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NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA

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GB/T 22053-2020

Replacing GB/T 22053-2008

Pentane vesicant

戊烷发泡剂

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China.**

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Foreword

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

This Standard replaces GB/T 22053-2008 "Pentane vesicant". Compared with GB/T 22053-2008, in addition to editorial modifications, the main changes in content in this Standard are as follows:

- deleted models of F₀, F₁, F₂, F₉, F₁₀ (see Table 1 of this Edition, Table 1 of Edition 2008);
- changed the adjustment range of the component content of each model from $\pm 5\%$ to $\pm 2\%$; changed the total mass fraction of pentane from $\geq 98\%$ to $\geq 99\%$; changed the mass fraction of heavy components C₆ and above from $\leq 1\%$ to $\leq 0.5\%$; changed the sulfur content from $\leq 10\mu\text{g/mL}$ to $\leq 5\text{mg/kg}$; changed the evaporation residue from $\leq 10\text{mg/100mL}$ to $\leq 1\text{mg/100mL}$; added the mass fraction of light component C₄ and below, cyclopentane mass fraction, 2,2-dimethylpropane mass fraction, moisture index; deleted indexes of mechanical impurities and moisture, copper corrosion and water-soluble acid or alkali (see Table 2 of this Edition, Table 2 of Edition 2008);
- modified the test method for component content from SY/T 0542 to SH/T 0714, SH/T 1790; modified the test method for density from GB/T 1884 to GB/T 2013; added SH/T 0689 to the test method for sulfur content; added SH/T 0246 to the test method for moisture; modified the test method for bromine index from GB/T 11136 to SH/T 0630, SH/T 1551 (see Table 2 of this Edition, Clause 4 of Edition 2008);
- deleted type inspection; modified exit-factory inspection items (see 5.1 of this Edition, 5.1 of Edition 2008);
- modified sampling from SY/T 0543 to GB/T 4756 (see 5.3 of this Edition, 5.3 of Edition 2008).

This Standard was proposed by China Petroleum and Chemical Industry Federation.

This Standard shall be under the jurisdiction of National Technical Committee on Chemical of Standardization Administration of China (SAC/TC 63).

The drafting organizations of this Standard: Shantou Bo Petrochemical Co., Ltd., Dongying Junyuan Petroleum Technology Development Co., Ltd., Puyang Lianzhong Xingye Chemical Co., Ltd., Shandong Product Quality Inspection Research Institute, SINOPEC Beijing Research Institute of Chemical Industry, SINOPEC Shanghai Petrochemical Co., Ltd.

Pentane vesicant

WARNING - This Standard does not indicate all possible safety issues. The user is responsible for taking appropriate safety and health measures and ensuring compliance with the conditions stipulated by relevant national laws and regulations.

1 Scope

This Standard specifies requirements and test methods, inspection rules as well as marks, packaging, transportation, storage requirements for pentane vesicant.

This Standard is applicable to pentane vesicant obtained by fractional distillation and refining of raw materials containing pentane. This product is mainly used as a vesicant in the production process of expandable polystyrene and flexible polyurethane.

Molecular formula: C_5H_{12} .

Relative molecular mass: 72.15 (according to 2018 international relative atomic mass).

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB 190, *Packing symbol of dangerous goods*

GB/T 2013, *Standard test method for density of liquid petrochemical products*

GB/T 3209, *Method for determining the amount of distillation residual of benzene - Type products*

GB/T 4756, *Method for manual sampling of petroleum liquids*

GB/T 8170, *Rules of rounding off for numerical values & expression and judgement of limiting values*

NB/SH/T 0164, *Packaging, storage, transportation and delivery acceptance*

5 Inspection rules

5.1 Exit-factory inspection

All items listed in Table 2 are exit-factory inspection items.

5.2 Batching

Under the condition of the same raw materials and process, each can of the product is a batch.

5.3 Sampling

According to GB/T 4756.

5.4 Determination

The test result is determined according to the rounding numerical comparison method in GB/T 8170. If one of the test results does not meet the requirements, conduct double sampling for reinspection. If the reinspection still fails, the whole batch of products is determined as rejected.

6 Marks, packaging, transportation, storage

6.1 General provisions

Marks, packaging, transportation and storage shall be carried out in accordance with NB/SH/T 0164.

6.2 Marks

There shall be a firm and clear mark on the packaging container of pentane vesicant. The content includes: product name, trademark, product model, manufacturer name, factory address, net content, batch number, reference to this Standard and the "flammable" mark specified in GB 190.¹

6.3 Packaging

When the mobile pressure vessel is filled with pentane vesicant, the filling factor is not more than 0.85.

6.4 Transpiration

It shall use mobile pressure vessel for transportation of pentane vesicant.

¹ Refer to Annex A for the tips on safety information of this product.

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