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

GB/T 11409.1-1995

11409.4-1989; GB/T 11409.5-1989; GB/T 11409.6-2003; GB/T 11409.7-1989; GB/T 11409.8-1989; GB/T 11409.9-2003

**Test methods rubber anti-agers and vulcanizing accelerators
(English Translation)**

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Table of Contents

- Foreword
- 1 Scope
- 2 Normative references
- 3 Test Method
- 3.1 Determination of melting point

Foreword

This standard replaces GB/T 11409.1-1995 "rubber antioxidant, vulcanization accelerator melting point measurement method", GB/T 11409.2-1995 "Rubber antioxidant, vulcanization accelerator crystallization point measurement method", GB/T 11409.3-2003 "rubber antioxidant, vulcanization accelerator softening point Determination ", GB/T 11409.4-1989 "rubber antioxidant, Determination, "the vulcanization accelerator weight loss on heating, GB/T 11409.5-1989 "Rubber antioxidant, vulcanization accelerator Determination of residue on sieve", GB/T 11409.6-2003 "rubber antioxidant, vulcanization accelerator apparent density Determination of the degree of ", GB/T 11409.7-1989 "rubber antioxidant, vulcanization accelerator ash measurement method ", GB/T 11409.8-1989 "Rubber antioxidant, vulcanization accelerator method for measuring the viscosity of a rotational viscometer method", GB/T 11409.9-2003 "rubber antioxidant, vulcanization Determination hydrochloride promoting agent insoluble content. " this standard is GB/T 11409.1 ~ GB/T 11409.9 integration amendments made.

This standard and GB/T 11409.1 ~ GB/T 11409.9 technical differences.

--- This standard measuring melting point and GB/T 11409.1-1995 difference is. capillary diameter of about 1mm to specifications from 1.2mm ~ 1.4mm, wall thickness of about 0.15mm to 0.2mm ~ 0.3mm (this standard 3.1, GB/T 11409.1-2.5 in 1995), the analysis step, the sample in the capillary constrictions of 2mm ~ 3mm 3mm ~ 6mm high to high, Than forecast by the low melting point 30 °C, and 2 °C/min heating to melting point 25 °C lower than forecast, and 3 °C/min heating, the installation of the capillary when the temperature rose to a melting point lower than the forecast of about 10 °C will be installed before the sample is attached to the capillary temperature Meter on.

--- Determination of the remaining items and GB/T 11409.2 ~ GB/T 11409.9 no technical difference, but have been modified editorial.

The standard proposed by China Petroleum and Chemical Industry Association.

This standard by the National Standardization Technical Committee rubber chemical

additives and rubber Technical Committee.

1 Scope

This standard specifies the rubber antioxidant, vulcanization accelerator melting point, crystallization point, softening point, heat reduction, sieve residue, apparent density, ash content, Viscosity measurement method of hydrochloric acid insolubles.

This standard applies to rubber antioxidant, vulcanization accelerator melting point, crystallization point, softening point, heat reduction, sieve residue, apparent density, ash content, Viscosity, measured hydrochloric acid insoluble.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

Preparation of GB/T 601 chemical reagent standard titration solution GB/T 603 chemical reagent test methods in the formulation and preparation of products (GB/T 603-2002, neq ISO 6353-1 with.

1982)

Representation GB/T 1250 limit values and the method of determining GB/T 6003.1 woven wire mesh test sieve (GB/T 6003.1-1997, eqv ISO 3310-1:1990) GB/T 6682 analytical laboratory use specifications and test methods (GB/T 6682-2008, ISO 3696. 1987, MOD)

3 Test Method

Unless otherwise indicated, in the analysis of the standard solution, preparations and products, according to GB/T 601, GB/T 603 provisions prepared. use Recognized as analytical reagents and third grade water GB/T 6682 may require.

Test results determined in accordance with GB/T 1250 in the rounding value comparison method.

3.1.1.1 Means

3.1.1.1.1

electrothermal melting point measuring device. 1, see Figure dimensions, the inner tube of the measurement device has 2 100W ~ 300W heating wire, connected to the 1kVA

regulators.

3.1.1.1.2

Installation. 1, the measuring device to the heat transfer fluid is injected, part of the lower edge portion is aligned with the expansion of its surface, measuring process, Keep immersion thermometer mercury ball away from the lower level to about 50mm, Bureau immersion thermometer reaches immersion line.

3.1.1.2 Thermometer. indexing is 0.1 °C, bureau immersion or full immersion.

3.1.1.3 Auxiliary thermometer. Indexing is 1 °C, the mercury ball is in the middle of the exposed outer surface of the mercury thermometer.

3.1.1.4 reference thermometer. 0 °C ~ 200 °C, indexing is 1 °C.

3.1.1.5 Capillary. length 70mm ~ 100mm, inner diameter of about 1.2mm ~ 1.4mm, wall thickness of about 0.2mm ~ 0.3mm.

3.1.1.6 throwing glass. diameter 8mm, length 800mm.

3.1.1.7 agate mortar.

3.1.1.8 regulator. 1kVA.

3.1.2 Heat transfer fluid

Selected according to the melting point of the sample level. Deg.] C melting point at 250 or less, the choice of liquid paraffin, sulfuric acid, 201 100 Simethicone and dioctyl phthalate esters.

A melting point of at least 250 °C, can be used sulfuric acid and potassium bisulfate (11 + 9) mixed solution and the like.