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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

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**Requirement of vertical flammability characteristic and test
method for certain category automobile interior material**

特定种类汽车内饰材料垂直燃烧特性技术要求和试验方法

(English Translation)

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Foreword

Clause 3, Clause 4 of this Standard are mandatory; the rest are recommendatory.

This Standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This Standard was proposed by Ministry of Industry and Information Technology of the People's Republic of China.

This Standard shall be under the jurisdiction of China National Automotive Standardization Technical Committee (SAC/TC 114).

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Requirement of vertical flammability characteristic and test method for certain category automobile interior material

1 Scope

This Standard specifies the technical requirements of vertical flammability characteristic and test methods for certain category automobile interior material.

This Standard is applicable to interior curtains, sun shades and/or other interior materials for M3 vehicles that are used to carry more than 22 passengers; it is not applicable to city buses that have standing passengers.

2 Terms and definitions

The following terms and definitions apply to this document.

2.1 burning rate

The ratio between combustion distance and time used, in millimeters per minute (mm/min).

3 Technical requirements

Vertical burning rate shall not exceed 100 mm/min.

4.1 Principle

Vertically fix the specimen on the rectangular frame. Use the predetermined flame to ignite specimen in the combustion chamber. Determine the combustion distance and time used of the specimen.

4.2.1 Specimen holder

The specimen holder shall be a rectangular frame, as shown in Figure 1. The frame height is 560 mm.

4.2.2 Pressboard

Use U pressboard to ensure the vertical flatness of specimen on the specimen holder. The U pressboard shall be flat with rigidity. It is made of suitable material. The size equals to the specimen holder size. The thickness is $1.0 \text{ mm} \pm 0.1 \text{ mm}$. Drill 12 round holes of which the diameter is about 4 mm on both sides of the pressboard.

4.2.3 Gas light

Gas light provides test fire source. Its description and structure shall comply with the provisions of Annex A.

4.2.4 Gas

The gas used by gas light is industrial propane gas, butane gas or liquefied petroleum gas.

4.2.5 Marker line

White mercerized cotton thread of which the maximum linear density is 50 tex.

4.2.6 Stopwatch

The stopwatch accuracy to measure time shall not be less than 0.5 s.

4.2.7 Steel ruler

The steel ruler scale is more than 600 mm. The accuracy is 1 mm.
unit. mm

4.2.8 Fuming hood

The specimen holder shall be placed in the fuming hood. The internal volume of fuming hood is 20 ~ 110 times specimen holder volume. Any one among the fuming hood's length, width and height must not exceed 2 times any size of the other two sizes.

4.3.1 Size

The size of specimen. length is $560\text{ mm} \pm 2\text{ mm}$; width is $170\text{ mm} \pm 2\text{ mm}$; the thickness is component thickness.

4.3.3 Pre-treatment

Place the specimen under standard state of which the temperature is $23^{\circ}\text{C} \pm 2^{\circ}\text{C}$, the relative humidity is $50\% \pm 5\%$ for at least 24 h, till the test starts.

4.4.1 Carry out the test under the environmental conditions of which the

temperature is $10^{\circ}\text{C} \sim 30^{\circ}\text{C}$, the relative humidity is 15% ~ 80%.

4.4.3 Fix the pretreated specimen on the fixing-needle of specimen holder,

close to the location column. Then press the U-pressboard on it to ensure that

the fixing-needle goes through each round hole on the pressboard. The specimen shall be at least 20 mm away from the frame. Mount the specimen holder on the top bracket of combustion chamber to ensure the specimen vertical.

4.5 Calculation

For the specimen burnt to at least the first marker line, the burning speed (v_i) shall be calculated according to the following equation.

4.6.1 If the specimen cannot keep burning for 5s after ignition for 15 s in the flame, or the flame burns out by itself before reaching to the first marker line, then the burning speed shall be regarded as it fails to comply with requirements. Both shall be represented as 0 mm/min.

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