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ICS 71.060.10

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National Standards of the People's Republic of China

GB/T 2449-2006

For Replacement of GB/T 2449-1992

Sulphur for Industrial Use

Released on September 14th, 2006

Implemented on February 1st, 2007

(Seal) Standards Press of China

Scratch the coating and call 95105615 or 8008105615 to check authenticity

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Released by:

General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China

Standardization Administration of China

Table 1

Item		Technical Specifications		
		Premium Grade	First Grade	Acceptable Grade
Mass fraction of Sulphur/% \geq		99.95	99.50	99.00
Mass fraction of water/%	Solid Sulphur \leq	2.0	2.0	2.0
	Liquid Sulphur \leq	0.10	0.50	1.00
Mass fraction of ash/% \leq		0.03	0.10	0.20
Mass fraction of acid [according to the amount of Sulphuric acid (H ₂ SO ₄)]/% \leq		0.003	0.005	0.02
Mass fraction of organics/% \leq		0.03	0.30	0.80
Mass fraction of Arsenic (As)/% \leq		0.0001	0.01	0.05
Mass fraction of Iron (Fe)/% \leq		0.003	0.005	--
Mass fraction of residue on sieve ^a /%	Particle size above 150 μm \leq	0	0	3.0
	Particle size between 75 μm and 150 μm \leq	0.5	1.0	4.0
a The specifications regarding residue on sieve are only applicable to Powder Sulphur.				

4.1.2 Sampling of Bulk Products

The number of product sampling units (or points) should be decided according to Provision 3.2.3.2 of GB/T 6679-2003. Sample from each randomly-selected sampling unit (or point), and the sampling methods for products of different forms are:

- For products in the forms of particles and flakes, insert a sampler into the products to the depth of 0.3m—0.5m and take samples there.
- For chunks of products, knock off pieces of products with diameters less than 25 mm with a hammer at different portions of the chunks.

Mix the samples thoroughly. When the mixture becomes well-distributed, divide it into 2 kg lab samples.

4.2 Sampling Method for Liquid Industrial Sulphur

The products should be sampled according to the provisions of Chapter 7 of GB/T 6680-2003. The sampling methods under different conditions are:

- During the process of tanker loading or discharging, take point samples periodically with the method of automatic or mechanical interception;
- Taking the actual amount of liquid Sulphur as the benchmark, take samples separately from the upper, the middle and the lower parts of the tanker or storage vessels, and then mix the three samples with the same volume and get a average sample.

For the above two sampling methods, the amount of each point sample should not be less than 0.2 kg. Merge and mix the point samples and the solidified mixture is the lab sample. If the weight of a lab sample is over 2 kg, break the sample into pieces with diameters less than 25 mm and divide them into 2 kg lab samples.

4.3 Treatment of Lab Samples

Lab samples should be equally divided into test samples and reserve samples and put respectively into sealed sample vials. The sample vials should be affixed with labels indicating the product name, grade, lot number, lot size, date and operator of sampling, etc. The retention time of the reserve sample should be decided by the enterprises.

4.4 Test Sample Preparation

Grind the test sample until the particles are able to pass through test sieve with mesh size of 2.00 mm (the powder Sulphur needs not to be ground). Divide it into two portions: one portion is used to measure the mass fraction of water and the mass fraction of residue at 200°C; the other portion is further ground until the particles are able to pass through test sieve with mesh size of 600 µm. Further divide it into two portions: one portion is used to measure the mass fractions of ash, organics and iron; the other portion is further ground until the particles are able to pass through test sieve with mesh size of 250 µm so that it can be used to measure the mass fractions of Sulphur (gravimetric method), acid, Arsenic, Chlorine and Selenium.

5 Test Method

If not otherwise indicated, the reagents and water in this standard refer to the analytical pure reagents and third grade water which conforms to the provisions of GB/T 6682. If not otherwise indicated, the standard titrating solutions and the standard solution, reagents and products for measuring impurity should be prepared according to the provisions of GB/T 601-2002, GB/T 602-2002, GB/T 603-2002.

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