

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

HJ 1059-2019

**Technical requirement for environmental labeling
products—Range hood**

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Preface

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

This standard identifies the environmental protection requirements for environmental design, production and product instructions of range hood.

This is the first version of the current standard.

The development of this standard is under the organization of the Department of Science, Technology and Finance, and the Department of Laws, Regulations and Standards of the Ministry of Ecology and Environment.

This standard is mainly drafted by Sino-Japan Friendship Center for Environmental Protection, China Environmental United Certification Center and Beijing Municipal Institute of Labour Protection.

This standard was approved by the Ministry of Ecology and Environment on December 13, 2019.

This standard shall take effect as of January 1, 2020.

This standard shall be interpreted by the Ministry of Ecology and Environment.

Technical Requirements for Environmental Labeling Products

Range Hood

1 Applicable Scope

This standard specifies the terms and definitions, basic requirements, technical contents and inspection methods for range hood labeling products.

This standard applies to households air-extraction range hoods used in kitchens¹.

This standard does not apply to range hoods installed for industrial and commercial purposes; nor to those installed in special occasions such as places that contain corrosive or explosive gas (dust, steam or gas).

Note ¹: The product range applicable to this standard is consistent with the air-extraction range hoods as stated in GB/T 17713-2011.

2 Normative References

This standard quotes the provisions of the following documents. If any document is without a marked date, its latest version shall apply.

GB 29539	The Minimum Allowable Values of Energy Efficiency and Energy Efficiency Grades for Range Hoods
GB/T 16288	Marking of Plastic Products
GB/T 17713	Range Hood
GB/T 18455	Package Recycling Marking
GB/T 21097.1	General Requirements on Fixed Number of Years of Safety Use and Recycling for Household and Similar Electrical Appliances
GB/T 26572	Requirements of Concentration Limits for Certain Restricted Substances in Electrical and Electronic Products
GB/T 29784.2	Determination of Polycyclic Aromatic Hydrocarbons in Electrical and Electronic Products—Part 2: Gas Chromatographic Method with Mass Spectrometric Detection
GB/T 29786	Determination of Phthalates in Electrical and Electronic Products —Gas Chromatography—Mass Spectrometry
HJ 2518	Technical Requirements for Environmental Labeling Products —Lighting Source
HJ 2537	Technical Requirements for Environmental Labeling Products Water—Based Paint

3 Terms and Definitions

The terms and definitions confirmed in GB 29539, GB/T 17713 and the following terms and definitions shall apply to this standard.

Range Hood

An electric appliance installed above the stove for collecting and processing polluted air.

[Modified in accordance with Definition 3.1 GB/T 17713-2011]

4 Basic Requirements

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

4.2 Pollutant emissions of the product manufacturers shall meet national and 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 components and materials shall not be lower than 80% of the average product mass.

5.1.1.2 Any plastic parts with mass over 25g or surface area more than 200 mm² shall be labeled in accordance with the requirements of GB/T 16288

5.1.2 Requirements for Hazardous Substances

5.1.2.1 The contents of lead (Pb), cadmium (Cd), mercury (Hg), hexavalent chromium (Cr⁶⁺), polybrominated biphenyl (PBBs) and polybrominated diphenyl ether (PBDEs) in the products shall meet the requirements of GB/T 26572.

5.1.2.2 Short chain chlorinated paraffins (SCCPs) shall not be employed in the product.

5.1.2.3 Chlorine-containing polymers and hexabromocyclododecane (HBCDD) shall not be employed in the casing, ventilation pipes and plastic parts with a mass over 25g.

5.1.2.4 The organic fluoride content used to improve the performance of plastics shall not be greater than 0.5% of the total mass of the product.

5.1.2.5 Except for wires and cables, the total content of phthalates (see Annex A) in any plastic parts with a mass greater than 25g shall not be greater than 1,000 mg/kg.

5.1.2.6 The total content of polycyclic aromatic hydrocarbons (see Annex B) in the casing, ventilation pipes, buttons and power cords of the product shall not be greater than 200 mg/kg, of which the content of benzo[a]pyrene shall not be greater than 20 mg/kg.

5.1.3 The adhesives used in the product shall meet the requirements of HJ 2541.

5.1.4 The coatings used in the product shall meet the requirements of HJ 2537.

5.1.5 The lighting source used in the product shall meet the requirements of HJ 2518.

5.2 Requirements for Production Process

5.2.1 Chemicals such as hydrochlorofluorocarbons (HCFCs), 1,1,1-trichloroethane ($\text{C}_2\text{H}_3\text{Cl}_3$), dichloroethane (CH_3CHCl_2), trichloroethylene (C_2HCl_3), carbon tetrachloride (CCl_4), trichloromethane (CHCl_3), dichloromethane (CH_2Cl_2), n-hexane (C_6H_{14}), bromopropane ($\text{C}_3\text{H}_7\text{Br}$), methylbenzene (C_7H_8), and xylene ($\text{C}_6\text{H}_4(\text{CH}_3)_2$) shall not be used as cleaning solvents.

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

5.3 Product Requirements

5.3.1 The energy efficiency of the product shall meet the requirements in Table 1.

Table 1 Product Energy Efficiency Requirements

Item	Limit
Full pressure efficiency, %	≥ 24
Standby power ² , W	≤ 1.0
Shutdonw power, W	≤ 0.7

Note ² : Standby power and shutdown power are not applicable to range hoods with communication protocols such as WIFI and Bluetooth.

5.3.2 The normal odor reduction of the product shall be no less than 98%, and the instant odour reduction shall be no less than 80%.

5.3.3 The oil/grease separation of the product shall not be less than 90%.

5.3.4 The sound power level of the product shall be no more than 70dB (A).

5.4 Requirements for Product Packaging

5.4.1 Hydrochlorofluorocarbons (HCFCs) shall not be used as foaming agents.

5.4.2 The total amount of heavy metals such as 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 based on the requirement of GB/T 18455.

5.5 Requirements for Product Instruction

5.5.1 Instructions for energy saving and cleaning shall be included.

5.5.2 Methods to reduce oil/grease and odor emissions, and the corresponding best usage instructions shall be included.

5.5.3 Information on hazardous substances in product parts such as name, content and recycling shall be provided.

5.5.4 Information on spare parts such as supply period, correct usage and disposal shall be clearly stated.

6 Test Methods

6.1 The calculation of Technical Content 5.1.1.1 shall be conducted based on the methods specified in GB/T 21097.1-2007.

6.2 The test of Technical Content 5.1.2.5 shall be conducted based on the methods specified in GB/T 29786-2013.

6.3 The test of Technical Content 5.1.2.6 shall be conducted based on the methods specified in GB/T 29784.2-2013.

6.4 The test of standby power and shutdown power in Technical Content 5.3.1 shall be conducted based on the methods specified in GB 29539-2013; the test of full pressure efficiency shall be conducted based on the methods specified in GB/T 17713-2011.

6.5 The test of Technical Content 5.3.2, 5.3.3, 5.3.4 shall be conducted based on the methods specified in GB/T 17713-2011.

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

Annex A

(Normative Annex)

Phthalate

Chinese Name	English Name	Abbreviation	CAS No.
邻苯二甲酸二 (2-乙基)己酯	Di-(2-ethylhexy)- phthalate	DEHP	117-81-7
邻苯二甲酸丁 基苄基酯	Butylbenzylphthalate	BBP	85-68-7
邻苯二甲酸二 丁酯	Dibutylphthalate	DBP	84-74-2
邻苯二甲酸二 异丁酯	Di-iso-butylortho-phthalate	DIBP	84-69-5

Annex B

(Normative Annex)

Polycyclic Aromatic Hydrocarbons (PAHs)

Chinese Name	English Name	CAS No.
苯并[a]芘	Benzo[a]pyrene	50-32-8
芴	Acenaphthene	83-32-9
芴烯	Acenaphthylene	208-96-8
蒽	Anthracene	120-12-7
苯并[a]蒽	Benzo[a]anthracene	56-55-3
苯并[b]荧蒽	Benzo[b]fluoranthene	205-99-2
苯并[g,h,i]芘(二苯嵌苯)	Benzo[ghi]perylene	191-24-2
苯并[k]荧蒽	Benzo[k]fluoranthene	207-08-9
蒎(1,2-苯并菲)	Chrysene	218-01-9
二苯并(a,h)蒽	Dibenz[a,h]anthracene	53-70-3
荧蒽	Fluoranthene	206-44-0
芴	Fluorene	86-73-7
茚并[1,2,3-c,d]芘	Indeno[1,2,3-cd]pyrene	193-39-5
萘	Naphthalene	91-20-3
菲	Phenanthrene	85-01-8
芘	Pyrene	129-00-0

