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Group I 33

**Confirm**

Director  
ООО «UgleMet»  
M. Y. Minmuhametov  
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**DRY ANTHRACITE**  
Technical Conditions

TC 2162-005 -92184700-2013

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Developed  
ООО «UgleMet»

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The current specification concerns Dry anthracite, being a mixture of black shiny shots of a certain fractional composition, without impurities.

Dry anthracite is used for intensification of steelmaking processes and sponging, frothing of slugs in modern metallurgical production, and as a standalone product in other consuming industries.

Example entries for orders and / or other documents:

“Dry anthracite Technical Conditions 2162-005-92184700-2013”.

## 1 TECHNICAL REQUIREMENTS

Dry anthracite (hereinafter the Material) must comply with the requirements of the current specification, be manufactured according to instructions and in compliance with sanitary norms, standards, approved according to the established order.

### 1.1 Basic parameters and characteristics.

1.1.1 The composition of the Dry anthracite complies with the requirements, mentioned in the Table 1.

Table 1

Standards of Quality Indicators for Dry anthracite according to its granulometric composition:

Product's name
Dry anthracite

Granulometric composition, as well as Quality Indicators, are variable at the customer's request.

1.1.2 Physical and chemical properties of the Material must comply with the requirements listed in Table 2.

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Table 2

Property's name	Standard	Analytical method
1. Visual appearance	Granular material, asphaltic stone grey in colour, is characterized by dull luster, its grains are square-shaped and ball-shaped.	Visually by eye
2. Weight fraction of total sulfur, %, less than	1.0	The All-Union state standard 8606-93 (ISO 334-92)
3. Weight fraction of total carbon, %, more than	90	According to paragraph 5.6 of the current specification
4. Weight fraction of total moisture, %, less than	1.0	The All-Union state standard 11014-2001
5. Dense loaded density, g/cc, more than	0.8	The All-Union state standard R 54246-2010 (ISO 23499-2008)
6. Volatile, %, less than	2,0	The All-Union state standard 6382-2001 (ISO 562-98, ISO 5071-1-97)
7. Ash-content, %, less than	10,0	The All-Union state standard 11022-95 (ISO 1171 -97)

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1.1.3 The material must not contain any extraneous impurities.

### 1.2 Requirements to the raw material.

1.2.1 The following is used for the material production:

- anthracitous coals or other coal types under the current documentation.

### 1.3 Markings

1.3.1 Markings, as well as general requirements to consumer information, are to contain information in accordance with Article 10 of the Russian Federation Law "Concerning the Protection of Consumers' Rights" dated 02/07/1992 № 23002-1.

Each unit of consumer and transport packaging is to be labeled in accordance with the following:

- manufacturer's name and / or trademark;
- manufacturer's address;
- product's name;
- grain size grade;
- lot number;
- net weight;
- product's manufacture date;
- designation of the current specification.

1.3.2 Shipping marking is to contain information in accordance with the All-Union state standard 14192, with the application of handling instructions in accordance with the All-Union state standard R 51474.

1.3.3 Clear and easy to read marking is required. Means and method of marking must ensure its stability and undamaged condition at the stage of trade.

#### **1.4 Packaging**

1.4.1 The Material is supplied as packaged. The Material is packaged in polypropylene big bag with the airproof insert. The insert is tied up.

1.4.2 Weight of the material in one bag must be from 700 up to 100 kg.

1.4.3 Weight maximum negative deviations must comply with the All-Union state standard 8.579.

1.4.4 Other kinds of packaging are possible, provided the Material is being safe while shipped.

## **2 SAFETY SPECIFICATION**

2.1 Dry anthracite is not a toxic product. MAC of Dry anthracite dust in the air of the working area corresponds to 6 mg/Nm<sup>3</sup> in accordance with the All-Union state standard 12.1.005.

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2.6 In the process of production, use, transportation and storage, Fire Safety must meet the requirements of the All-Union state standard 12.1.004; the All-Union state standard 12.1.041; the All-Union state standard R 12.3.047, the ignition temperature of Dry anthracite in the open air is above 800 degrees Celsius.

Fire-extinguishing equipment includes: chemical foam, sand, water mist.

### 3 ENVIRONMENT PROTECTION REQUIREMENTS

3.1 Production of the Material must comply with the requirements of the All-Union state standard 12.3.002.

3.2 In the process of production functioning, the implementation of the Federal Law of the Russian Federation dated 01/10/2002 № 7-FL “Concerning the Protection of the Environment“.

Characteristics of the industrial premises must comply with the Sanitary Regulations and Standards 2.2.4.548.

3.4 Lists of harmful substances, emitted into the air of the working area and being subject to determination, must be agreed with the authorities of the Federal Supervision Agency for Customer Protection and Human Welfare of the Russian Federation.

The air control of the working area must comply with the All-Union state standard 12.1.005.

3.5 The content of harmful substances in the air of the working area must not exceed the maximum permissible concentrations (MPC) set by the All-Union state standard 12.1.005 and Hygienic Standard 2.2.5.1313-2003.

3.6 In order to protect the environment from pollution by the sewage, there must be organized control of the sewage content in accordance with the requirements of Hygienic Standard 2.1.5.1315-2003 and Hygienic Standard 2.1.5.2307-2007.

3.7 Waste disposal must comply with the sanitary rules, otherwise waste must be sent for recycling.

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The Material properties are not harmful to a human. It does not form any toxic and detrimental compound in the air and water.

Sifting of the Material may result in appearing of dust. The Material does not produce dust at storage, provided the original package is safe.

The Material does not apply to spontaneously ignite and explosive coals.

In case of fire, it must be extinguished by the aspirated foam by means of mobile foam-making generator , or by water of the domestic fire fighting water line.

As in terms of the safety indicators, the Material meets the requirements of the All-Union state standard R 51591.

Based on the degree of the effect on the human body, the Material occupies the 4th position of the hazard rating according to the All-Union state standard 12.1.007.

2.2 Working areas and laboratories, where the Material is worked with, must be equipped with combined extract and input ventilation system according to the All-Union state standard 12.4.021. Places of sifting and sampling the carbon material must be equipped with local suction in accordance with the fire safety rules.

2.3 When working with the Material, staff who deal with the production and consumption processes must be provided with the individual protective gear in accordance with the general industry standards.

2.4 The staff, as well as newly employed workers, must undergo preliminary and periodic health examination, preparatory training in safe methods of handling carbon raw materials and in safety equipment handling requirements, labour protection briefing in accordance with the All-Union state standard 12.0.004.

2.5 The staff, who work with the Material production, must be provided with cotton protective clothing and personal protection devices: glasses in accordance with the All-Union state standard 12.4.230.1, gloves in accordance with the All-Union state standard 12.4.068, Particulate Respirator in accordance with the All-Union state standard 12.4.028, as well as small box respirator in accordance with the All-Union state standard 12.4.121 for use in emergency situations.

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3.8 Environmental protection must comply with the All-Union state standard 17.2.3.01. Harmful substances emissions into the atmosphere must comply with the All-Union state standard 17.2.3.02.

3.9 The noise level in the working areas must not exceed the norms provided by Hygienic Standard 2.2.4 / 2.1.8.562-96.

3.10 Vibration level in industrial premises must not exceed the norms provided by Hygienic Standard 2.2.4 / 2.1.8.566-96.

#### 4 ACCEPTANCE PROCEDURE

4.1 The material is accepted by lots. A lot is to be an amount of one class material, homogeneous by its quality indicators and sent to one destination point at a time.

4.2 Each lot comes with the quality certificate which includes:

- manufacturer's name and / or trademark;
- manufacturer's address;
- product's name;
- grain size grade;
- lot number;
- chemical composition;
- weight of the shipped lot, tonnes;
- product's manufacture date;
- shipping date;
- number of packages in a lot;
- designation of the current specification.

4.3 Each lot of the Material is subject to acceptance tests in order to comply with the requirements of paragraph 1.1.2, criteria 1-6; paragraph 1.1.1 of the current specification.

4.4 Periodic testings are performed for the Material to comply with the requirements of paragraph 1.1.2, criteria 7.

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