CARSURIN
1968


Report No. : 252561.6870

# CERTIFICATE OF ANALYSIS

| | |
|---|---|
| Description | : Coconut Shell Charcoal Briquette |
| Type of Sample | : Hexa & Cube, Size (2.5 x 2.5 x 2.5 cm) |
| Manufacturer / Shipper | : PT. Coco Total Karbon Indonesia<br>Jl. Mayor Unus KM 1,5 Soroyudan,<br>Kabupaten Magelang, Jawa Tengah |
| Sample Weight | : 3.00 Kgs |
| Date of Sampling | : 23 October 2025 |
| Location of Sampling | : PT. Coco Total Karbon Indonesia, Warehouse |
| Date of Analysis | : 24 October 2025 |
| Invoice No. | : WAC-2-17-69-25 |
| Booking No. | : EBKG14574491 |
| Gross Weight | : 28,000 Kgs |

## Sampling

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

## Analysis

Analysis were performed at PT Carsurin Tbk. Semarang Laboratory (acceditation by KAN / National Accreditation Committe – Indonesia for SNI ISO/IEC 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 | % | 5.72 | - | ASTM D1762-84 (2021) section 7.2 |
| Ash Content | % | 2.13 | 2.26 | ASTM D1762-84 (2021) section 7.4 |
| Volatile Matter | % | 21.20 | 22.49 | ASTM D1762-84 (2021) section 7.3 |
| Fixed Carbon | % | 70.95 | 75.25 | MWI.01.63.LC (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, 27 October 2025
**PT. CARSURIN Tbk.**

CARSURIN 1968

**Dede Jemmi Supriadi**
Head of Laboratory

*For verification of authenticity of certificate or reports, scan the secure QR code using the Validator App or visit verify.carsurin.com*

**The analysis results are based on representative samples which are taken based on applied standard (Ref SNI 19-0428-1998 *Petunjuk Pengambilan Contoh Padatan*) during the inspection (or audit). This particular cargo as stated in this certificate has been performed cooling and weathering process as declared by the shipper in the weathering certificate. The certificate is valid for this particular shipment with the invoice number, booking number, and gross/net weight as mentioned in this certificate.**

**SUBJECT**
Evaluation of "Coconut Shell Charcoal Briquette" Sample for Self-Heating Substance Test

**MANUFACTURER / SHIPPER**
PT. Coco Total Karbon Indonesia
Jl. Mayor Unus KM 1,5 Soroyudan,
Kabupaten Magelang, Jawa Tengah

**DATE OF SAMPLING**
23 October 2025

**LOCATION OF SAMPLING**
PT. Coco Total Karbon Indonesia, Warehouse

**DESCRIPTION & TYPE OF SAMPLE**
Coconut Shell Charcoal Briquette, Hexa & Cube, Size (2.5 x 2.5 x 2.5 cm)

**DATE OF TESTING**
24 October 2025 up to 26 October 2025

**INVOICE NO.**
WAC-2-17-69-25

**BOOKING NO.**
EBKG14574491

**GROSS WEIGHT**
28,000 Kgs

**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 particular cargo as stated in this certificate has been performed cooling and weathering process as declared by the shipper in the weathering certificate. The certificate is valid for this particular shipment with the invoice number, booking number, and gross/net weight as mentioned in this certificate.**

## 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) 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 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 "Coconut Shell Charcoal Briquette" sample

| Sample | Oven Temperature (°C) | Cube Size (mm) | Maximum Temperature Reached (°C) | Result |
|---|---|---|---|---|
| Coconut Shell Charcoal Briquette | 140 | 100 | 201.4 | Positive |
| Coconut Shell Charcoal Briquette | 140 | 25 | 140.4 | Negative |
| Coconut Shell Charcoal Briquette | 120 | 100 | 129.2 | Negative |

The above result showed that the "Coconut Shell Charcoal Briquette" sample shall not be classified in self heating substances and the substance is to be contained in packages of not more than 3 $m^3$.

## Remark

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

Jakarta, 27 October 2025

**PT. CARSURIN Tbk.**

**Dede Jemmi Supriadi**
Head of Laboratory

**PT. CARSURIN Tbk.**

CARSURIN 1968

**Amran Lesmana**
Head of Charcoal Division

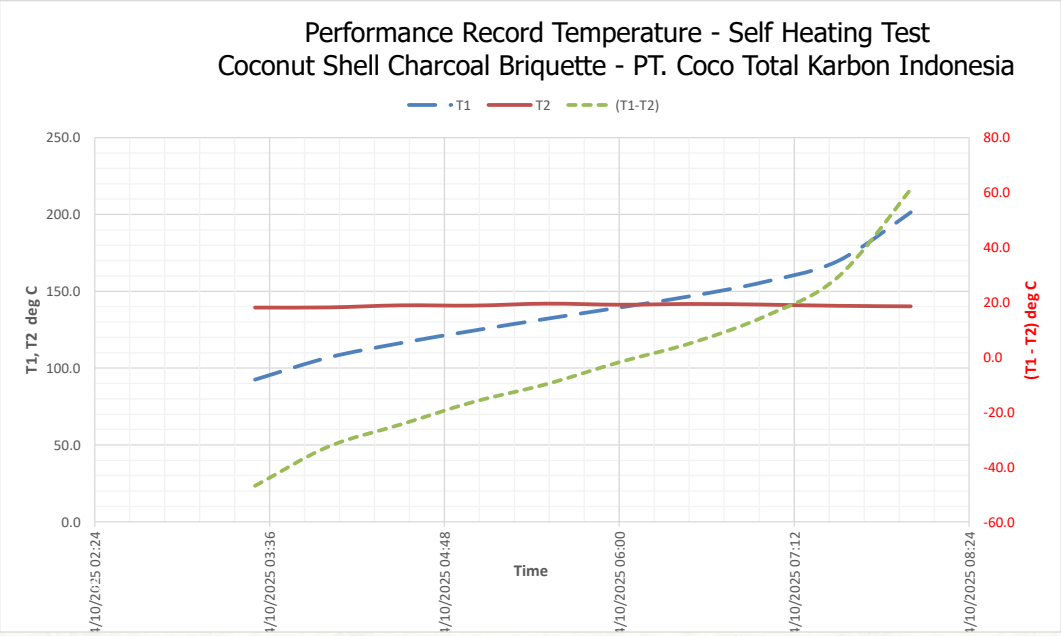
*For verification of authenticity of certificate or reports, scan the secure QR code using the Validator App or visit verify.carsurin.com*

Temperature Profile "Coconut Shell Charcoal Briquette" at $140^0$ C (100mm cube)

| | | |
|---|---|---|
| Start Time | : 24-Oct-25 | 03:30:00 |
| Stop Time | : 24-Oct-25 | 08:00:00 |
| Elapsed Time | : 4:30:00 | |
| Interval | : 00:30:00 | |
| Total Readings | : 10 | |
| Thermocouple Type | : K | |
| Scaling | : (None) | |

| Temperature | Max Time Stamp | Max | Average | Min | Min Time Stamp |
|---|---|---|---|---|---|
| T1 | 00/01/1900 00:00 | 201.4 | 138.6 | 92.5 | 24/10/2025 03:30 |
| T2 | 24/10/2025 05:30 | 142.0 | 140.7 | 139.4 | 24/10/2025 03:30 |
| T1-T2 | 00/01/1900 00:00 | 61.2 | -2.2 | -46.9 | 24/10/2025 03:30 |

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

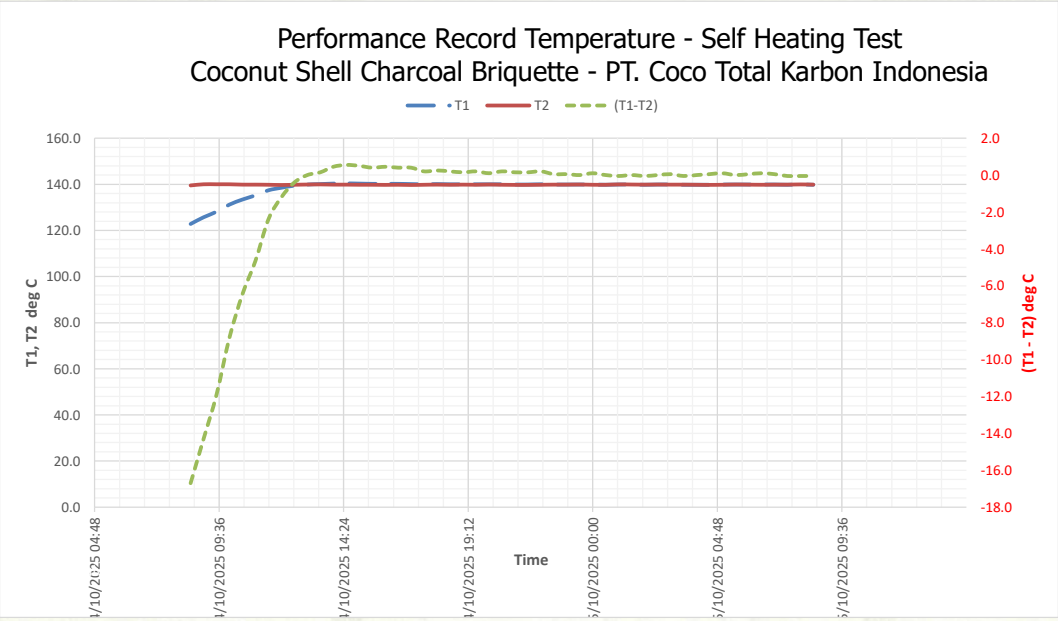


24 Hours Temperature Profile "Coconut Shell Charcoal Briquette" at $140^0$ C (25mm cube)

| | | |
|---|---|---|
| Start Time | : 24-Oct-25 | 08:30:00 |
| Stop Time | : 25-Oct-25 | 08:30:00 |
| Elapsed Time | : 24:00:00 | |
| Interval | : 00:30:00 | |
| Total Readings | : 49 | |
| Thermocouple Type | : K | |
| Scaling | : (None) | |

| Temperature | Max Time Stamp | Max | Average | Min | Min Time Stamp |
|---|---|---|---|---|---|
| T1 | 24/10/2025 14:30 | 140.4 | 138.6 | 122.8 | 24/10/2025 08:30 |
| T2 | 24/10/2025 09:00 | 140.0 | 139.8 | 139.5 | 24/10/2025 08:30 |
| T1-T2 | 24/10/2025 14:30 | 0.6 | -1.3 | -16.7 | 24/10/2025 08:30 |

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

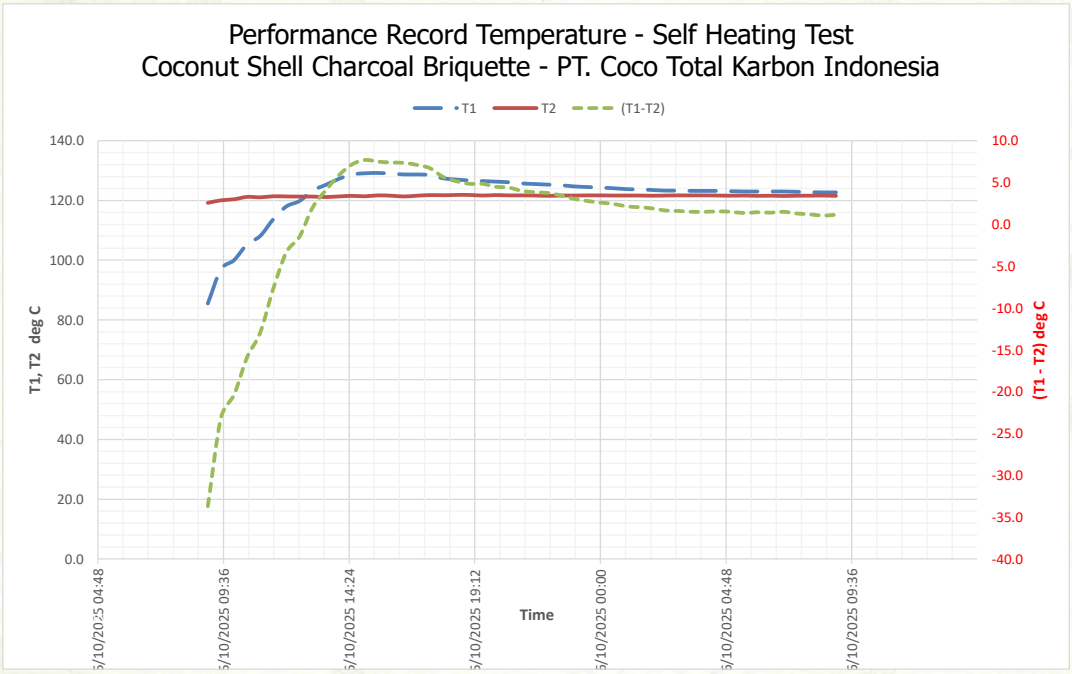


24 Hours Temperature Profile "Coconut Shell Charcoal Briquette" at $120^0$ C (100mm cube)

| | | |
|---|---|---|
| Start Time | : 25-Oct-25 | 09:00:00 |
| Stop Time | : 26-Oct-25 | 09:00:00 |
| Elapsed Time | : 24:00:00 | |
| Interval | : 00:30:00 | |
| Total Readings | : 49 | |
| Thermocouple Type | : K | |
| Scaling | : (None) | |

| Temperature | Max Time Stamp | Max | Average | Min | Min Time Stamp |
|---|---|---|---|---|---|
| T1 | 25/10/2025 15:00 | 129.2 | 122.0 | 85.5 | 25/10/2025 09:00 |
| T2 | 25/10/2025 18:30 | 121.9 | 121.5 | 119.2 | 25/10/2025 09:00 |
| T1-T2 | 25/10/2025 15:00 | 7.7 | 0.5 | -33.7 | 25/10/2025 09:00 |

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



Please note that this Report is issued under the following terms:

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2. The samples mentioned in this report are taken, and representative products are to be loaded that have been correctly sampled by trained staff from our laboratory and that the sample was correctly tested and has passed the test.


Coconut Shell Charcoal Briquette, Type: Hexa & Cube, Size (2.5 x 2.5 x 2.5 cm)

3. Nothing in this report shall be interpreted to mean that PT. CARSURIN Tbk. has verified or ascertained endorsement or marks from any other authority or bodies that may be found on that sample.

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