

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

JT/T 860.7-2017

**Modifier for asphalt mixture - Part 7: Pyrolytic carbon black from
used tire**

沥青混合料改性添加剂 第7部分：废旧轮胎热解炭黑 清晰版

(English Translation)

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1 Scope

This part of JT/T 860 specifies the technical requirements, test methods, inspection regulations, as well as marking, packaging, transportation and storage requirements.

This part applies to the production, inspection and use of asphalt mixture modification additive waste tire pyrolysis carbon black.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only the dated version applies to this document pieces. For undated reference documents, the latest version (including all amendments) applies to this document.

GB/T 3780.1 Carbon black Part 1: Test method for iodine absorption value GB/T 3780.2 Carbon black - Part 2: Determination of oil absorption value GB/T 3780.7 Carbon black - Part 7: Determination of pH value GB/T 6003.1 Test sieve technical requirements and inspection Part 1: Wire woven mesh test sieve JT G E20 Highway Engineering Asphalt and Asphalt Mixture Test Regulations JT G E42 Highway Engineering Aggregate Test Regulations JT G F40 Technical specification for highway asphalt pavement construction

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Pyrolysis carbon black from waste tires

Under the condition of anaerobic or anoxic, high temperature is used to incompletely burn or pyrolyze the organic matter in waste tires, Solid material formed after spillage of volatile products.

3.2 Pyrolysis carbon black content of waste tires

The mass percentage of waste tire pyrolysis carbon black modified additives to the mass of petroleum asphalt before modification.

3.4 Iodine absorption value of waste tire pyrolysis carbon black

The mass ratio of the amount of iodine adsorbed by waste tire pyrolysis carbon black to the sample amount.

3.5 Oil absorption value of waste tire pyrolysis carbon black

The ratio of the volume of oil consumed by waste tire pyrolysis carbon black to the sample volume.

4 Technical requirements

The technical requirements for waste tire pyrolysis carbon black should meet the requirements in Table 1. Technical requirements of modified asphalt after adding waste tire pyrolysis carbon black Please see Table A in Appendix A. 1. For the technical requirements of waste tire pyrolysis carbon black modified asphalt mixture, see Table B in Appendix B. 1.

5.1 Appearance

Check visually.

5.2 Ash

The test method for pyrolysis carbon black ash of waste tires is carried out according to T 0614 in JT G E20.

Use an evaporating dish with a diameter of not less than 120mm, and the sample size is (5 ± 0.5) g.

5.3 Iodine absorption value

The test method for the iodine absorption value of waste tire pyrolysis carbon black is in accordance with GB/T 3780.1 proceed.

5.4 Moisture content

The test method for the moisture content of waste tire pyrolysis carbon black is carried out according to T0103 in JT G E20.

5.5 Oil absorption value

The test method for the oil absorption value of waste tire pyrolysis carbon black is in accordance with GB/T 3780.2 proceed.

5.6 PH value

The test method for the pH value of pyrolysis carbon black from waste tires is in accordance with GB/T 3780.7 proceed.

5.7 Granularity

The test method for the particle size of waste tire pyrolysis carbon black is carried out according to the dry sieving method of T0302 in JT G E42, and the sieve used for the test should meet the requirements of GB/T 6003. The specification in 1 is $\phi 200 \times 50-45/4.5$. The technical index requirements of the sieve, the sample quantity is 100g.

6.1 Inspection classification

The inspection of waste tire pyrolysis carbon black is divided into type inspection and factory inspection.

Type inspection should be carried out in one of the following situations.

- a) Trial type inspection of new products;

- b) After the official production, there are changes in the process or raw materials, which affect the performance of the product;
- c) When production is resumed after suspension of production for more than half a year;
- d) Periodic inspection when every normal production reaches 500t;
- e) When there is a large difference between the factory inspection result and the previous type inspection;
- f) When the national or industry quality and technology supervision department puts forward the type inspection requirements.

6.2 Inspection items

The inspection items are shown in Table 2.

6.3.1 Batch

The manufacturer should number the products in batches according to the output, each batch number is 100t, and those less than 100t are counted as one batch.

6.3.2 Sampling

Randomly select two packs of pyrolysis carbon black from waste tires, stir them thoroughly and divide them into two parts, each part not less than 5kg, seal it well, send one part for inspection, and the other part Save the sealed sample. The products of the same batch number shall be randomly inspected once.

6.4 Judgment rules

In the type inspection and factory inspection, if all the performance indicators meet the requirements in Table 1, it is determined that the batch number of waste tire pyrolysis carbon black is qualified.

products. If there is one item that does not meet the specified requirements, it is allowed to randomly select two samples from the batch of products to retest the unqualified items.

If all the products meet the standard requirements, it will be judged as qualified; otherwise, the batch of products will be unqualified.

7.1 Marking and packaging

7.1.1

Pyrolytic carbon black from waste tires should be packaged in paper bags or plastic bags that are moisture-proof, not easy to break, and have an inner film.

The package should include the following.