



NUCON International, Inc.

P.O. BOX 29151 7000 HUNTLEY ROAD
COLUMBUS, OHIO 43229 U.S.A.

TELEPHONE: (614) 846-5710
TOLL FREE: (800) 992-5192
FAX: (614) 431-0858
WEB SITE: www.nucon-int.com

CERTIFICATION OF COMPLIANCE

Client: Aleph Group & Asociados SAC Date: 01 July 2025
Av. Rafael Escardó 154
Address: San Miguel, Lima 15087
PERU

NUCON Project Number: 11ALEPH3070

Purchase Order Number: wire transfer Release Number: N/A
Purchase Order Date: 30 June 2025 Release Date: N/A

NUCON PRODUCT OR SERVICE PROVIDED:

1. Supply forty (40) pounds of NUCON NUSORB KITEG II impregnated coconut shell carbon from Lot 55 Batch 560.
2. The carbon was processed in February of 2025 and has a shelf life of five (5) years when stored in accordance with ANSI N45.2.2 Level B.
3. Provide actual test results for the above carbon.
4. NUCON has performed all inspections and tests required to verify conformance.

This is to certify that the product or service supplied conforms to the specification(s) of:

CLIENT P.O. No.: wire transfer
ASTM D3803-1989

NUCON 045 Quality Assurance Manual, Revision 13 Dated 25 February 1991 and is so documented by NUCON QUALITY ASSURANCE with any exceptions noted.

Exceptions: None.

Paul E Kovach
Date: 01 July 2025

NUCON Quality Assurance
NUCON International, Inc.



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FT-55 (Rev. 3 8/97)

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CARBON TEST REPORTCLIENT: Aleph Group & Asociados SAC PROJECT: 11ALEPH3070 DATE: 12 Feb 2025SAMPLE DESCRIPTION: Nuclear Grade Adsorbent SAMPLE LOG NO: 0225-2PRODUCT GRADE: NUCON® NUSORB® KITEG II LOT: 55 BATCH: 560

TEST	PROCEDURE	RESULT	EQUIPMENT LOG NO.
Apparent Density g/ml	NUCON 104 Rev 1 ASTM D2854	0.52	L1701, L1262, L1860
CCl ₄ Activity (on base) wt %	NUCON 28 Rev 1 ASTM D3467	63.5	L1804, L1822, L0836, L1860
Moisture Content wt %	NUCON 107 Rev 1 ASTM D2867	4.9	L1860, L1701
Total Ash Content (on base) wt %	NUCON 106 Rev 1 ASTM D2866	2.4	L1804, L1807, L1860
Hardness wt %	NUCON 29 Rev 0 ASTMD3802	99	L1701, L2025, L1782
Ignition Temperature °C	NUCON 27 Rev 0 ASTM D3466	361.99	L1577, L1867
Impregnant Content wt%	NUCON 118 Rev 2 (TEDA & KI)	5.0	L1233
pH	NUCON 7 Rev 0 ASTM D3838	10.50	L1701, L1636, L1262

Particle Size Distribution NUCON Procedure 105 Rev. 2, ASTM D2862

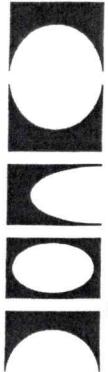
PARTICLE SIZE	WEIGHT	PERCENT	CUMULATIVE	EQUIPMENT LOG NO.
On 6	0.0	0.0	0.0	L1701, L2025, L0439
On 8	0.1	0.1	0.1	L1701, L2025, L1126
On 12	37.0	37.1	37.2	L1701, L2025, L0443
On 16	61.6	61.8	99.0	L1701, L2025, L1781
On 18	0.8	0.8	99.8	L1701, L2025, L1749
Thru 18	0.2	0.2	100.0	L1701, L2025
Total	99.7	100.0		

Date 12 February 2025

Certified By

Tested By SW-JG-AV

Reviewed By



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RADIOIODINE TEST REPORT

Client:

NUCON International

Purchase Order:

NUSORB KITEG II

PO Exp:

N/A

Release No.:

System ID:

LOT 55

Sample ID:

BATCH 560

Test Date:

11-Feb-25

Test Method(s):

ANSI/ASME AG1-1994, -1997 FF-5221

ASTM D3803-1989, 1991(2022)

Requested

Exceptions:

Distribution and Number of Copies

Internal:

Project Master File **1**

I-Lab File **1**

QA File **1**

I-Lab ID# C881

NUCON Project/Report: 11KITEG025/



NUCON International, Inc.

I-Lab ID# **C881**
Client: **NUCON International**
Plant: **NUCON International**
Sample ID: **BATCH 560**
System ID: **LOT 55**

Project **11KITEG025/**
P.O. No.: **NUSORB KITEG II**
Rel. No.:
Test Date **11-Feb-25**

Standard(s): **ANSI/ASME AG1-1994, -1997 FF-5221**
ASTM D3803-1989, 1991(2022)

<u>Parameter</u>	<u>Nominal Conditions</u> ¹	<u>Actual Conditions</u> ²
Pre-Equilibration Time (min)	960	960
Equilibration Time (min)	120	120
Challenge Time (min)	60	60
Elution Time (min)	60	60
Challenge Agent	CH3I	CH3I
Agent Concentration (mg/m ³)	1.75	1.75
Test Bed Depth (mm)	50	50
Test Bed Diameter (mm)	50	50
Number of Beds	1	1
Pre-Equilibration Temp. (°C)	30	29.95 ± 0.05
Equilibration Temp. (°C)	30	29.95 ± 0.05
Challenge Temp. (°C)	30	29.95 ± 0.05
Elution Temp. (°C)	30	29.95 ± 0.05
Velocity (m/min)	12.2	12.19 ± 0.02
Relative Humidity (%)	95	95.88 ± 0.30
Pressure (kPa)	101.3	99.24 ± 0.16

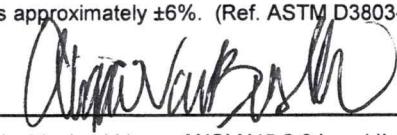
¹Tolerances are in accordance with the listed test method(s) and NUCON 13-248 Rev. 2.

²Actual Value or Time Weighted Average ± Standard Deviation as applicable

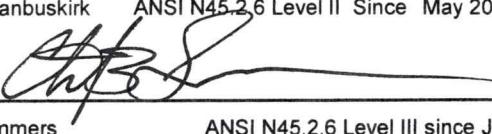
* Denotes a condition specified by the client that is an exception to the test method(s).

<u>Test Results</u>		
<u>Actual & Standard Deviation</u>		<u>Acceptance Criteria</u>
	Bed 1	Bed 1
Penetration	0.588% ± 0.008	n/a
Efficiency	99.412% ± 0.008	n/a

³The standard deviation indicated above is associated with the precision of the radio-iodine measurement process. The actual accuracy of the penetration result must be estimated from interlaboratory bias and precision data used to support the ASTM standard. For the ASTM standard, this data indicates that for laboratories which rigorously follow the test method, the relative standard deviation of a 1% penetration result is approximately ±25% and of a 10% penetration result is approximately ±6%. (Ref. ASTM D3803-1989)

Performed By  Date 13-Feb-25

Abby Vanbuskirk ANSI N45.2.6 Level II Since May 2023

Approved By  Date 13 Feb 25

Clinton Summers ANSI N45.2.6 Level III since June 2006



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4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after inhalation : May cause irritation to the respiratory tract, sneezing, coughing, burning sensation of throat with constricting sensation of the larynx and difficulty in breathing.
- Symptoms/injuries after skin contact : Slight irritation.
- Symptoms/injuries after eye contact : Causes serious eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Dry powder. Water spray. Foam.

5.2. Special hazards arising from the substance or mixture

- Explosion hazard : Avoid raising powdered materials into airborne dust, creating an explosion hazard.

5.3. Advice for firefighters

- Firefighting instructions : Evacuate area. Eliminate all ignition sources if safe to do so. Exercise caution when fighting any chemical fire.
- Protection during firefighting : Do not attempt to take action without suitable protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : May form combustible dust concentrations in air.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

- Protective equipment : Avoid breathing dust.
- Emergency procedures : Stop release.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : On land, sweep or shovel into suitable containers. Flush spill area with water spray.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Avoid dust formation. Do not breathe dust.
- Precautions for safe handling : No open flames. No smoking. Use only outdoors or in a well-ventilated area. Do not get in eyes, on skin, or on clothing. Do not breathe dust. Avoid contact during pregnancy/while nursing. Use personal protective equipment as required. Avoid dust formation. Eliminate all ignition sources if safe to do so. Use only non-sparking tools.
- Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace.



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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: NUSORB® KITEG II™(Impregnated steam-activated coconut shell carbon for Radioiodine removal)

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.3. Details of the supplier of the safety data sheet

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T (614) 846-5710 - F (614) 431-0858
sales@nucon-int.com - <http://www.nucon-int.com/>

1.4. Emergency telephone number

Emergency number : + 800-992-5192 extension 124

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Not classified

2.2. Label elements

GHS-US labeling

No labeling applicable

2.3. Other hazards

Other hazards not contributing to the classification : None under normal conditions. May form combustible dust concentrations in air.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Steam-Activated Carbon	(CAS No) 7440-44-0	95 - 97	Not classified
Potassium iodide (KI)	(CAS No) 7681-11-0	1.5 - 2.5	Skin Sens. 1B, H317 Repr. 2, H361 STOT RE 1, H372
Triethylenediamine	(CAS No) 280-57-9	1.5 - 2.5	Acute Tox. 4 (Oral), H302

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- | | |
|---------------------------------------|--|
| First-aid measures general | : Call a POISON CENTER or doctor/physician. |
| First-aid measures after inhalation | : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. |
| First-aid measures after skin contact | : If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes. Wash contaminated clothing before reuse. |
| First-aid measures after eye contact | : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. |
| First-aid measures after ingestion | : Rinse mouth. Do not induce vomiting. Call a physician immediately. |



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Boiling point	:	No data available
Flash point	:	No data available
Auto-ignition temperature	:	450 °C
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapor pressure	:	No data available
Relative vapor density at 20 °C	:	No data available
Relative density	:	No data available
Specific gravity / density	:	400 - 600 g/l
Solubility	:	insoluble in water.
Log Pow	:	No data available
Log Kow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available.
Oxidizing properties	:	No data available.
Explosion limits	:	No data available

9.2. Other information

VOC content	:	< 1 % by volume
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SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Moisture. Avoid dust formation.

10.5. Incompatible materials

Strong oxidizers. Fluorine. Halogens. Peroxides. Oxygen.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide. Nitrogen oxides. Potassium oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	:	Not classified
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Carbon (7440-44-0)

LD50 oral rat	> 10000 mg/kg
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Triethylenediamine (280-57-9)

LD50 oral rat	1700 mg/kg
LD50 dermal rabbit	3200 mg/kg
ATE US (oral)	1700.000 mg/kg body weight
ATE US (dermal)	3200.000 mg/kg body weight

Skin corrosion/irritation	:	Not classified
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7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Comply with applicable regulations.
Storage conditions	: Keep only in the original container in a cool, well-ventilated place away from: moisture.
Incompatible products	: Oxidizing agent.
Storage area	: Store in a well-ventilated place.
Special rules on packaging	: Store in a closed container.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

NUSORB KITEG (Impregnated coconut carbon for Radioiodine removal) (7440-44-0)	
ACGIH	Not applicable
OSHA	Not applicable
Carbon (7440-44-0)	
ACGIH	Not applicable
OSHA	Not applicable
Potassium iodide (KI) (7681-11-0)	
ACGIH	Not applicable
OSHA	Not applicable
Triethylenediamine (280-57-9)	
ACGIH	Not applicable
OSHA	Not applicable

8.2. Exposure controls

Personal protective equipment	: Wash hands thoroughly after handling.
Eye protection	: Chemical goggles or face shield.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: In case of inadequate ventilation wear respiratory protection. Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.
Consumer exposure controls	: Avoid contact during pregnancy/while nursing.
Other information	: Do not breathe dust. Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: granular. Pellets/tablets.
Color	: Black dark gray
Odor	: odorless
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: 3550 °C
Freezing point	: No data available



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Serious eye damage/irritation	:	Not classified
Respiratory or skin sensitization	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
Specific target organ toxicity (single exposure)	:	Not classified
Specific target organ toxicity (repeated exposure)	:	Not classified
Aspiration hazard	:	Not classified
Potential Adverse human health effects and symptoms	:	Harmful if swallowed. Harmful if inhaled.
Symptoms/injuries after inhalation	:	May cause irritation to the respiratory tract, sneezing, coughing, burning sensation of throat with constricting sensation of the larynx and difficulty in breathing.
Symptoms/injuries after skin contact	:	Slight irritation.
Symptoms/injuries after eye contact	:	Causes serious eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water	:	Harmful to aquatic life. Toxic to aquatic life. May cause long lasting harmful effects to aquatic life. Harmful to aquatic life with long lasting effects. Toxic to aquatic life with long lasting effects. Very toxic to aquatic life with long lasting effects.
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Triethylenediamine (280-57-9)

LC50 fish 1	1510 - 1980 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
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12.2. Persistence and degradability

Carbon (7440-44-0)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Carbon (7440-44-0)	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on ozone layer	:	No known ecological damage caused by this product.
Effect on the global warming	:	No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations	:	Dispose of contents/container to meet all regulations.
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SECTION 14: Transport information

In accordance with DOT

Not evaluated

Additional information

Other information	:	No supplementary information available.
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ADR

No additional information available



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Transport by sea

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods (IMDG) Code Special Provision 925 for transport by sea; this carbon is made by a steam activation process.

Air transport

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations Special Provision A.3 for transport by air; when tested according to the United Nations Transport of Dangerous Goods test protocol this carbon does not meet the definition of a self-heating substance (IATA Class 4.2) or any other hazard class, and therefore should not be listed as a hazardous material.

SECTION 15: Regulatory information

15.1. US Federal regulations

Carbon (7440-44-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Potassium iodide (KI) (7681-11-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Triethylenediamine (280-57-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

Carbon (7440-44-0)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
Potassium iodide (KI) (7681-11-0)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
Triethylenediamine (280-57-9)	
Listed on the Canadian DSL (Domestic Substances List)	

EU-Regulations

Carbon (7440-44-0)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Potassium iodide (KI) (7681-11-0)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Triethylenediamine (280-57-9)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

15.2.2. National regulations

Carbon (7440-44-0)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on INSQ (Mexican national Inventory of Chemical Substances)
Listed on Turkish inventory of chemical



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Potassium iodide (KI) (7681-11-0)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Canadian IDL (Ingredient Disclosure List)
Listed on INSQ (Mexican national Inventory of Chemical Substances)
Listed on Turkish inventory of chemical

Triethylenediamine (280-57-9)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Canadian IDL (Ingredient Disclosure List)
Listed on INSQ (Mexican national Inventory of Chemical Substances)
Listed on Turkish inventory of chemical

15.3. US State regulations

SECTION 16: Other information

Full text of H-phrases:

----- Acute Tox. 4 (Oral)
----- Repr. 2
----- Skin Sens. 1B
----- STOT RE 1
----- H302
----- H317
----- H361
----- H372

Acute toxicity (oral) Category 4
Reproductive toxicity Category 2
Skin sensitization Category 1B
Specific target organ toxicity (repeated exposure) Category 1
Harmful if swallowed
May cause an allergic skin reaction
Suspected of damaging fertility or the unborn child
Causes damage to organs through prolonged or repeated exposure

GHS US SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.