

**SUBJECT**

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

**MANUFACTURER / SHIPPER**

PT. General Carbon Industry  
JL. Brigjen Katamso Km.7, Tanjung Uncang,  
Batam, Indonesia

**DATE OF RECEIVED**

May 24<sup>th</sup>, 2023

**DESCRIPTION OF SAMPLE**

Coconut Shell Charcoal Briquette

**DATE OF TESTING**

May 24<sup>th</sup> up to May 25<sup>th</sup>, 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) 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 33.3.1.3.3), 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 was the 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	140.4	Negative

The above result showed that the "Coconut Shell Charcoal Briquette" Sample sample shall not be classified in selfheating 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.

Medan, May 25<sup>th</sup>, 2023

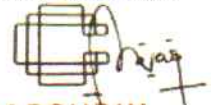
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**Azhari Damanik**

Head of Laboratory

PT. CARSURIN



**CARSURIN**

**Amran Esmana**

Head of Technical Charcoal

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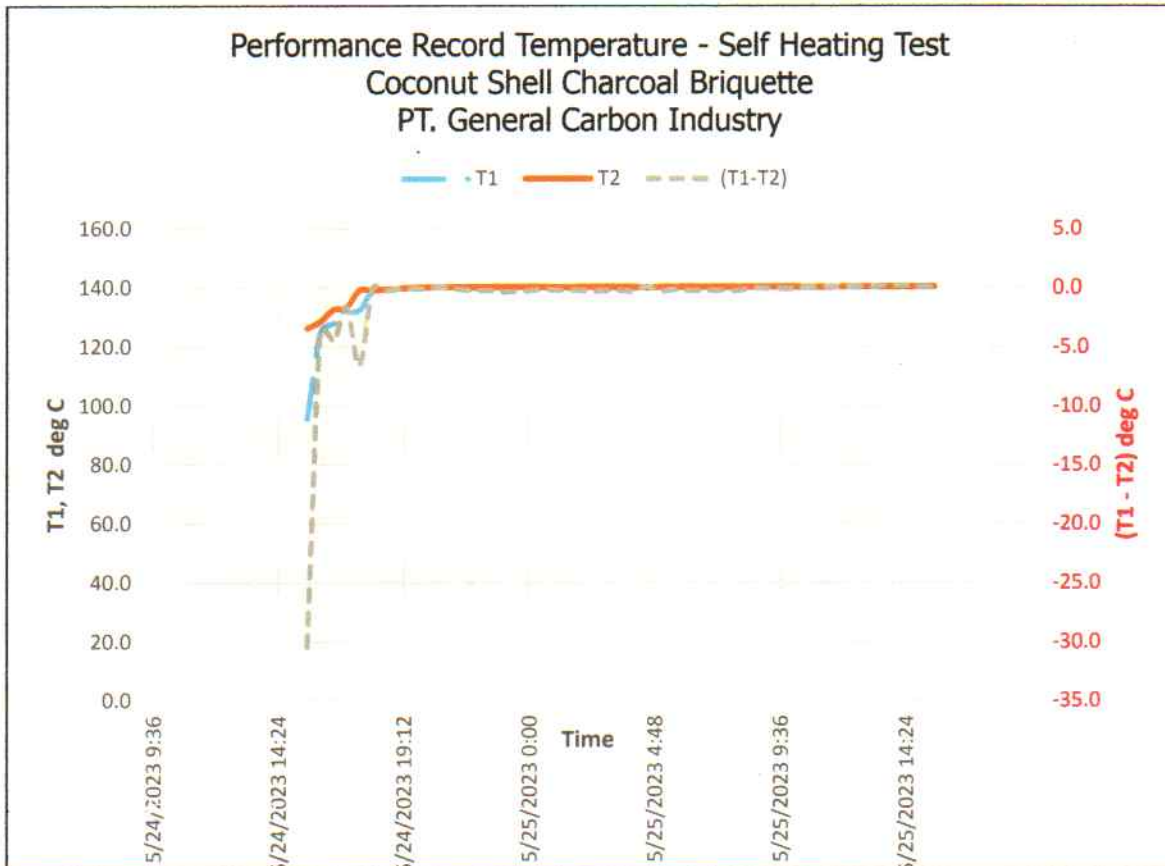
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Report No : 230461.0047

24 Hours Temperature Profile "Coconut Shell Charcoal Briquette" at 140<sup>o</sup> C (100mm cube)

Start Time : May 24<sup>th</sup>, 2023 15:00:00  
Stop Time : May 25<sup>th</sup>, 2023 15:00:00  
Elapsed Time : 24:00:00  
Interval : 0:30:00  
Total readings : 49  
Thermocouple Type : K  
Scaling : (none)

	Max Time Stamp	Max	Average	Min	Min Time Stamp
T1	25/05/2023 15:30	140.4	138.3	95.8	24/05/2023 15:00
T2	25/05/2023 15:30	140.4	139.3	126.3	24/05/2023 15:00
T1-T2	25/05/2023 14:30	0.2	-1.1	-30.5	24/05/2023 15:00



Remark:

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



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