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PEOPLE'S REPUBLIC OF CHINA

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GB/T 31332-2014

**Vulcanizing accelerator - N-cyclohexylbenzothiazole-
2-sulfenamide (CBS)**

硫化促进剂 N-环己基-2-苯并噻唑次磺酰胺 (CBS)

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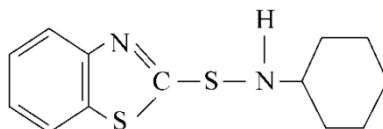
1 Scope

This Standard specifies the requirements, test methods, inspection rules, marking, packaging, transportation, and storage of vulcanizing accelerator N-cyclohexylbenzothiazole-2-sulfenamide (referred to as vulcanizing accelerator CBS).

This Standard is applicable to the vulcanizing accelerator CBS prepared by using vulcanizing accelerator 2-mercaptobenzothiazole (referred to as vulcanizing accelerator MBT) and cyclohexylamine as main raw materials.

Molecular formula: $C_{13}H_{16}N_2S_2$

Structural formula:



Relative molecular mass: 264.39 (according to 2012 International relative atomic mass)

CAS RN: 95-33-0

2 Normative references

The following documents are indispensable for the application of this document. For the dated references, only the editions with the dates indicated are applicable to this document. For the undated references, the latest edition (including all the amendments) are applicable to this document.

GB/T 191-2008 Packaging - Pictorial Marking for Handling of Goods

GB/T 601-2002 Chemical reagent - Preparations of reference titration solutions

GB/T 603-2002 Chemical reagent - Preparations of reagent solutions for use in test methods

The expression and rounding off rules of the test data in this Standard shall comply with the relevant provisions of the 4.3.3 rounded-off value comparison method in GB/T 8170-2008.

4.2 Appearance

Visual inspection under natural light.

4.3 Determination of initial melting point

It shall be determined according to the provisions of 3.1 of GB/T 11409-2008.

4.4 Determination of heating loss

It shall be determined according to the provisions of 3.4 of GB/T 11409-2008. The sample weighing amount is about 2 g (accurate to 0.0001 g). The temperature of electrothermal constant-temperature drying oven is controlled at $(70 \pm 2)^{\circ}\text{C}$. The heating time is 3 h. The difference between the results of two parallel determinations shall not exceed 0.04%. The arithmetic mean of the results of two parallel determinations shall be taken as the determination result.

4.5 Determination of ash

It shall be determined according to the provisions of 3.7 of GB/T 11409-2008. The sample weighing amount is about 3 g (accurate to 0.0001 g). The temperature of high-temperature furnace is controlled at $(750 \pm 25)^{\circ}\text{C}$. The difference between the results of two parallel determinations shall not exceed 0.04%. The arithmetic mean of the results of two parallel determinations shall be taken as the determination result.

4.6 Determination of sieve residue

It shall be determined according to the provisions of 3.5.2 of GB/T 11409-2008. The difference between the results of two parallel determinations shall not exceed 0.02%. The arithmetic mean of the results of two parallel determinations shall be taken as the determination result.

4.7 Determination of methanol insolubles

It shall be determined according to the provisions of 5.5 of GB/T 21184-2007. The difference between the results of two parallel determinations shall not exceed 0.05%. The arithmetic mean of the results of two parallel determinations shall be taken as the determination result.

4.8 Determination of purity and free amine

4.8.1 Determination of purity and free amine (titration method)

5.5 Re-inspection

If one item of the exit-factory inspection results does not meet the requirements of this Standard, from twice the package of the same lot of products, re-sampling shall be carried out for re-inspection. Even if only one of the indexes in the re-inspection results does not meet the requirements of this Standard, the lot of products is judged as unqualified products.

6 Marking, packaging, transportation, and storage

6.1 Marking

The vulcanizing accelerator CBS shall have a clear and firm mark on the outer packaging. Its content shall include product name, standard number, manufacturer name, address, production date, lot number, trademark, net quantity, etc. According to the provisions of GB/T 191-2008, MARK the signs such as “avoid sun” and “avoid rain”.

6.2 Packaging

The vulcanizing accelerator CBS is packaged using a woven bag lined with plastic bag or a paper-plastic compound bag. The net quantity of each bag is 25 kg. Special packaging shall be in accordance with user requirements.

6.3 Transportation

The vulcanizing accelerator CBS, when transported, shall be protected from rain and sun; when handling, lightly loaded and unloaded to prevent impact.

6.4 Storage

The vulcanizing accelerator CBS shall be stored in a clean, dry, well-ventilated warehouse. It shall avoid direct sunlight. The distance from the wall shall be greater than 0.5 m. It shall not be close to the water pipes, sewers, and heating devices, to prevent moisture and deterioration. It shall not be close to the fire source.

The vulcanizing accelerator CBS, under the transportation and storage conditions in accordance with the provisions of this Standard, from the date of production, shall have a storage period of 6 months.

_____ **END** _____

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