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

GB/T 3781.5-2019

Acetylene black -- Part 5: Determination of grit content

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Foreword

GB/T 3781 "acetylene black" is divided into the following parts.

---Part 5. Determination of coarse fractions;

---Part 6. Determination of apparent specific volume;

---Part 8. Determination of the amount of hydrochloric acid absorbed;

--- Part 9. Determination of resistivity.

This part is the fifth part of GB/T 3781.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This part replaces GB/T 3781.5-2006 "acetylene black black part 5. determination of coarse grain fraction", and GB/T 3781.5-2006

The main technical changes are as follows.

--- Modified the oven control temperature of 105 ° C is 125 ° C (see 4.5, 4.5 of the.2006 edition);

--- Analysis steps have been refined (see Chapter 7);

--- Added the description of "Using a rubber hose to flush the accumulated sample from the periphery of the funnel with a small water flow" (see 7.8).

This section uses the redrafting method to modify the use of ISO 1437.2017 "measurement of rubber compounding agent carbon black sieve residue."

This section has more structural adjustments than ISO 1437.2017. This section is listed in Appendix A with ISO 1437.2017.

The chapter number is compared to the list.

The technical differences between this part and ISO 1437.2017 and their reasons are as

follows.

---About the normative reference documents, this part has made specific technical differences to adapt to China's technical conditions, adjustments

The situation is reflected in Chapter 2, "Regulatory Citations", and the specific adjustments are as follows.

* Replaced with GB/T 6003.1 with international standards and GB/T 3782 and GB/T 8170 with added references.

ISO 1437.2017 (see 4.1, Chapter 6 and Chapter 8);

--- Removed "terms and definitions", with the definition of national standards (see ISO 3437. Chapter 3 of.2017);

--- Added "dryer" for drying the test sieve storage (see 4.6);

--- Added "reagents" to wet the carbon black prior to testing (see Chapter 5);

--- Added "samples", the rules are more comprehensive and clear (see Chapter 6);

--- Modify the sample volume "100g" to "50g", due to the larger volume of acetylene black, increase operability (see 7.5, ISO 1437.2017)

6.2.3);

--- Removed the requirement of precision, because acetylene black has a small coarse fraction and is difficult to handle (see Chapter 8 of ISO 1437.2017);

--- Deleted the formula for the calculation of parts per million, and clearly indicated in the result representation that one test result shall prevail, consistent with the technical indicators.

(See Chapter 8, ISO 1437. Chapter 7 of.2017).

This section has made the following editorial changes.

--- In order to be consistent with China's existing standard series, the standard name was revised;

--- Added Appendix A (informative) "Structural changes in this section compared to ISO 1437.2017".

This part was proposed by the China Petroleum and Chemical Industry Federation.

This part is under the jurisdiction of the National Rubber and Rubber Products Standardization Technical Committee (SAC/TC35).

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1 Scope

This part of GB/T 3781 specifies a method for determining the coarse fraction of acetylene black.

This section applies to acetylene black.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 3782 acetylene black

GB/T 6003.1 Test sieves - Technical requirements and testing - Part 1. Wire woven mesh test sieves (ISO 3310-1:2000,

MOD)

GB/T 8170 Numerical Rounding Rules and Representation and Determination of Limit Values

3 Principle

Control the flow pressure to flush a sample of known mass, pass it through a 150 μm test sieve, dry and weigh the residue left on the test sieve

The mass is the coarse fraction of the sample.

4 instruments

4.1 Water washing sieve residue measuring device. Figure 1 is a schematic diagram of the main components of the instrument. The main components are divided into.

a) Test sieve, made of phosphor bronze or stainless steel, with a pore size of 150 μm , in accordance with GB/T 6003.1.

b) Funnel with test sieve at the bottom.

c) Nozzle, spray clean water under controlled pressure to flush the carbon black through the test sieve.

d) Water pressure regulating device.

e) Water filter, the wire mesh installed on the water supply line, the hole diameter should not be larger than the test sieve.