

## CERTIFICATE OF ANALYSIS

Description : Wood Briquettes Charcoal  
Shipper : PT. Mitra Wood Sejahtera  
Dsn. Tanggungan RT. 5 RW. 2, Ds. Wringinanom,  
Kec. Wringinanom, Kab. Gresik, Jawa Timur, Indonesia

Sample Weight : 3.00 Kgs  
Date of Sampling : 11 August 2023  
Place of Sampling : PT. Mitra Wood Sejahtera, Warehouse  
Date of Analysis : 13 August 2023

### Sampling

Samples were taken and prepared in accordance with SNI 19-0428-1998.

### Analysis


Analysis were performed at PT Carsurin Tbk. Semarang Laboratory (accreditation by KAN / National Accreditation Committee – Indonesia for ISO 17025:2017 Cert No. LP-415-IDN) in accordance with ASTM Standard. The results of our analysis are as follows:

Parameter	Unit	Results		Method
		Wet Basis	Dry Basis	
Moisture	Pct	5.42	-	ASTM D1762-84 (REAPPROVED 2021)
Ash Content	Pct	9.75	10.31	ASTM D1762-84 (REAPPROVED 2021)
Volatile Matter	Pct	44.15	46.68	ASTM D1762-84 (REAPPROVED 2021)
Fixed Carbon	Pct	40.68	43.01	By Calculation

This certificate refers solely to the analysis in accordance with the details described herein and does not certify any other matter, and is issued without prejudice.

Jakarta, 15 August 2023

**PT. CARSURIN Tbk.**



**CARSURIN**

**Dede Gemmi Supriadi**

Head of Laboratory

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**The analysis results are based on representative samples which are taken based on applied standards (Ref SNI 19-0428-1998 Petunjuk Pengambilan Contoh Padatan) during the inspection (or audit). This report is valid within 90 days from the date of testing.**



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CARSURIN

1968

Page No. : 1 of 4

Report No. : 231161.5430

**SUBJECT**

Evaluation of "Wood Briquettes Charcoal" Sample for Self-Heating Substance Test

**CUSTOMER**

PT. Mitra Wood Sejahtera  
Dsn. Tanggungan RT. 5 RW. 2, Ds. Wringinanom,  
Kec. Wringinanom, Kab. Gresik, Jawa Timur, Indonesia

**SAMPLING DATE**

11 August 2023

**DESCRIPTION OF SAMPLE**

Wood Briquettes Charcoal

**DATE OF TESTING**

13 August 2023 up to 14 August 2023

**The analysis results are based on representative samples which are taken based on applied standards (Ref SNI 19-0428-1998 Petunjuk Pengambilan Contoh Padatan) during the inspection (or audit). This report is valid within 90 days from the date of testing.**



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**METHOD OF TEST**

The self heating substances test was performed according to United Nations "Recommendations on the Transport Dangerous Good, Manual of Test and Criteria" (33.4.3.3.1) as per revised UN test manual 7<sup>th</sup> edition 2019. Self heating substances, using method of UN 33.4.6 "Test N.4: Test method self-heating substances".

A consignment of carbon if it passes the tests for self-heating substances as reflected in the United Nations Manual of Tests and Criteria (see 33.4.3.3), and is accompanied by a certificate from a laboratory accredited by the competent authority, stating that the product to be loaded has been correctly sampled by trained staff from that laboratory and that the sample was correctly tested and has passed the test.

The sample received was placed into a 100 mm cubic mesh sample container made of stainless steel. The container was then hung at the centre of the oven. The oven temperature was slowly raised to 140° C and kept constant for 24 hours. The temperature at the centre of the sample and temperature between the container and oven were recorded continuously.

**RESULT**

Table 1: Analysis result for "Wood Briquettes Charcoal" sample

Sample	Oven Temperature (°C)	Cube Size (mm)	Maximum Temperature Reached (°C)	Result
Wood Briquettes Charcoal	140	100	160.2	Negative

The above result showed that the "Wood Briquettes Charcoal" sample shall not be classified in self heating substances.

**Remark**

The temperature profiles were enclosed in pages 3 for your references. T1 represented temperature in the center of the sample. T2 represented temperature between the container and the oven wall.

Jakarta, 15 August 2023  
PT. CARSURIN Tbk.

**Dede Jemmi Supriadi**  
Head of Laboratory

PT. CARSURIN Tbk.

**Amran Lesmana**  
Head of Technical Charcoal

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CARSURIN

1968

Page No. : 3 of 4

Report No. : 231161.5430

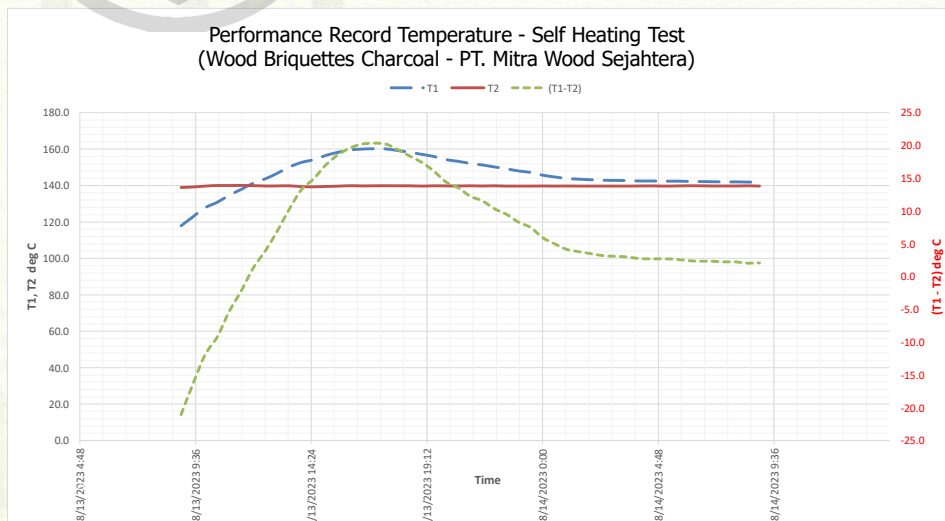
### 24 Hours Temperature Profile "Wood Briquettes Charcoal" at 140<sup>0</sup> C (100mm cube)

Start Time : 13-Aug-23 9:00:00  
Stop Time : 14-Aug-23 9:00:00  
Elapsed Time : 24:00:00  
Interval : 0:30:00  
Total Readings : 49  
Thermocouple Type : K  
Scaling : (None)

Temperature	Max Time Stamp	Max	Average	Min	Min Time Stamp
T1	8/13/2023 17:00	160.2	146.2	117.9	8/13/2023 9:00
T2	8/13/2023 11:30	140.1	139.7	139.0	8/13/2023 9:00
T1-T2	8/13/2023 17:00	20.4	6.5	-21.1	8/13/2023 9:00

#### Remark:

T1 represented temperature in the centre of the sample. T2 represented temperature between the container and the oven wall.



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CARSURIN

1968

Page No. : 4 of 4

Report No. : 231161.5430

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