marking
GB/T 26572	Requirements on Concentration Limits for Certain Restricted Substances in Electrical and Electronic Products
CJ/T 28	Chinese Cooking Gas Appliances
CJ/T 187	Gas Steaming Oven
CJ/T 392	Commercial Gas Oven for Cooking
HJ 2537	Technical Requirement for Environmental Labeling Products — Water-based Coating
HJ 2541	Technical Requirement for Environmental Labeling Products — Adhesive
HJ/T 296	Technical Requirement for Environmental Labeling Products — Sanitary Wares

### 3 Terms and Definitions

The following term and definition shall apply to this standard.

#### 3.1 Gas cooking appliances

It refers to the cooking utensils that contain gas burner.

[GB 16410 -2007, Definition 3.1]

### 4 Basic Requirements

4.1 The product shall meet the requirements of relevant quality, safety and sanitation standards.

4.2 Pollutant emissions of product manufacturers shall meet national or local emission standards.

4.3 Product manufacturers shall strengthen clean production in the process of production.

### 5 Technical Contents

#### 5.1 Requirements for environmental design

##### 5.1.1 Design for easy recycling

5.1.1.1 The recycling rate of product components and materials shall be no less than 75% of the average mass of electrical appliance.

5.1.1.2 Plastic parts with mass over 25g or surface area more than 200 mm<sup>2</sup> shall be labeled in accordance with the requirements of GB/T 16288.

##### 5.1.2 Requirements for hazardous substances in parts

5.1.2.1 The content of short-chain chlorinated paraffins (SCCPs) in plastic parts shall be no more than 0.1% of the total mass of the plastic part.

5.1.2.2 Any plastic part with mass greater than 25g except that in casing or frame plastic parts close to heating shall not employ polybrominated biphenyl, polybrominated diphenyl ether and hexabromocyclododecane.

5.1.3 The adhesive used in the products shall meet the requirements of HJ 2541.

5.1.4 The coatings used in the products shall meet the requirements specified in HJ 2537.

5.1.5 The internal and external irradiation indexes of stone materials used in the products shall meet relevant requirements of HJ/T 296.

#### 5.2 Requirement for production process

5.2.1 Hydrochlorofluorocarbons (HCFCs), 1,1, 1-trichloroethane (C<sub>2</sub>H<sub>3</sub>Cl<sub>3</sub>), dichloroethane (CH<sub>3</sub>CHCl<sub>2</sub>), trichloroethylene (C<sub>2</sub>HCl<sub>3</sub>), carbon tetrachloride (CCl<sub>4</sub>), trichloromethane (CHCl<sub>3</sub>), dichloromethane (CH<sub>2</sub>Cl<sub>2</sub>), n-hexane (C<sub>6</sub>H<sub>14</sub>), bromopropane (C<sub>3</sub>H<sub>7</sub>Br), methylbenzene (C<sub>7</sub>H<sub>8</sub>), xylene (C<sub>6</sub>H<sub>4</sub>(CH<sub>3</sub>)<sub>2</sub>) shall not be used as cleaning solvent.

5.2.2 Lead-free welding process shall be used in assembly and connection of parts and components.

#### 5.3 Product requirements

5.3.1 The NO<sub>x</sub> volume fraction ( $\alpha=1$ ) in dry flue gas of cooking appliances using different gas shall meet the requirements of Table 1 under rated heat load.

Table 1 NO<sub>x</sub> volume fraction in dry flue gas

Item	Manufactured gas, natural gas	Liquefied petroleum gas
NO <sub>x</sub> ( $\alpha=1$ )/10 <sup>-6</sup>	≤60	≤70

5.3.2 The CO volume fraction ( $\alpha=1$ ) in dry flue gas of cooking appliances using different gas shall be no more than 300×10<sup>-6</sup> under rated heat load.

5.3.3 The thermal efficiency of the product shall meet the energy saving evaluation value requirements specified in GB 30720 or GB 30531.

5.3.4 Product combustion noise shall meet the requirements of Table 2.

Table 2 Noise of gas cooking appliance (acoustic pressure level)

Category	Combustion noise, dB (A)	Flameout noise, dB (A)
Domestic gas cooking appliance	≤60	≤70
Commercial gas cooking appliance	≤60	≤80

5.3.5 Limit for hazardous substances

The content of lead (Pb), cadmium (Cd), mercury (Hg), hexavalent chromium (Cr<sup>6+</sup>), polybrominated biphenyl (PBBs) and polybrominated diphenyl ether (PBDEs) in products shall meet the requirements of GB/T 26572.

5.4 Packaging requirements

5.4.1 HCFCs shall not be used as foaming agent.

5.4.2 The total amount of heavy metal lead, cadmium, mercury and hexavalent chromium in package and packaging materials shall not exceed 100 mg/kg.

5.4.3 The product shall be labeled in accordance with the requirements specified in GB/T 18455.

5.5 Requirements for public information

The information on product recovery and recycling shall be provided.

## 6 Test Methods

6.1 The test of NO<sub>x</sub> emission of domestic gas cooking appliances in Technical Content 5.3.1 shall be

conducted based on the methods specified in GB 16410; that of commercial gas cooking appliances shall be conducted based on the methods in CJ/T 28, CJ/T 187 and CJ/T 392.

6.2 The test of CO emission of domestic gas cooking appliances in Technical Content 5.3.2 shall be conducted based on the methods specified in GB 16410; that of commercial gas cooking appliances shall be conducted based on the methods stated in CJ/T 28, CJ/T 187 and CJ/T 392.

6.3 The test of thermal efficiency of domestic gas cooking appliances in Technical Contents Clause 5.3.3 shall be conducted based on the methods specified in GB 30720; that of commercial gas cooking appliances shall be conducted based on the methods stated in GB 30531.

6.4 The test of combustion noise and flameout noise of domestic gas cooking appliances in Technical Content 5.3.4 shall be conducted based on the methods specified in GB 16410; that of commercial gas cooking appliances shall be conducted based on the methods stated in CJ/T 28, CJ/T 187 and CJ/T 392.

6.5 Other requirements in Technical Contents shall be verified by document review combined with site inspection.

---