

REPORT OF ANALYSIS

Description : Charcoal Briquette
 Manufacturer / Shipper : PT. Kinaya Proyek Indonesia.
 Ruko Grand Royal Blok B.19, Poris Plawad Utara, Cipondoh,
 Tangerang
 Sample Weight : 3.00 Kgs
 Received Date : 28 February 2023
 Date of Analysis : 01 March 2023

Sampling

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

Analysis

Analysis were performed at PT Carsurin 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	8.39	-	ASTM D1762-84 (REAPPROVED 2021)
Ash Content	Pct	21.65	23.63	ASTM D1762-84 (REAPPROVED 2021)
Volatile Matter	Pct	19.04	20.78	ASTM D1762-84 (REAPPROVED 2021)
Fixed Carbon	Pct	50.92	55.59	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, 03 March 2023

PT. CARSURIN



Dede Jemmi Supriadi
Head of Laboratory

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SUBJECT

Evaluation of "Charcoal Briquette" Sample for Self-Heating Substance Test

CUSTOMER

PT. Kinaya Proyek Indonesia

Ruko Grand Royal Blok B.19, Poris Plawad Utara, Cipondoh,
Tangerang

DATE OF RECEIVED SAMPLE

28 February 2023

DESCRIPTION OF SAMPLE

Charcoal Briquette

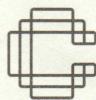
DATE OF TESTING

01 March 2023 up to 03 March 2023

The below findings are based on sample/s only, which is/are submitted or supplied by client. 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 7th 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 "Charcoal Briquette" sample

Sample	Oven Temperature (°C)	Cube Size (mm)	Maximum Temperature Reached (°C)	Result
Charcoal Briquette	140	100	205.8	Positive
Charcoal Briquette	140	25	140.5	Negative
Charcoal Briquette	120	100	124.9	Negative

The above result showed that the "Charcoal Briquette" sample shall not be classified in self heating substances of of division 4.2 and the substance is to be transported in packages with a volume not more than 3 m3.

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, 03 March 2023

PT. CARSURIN

Dede Jemmi Supriadi
Head of Laboratory

PT. CARSURIN

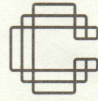
Amran Lesmana
Head of Technical Charcoa

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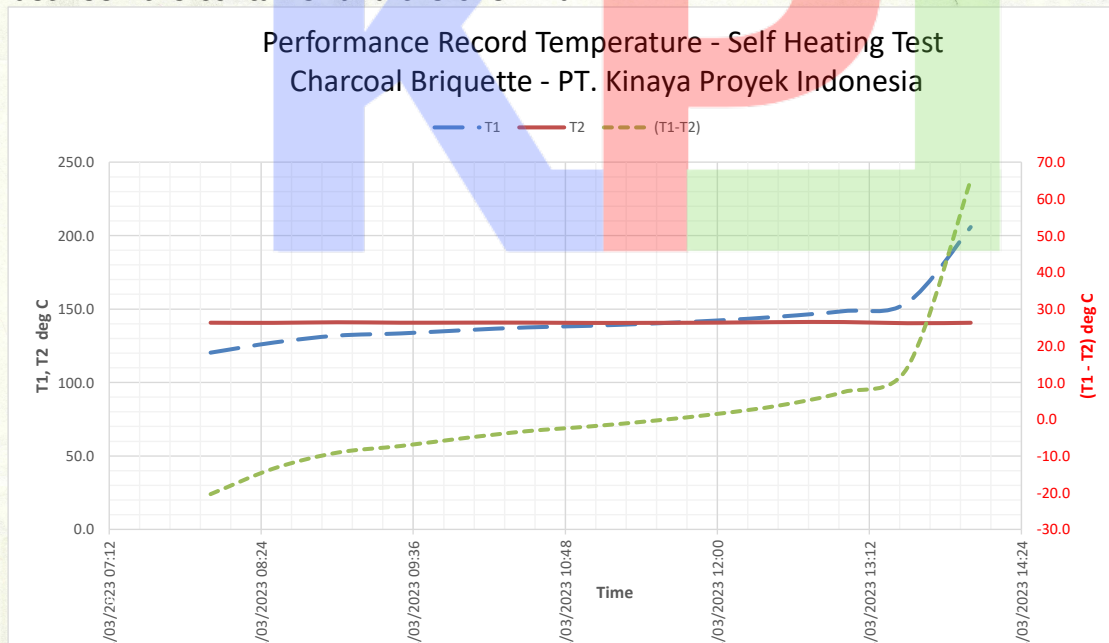
Temperature Profile "Charcoal Briquette" at 140⁰ C (100mm cube)

Start Time : 01-Mar-23 8:00:00
 Stop Time : 01-Mar-23 14:00:00
 Elapsed Time : 6:00:00
 Interval : 00:30:00
 Total Readings : 13
 Thermocouple Type : K
 Scaling : (None)

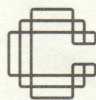
Temperature	Max Time Stamp	Max	Average	Min	Min Time Stamp
T1	01/03/2023 14:00	205.8	143.1	120.3	01/03/2023 08:00
T2	01/03/2023 13:00	141.2	140.7	140.4	01/03/2023 13:30
T1-T2	01/03/2023 14:00	65.2	2.4	-20.4	01/03/2023 08:00

Remark:

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



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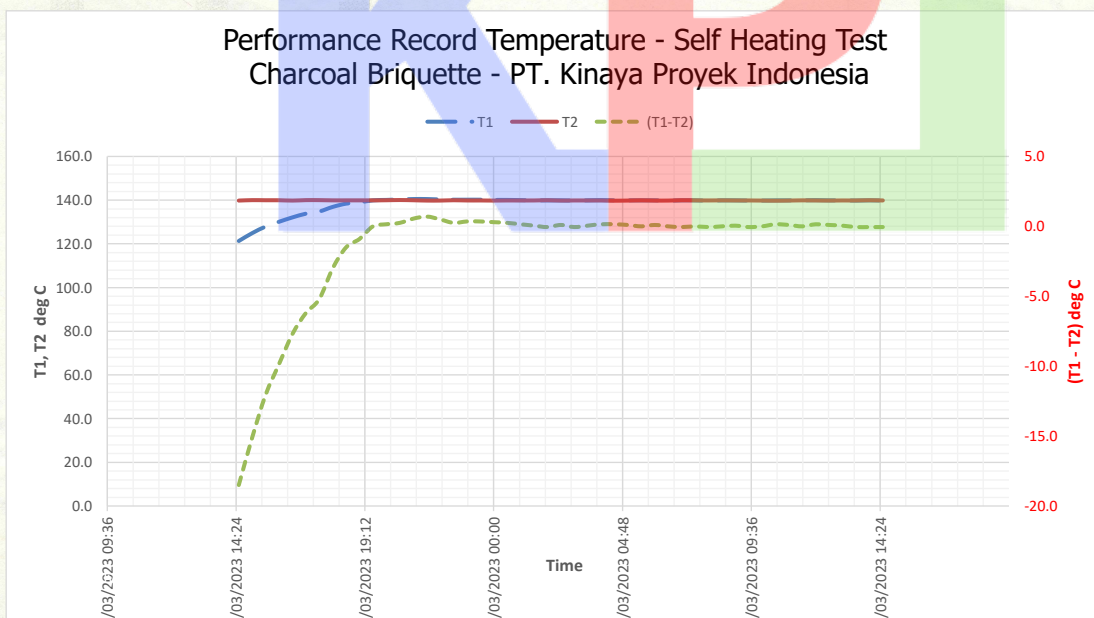
24 Hours Temperature Profile "Charcoal Briquette" at 140⁰ C (25mm cube)

Start Time : 01-Mar-23 14:30:00
 Stop Time : 02-Mar-23 14:30:00
 Elapsed Time : 24:00:00
 Interval : 00:30:00
 Total Readings : 49
 Thermocouple Type : K
 Scaling : (None)

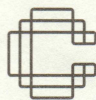
Temperature	Max Time Stamp	Max	Average	Min	Min Time Stamp
T1	01/03/2023 21:00	140.5	138.3	121.3	01/03/2023 14:30
T2	01/03/2023 20:30	140.1	139.9	139.8	01/03/2023 14:30
T1-T2	01/03/2023 21:30	0.7	-1.5	-18.5	01/03/2023 14:30

Remark:

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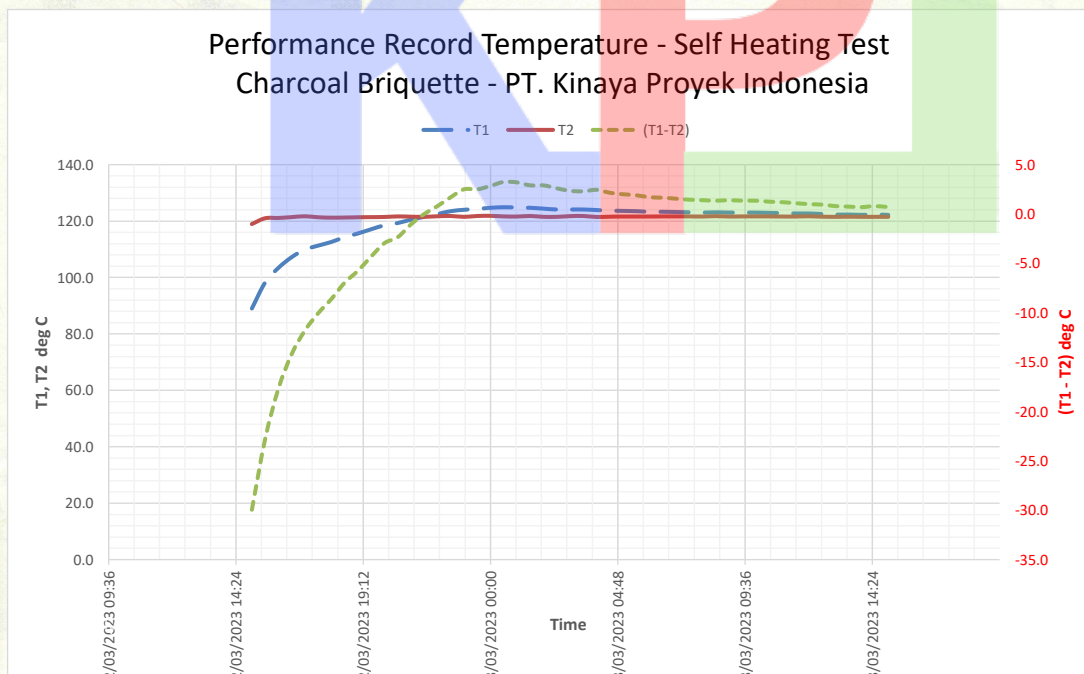
24 Hours Temperature Profile "Charcoal Briquette" at 120⁰ C (100mm cube)

Start Time : 02-Mar-23 15:00:00
 Stop Time : 03-Mar-23 15:00:00
 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	03/03/2023 00:30	124.9	119.9	89.0	02/03/2023 15:00
T2	03/03/2023 00:00	121.9	121.5	119.0	02/03/2023 15:00
T1-T2	03/03/2023 00:30	3.3	-1.6	-30.0	02/03/2023 15:00

Remark:

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