

SECTION 1: PRODUCT & COMPANY IDENTIFICATION

1.1 Product Identifiers

Product Name: NANOMYTE® BE-300E

Product Description: Activated Carbon Electrode Sheet

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Identified Uses: Anode material for lithium-ion batteries

1.3 Details of the Supplier of the Safety Data Sheet

Company: NEI Corporation

Address: 400 Apgar Drive, Unit E | Somerset, NJ 08873 – USA

Phone: +1 (732) 868-3141

Fax: +1 (732) 868-3143

Email: productinfo@neicorporation.com

1.4 Emergency Telephone Numbers

Manufacturer: +1 (732) 868-3142 (9am to 6pm EST / UTC -0500)

U.S. Poison Control Center: +1-800-222-1222

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture


GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Combustible dust [Activated Carbon]

Carcinogenicity (Category 2B), H351 [Carbon Black]

2.2 Label Elements

GHS Label Elements, including precautionary statements

Pictogram(s): 

Signal Word: Warning

Hazard Statement(s):

H351 Contains a component suspected of causing cancer (carbon black)

Precautionary Statement(s):

P202 Do not handle until all safety precautions have been read and understood.

P280 Wear protective gloves, protective clothing, & eye protection

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

May form combustible dust concentrations in air

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Component Name	Synonyms	Formula	CAS #	Concentration
Activated Carbon	Charcoal activated	C	7440-44-0	80 – 95%
Poly(vinylidene fluoride)	PVDF	(C ₂ H ₂ F ₂) _x -	249347-79-9	2.5 – 10%
Carbon Black	Graphitized carbon black	C	1333-86-4	2.5 – 10%

SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid Measures

General Advice:

Move out of exposed area. Seek medical attention if irritation occurs. Show this SDS to the doctor in attendance.

After Inhalation:

If breathed in, move person into fresh air. If not breathing, give artificial respiration and seek medical attention.

After Skin Contact:

Wash off with soap and plenty of water as a precaution.

After Eye Contact:

Flush eyes with water as a precaution.

After Swallowing:

Never give anything by mouth to an unconscious person. Rinse mouth with water.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed

The most important known symptoms and effects are described in section 2 and/or in section 11.

4.3 Indication of any Immediate Medical Attention and Special Treatment Needed

No Data Available

SECTION 5: FIREFIGHTING MEASURES

5.1 Suitable Extinguishing Media

Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

5.2 Special Hazards Arising from the Substance or Mixture

Carbon oxides, hydrogen fluoride

5.3 Advice for Firefighters

Wear full protective clothing and self-contained breathing apparatus approved for firefighting.

5.4 Other Information

No data available

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment, and Emergency Procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist, or gas.

6.2 Environmental Precautions

No special environmental precautions required.

6.3 Methods and Materials for Containment and Cleaning Up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to Other Sections

For safe handling, see Section 7; for personal protection, see Section 8; for disposal, see Section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Appropriate personal protective equipment should be used at all times. Provide appropriate exhaust ventilation at places where dust is formed. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. For precautions see section 2.2.

7.2 Conditions for Safe Storage (including any incompatibilities)

Store sealed, in a dry and well-ventilated place.

7.3 Specific End Uses

A part from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameters

Components with workplace control parameters:

Component	CAS #	Value	Control Parameters	Basis
Carbon Black	1333-86-4	TWA	3.5 mg/m ³	OSHA Permissible Exposure Limit (PEL)
		TWA	3.5 mg/m ³	NIOSH Recommended Exposure Limit (REL)
		TWA	0.1 mg PAHs/m ³	NIOSH Recommended Exposure Limit (REL) (carbon black in the presence of PAHs)
		TWA	3.5 mg/m ³	(ACGIH) Threshold Limit Value (TLV) (inhalable particulate matter)

8.2 Exposure Controls

Appropriate Engineering Controls

Handle in accordance with good industrial hygiene and safety practice.

Personal Protective Equipment

Respiratory Protection:

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Eye / Face Protection:

Use eye protection equipment that is tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Hand Protection:

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Skin and Body Protection:

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Control of Environmental Exposure

No special environmental precautions required.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties

Form: Solid (electrode sheet)

Color: Black

Odor: Odorless

pH: No data available

Melting point/range: No data available

Specific Gravity: No data available

Relative Density: No data available

Viscosity (20 °C): No data available

Boiling Point: No data available

Flashpoint: No data available

Ignition Temperature: No data available

Auto-ignition Temperature: No data available

Lower Explosion Limit: No data available

Upper Explosion Limit: No data available

Vapor Pressure: No data available

Vapor Density: No data available
 Water Solubility: No data available
 Evaporation Rate: No data available

9.2 Other Information

No Data Available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

No Data Available

10.2 Chemical Stability

Stable under recommended storage conditions (see Section 7.2)

10.3 Possibility of Hazardous Reactions

No Data Available

10.4 Conditions to Avoid

No Data Available

10.5 Incompatible Materials

Strong oxidizing agents

10.6 Hazardous Decomposition Products

Under fire conditions: Carbon oxides, hydrogen fluoride (see Section 5)

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

Acute Toxicity

Oral LD50:	> 6,000 mg/kg (Rat) – (OECD Test Guideline 423)	[Fluoropolymer]
	> 8,000 mg/kg (Rat)	[Carbon Black]
Inhalation LC50:	No Data Available	
Dermal LD50:	No Data Available	
Intravenous LD50:	LD50 Intravenous - Mouse - 440 mg/kg	[Activated Carbon]

Skin corrosion/irritation

No Data Available

Serious eye damage/eye irritation

No Data Available

Respiratory or skin sensitization

No Data Available

Germ cell mutagenicity

No Data Available

Carcinogenicity

Group 2B: Carbon black is *possibly carcinogenic* to humans based on sufficient experimental evidence on animals and inadequate evidence from epidemiological studies.

IARC: No other component of this product (present at levels greater than or equal to 0.1%) is identified as a probable, possible, or confirmed human carcinogen by IARC.

ACGIH: No component of this product (present at levels greater than or equal to 0.1%) is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product (present at levels greater than or equal to 0.1%) is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product (present at levels greater than or equal to 0.1%) is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No Data Available

Teratogenicity

No Data Available

Specific target organ toxicity - single exposure (Globally Harmonized System)

No Data Available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

No Data Available

Aspiration hazard

No Data Available

Additional Information

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

No Data Available

12.2 Persistence and Degradability

No Data Available

12.3 Bioaccumulative Potential

No Data Available

12.4 Mobility in Soil

No Data Available

12.5 Results of PBT and vPvB Assessment

PBT/vPvB assessment not available as chemical safety assessment not conducted

12.6 Other Adverse Effects

No Data Available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated Packaging

Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

14.1 Department of Transportation (DOT - US)

Not Dangerous Goods

14.2 International Maritime Dangerous Goods (IMDG)

Not Dangerous Goods

14.3 International Air Transport Association (IATA)

Not Dangerous Goods

14.4 Other

HST Code / Schedule B #: 3802.10.0000

SECTION 15: REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Chronic Health Hazard [Carbon Black]

The following product components are cited on the lists below:

<u>Component</u>	<u>CAS #</u>	<u>List Citations</u>
Activated Carbon	7440-44-0	NJ, PA Right to Know
Poly(vinylidene fluoride)	249347-79-9	NJ, PA Right to Know
Carbon Black	1333-86-4	MA, NJ, PA, MN, LA, CA Right to Know

CALIFORNIA PROPOSITION 65

WARNING! This product contains a chemical known to the State of California to cause cancer.

<u>Component</u>	<u>CAS #</u>
Carbon Black	1333-86-4

15.2 Chemical Safety Assessment

A chemical safety assessment was not carried out for this product.

SECTION 16: OTHER INFORMATION

REACH Number

A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

HMIS Classification

Health Hazard:	0
Flammability Hazard:	0
Physical Hazard:	0

NFPA Rating

Health Hazard:	0
Flammability Hazard:	0
Reactivity Hazard:	0

Further Information

NEI has attempted to provide current and accurate information to the best of its knowledge. NEI makes no representations regarding the accuracy or completeness of the information and assumes no liability for any loss, damage, injury of any kind which may result from or arise out of the use of or reliance on the information by any person. Employers should use this information only as a supplement to other information gathered by them and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

– END OF SDS –