

## SECTION 1: PRODUCT & COMPANY IDENTIFICATION

### 1.1 Product Identifiers

Product Name: NANOMYTE® H-Polymer  
Product Description: PEO-based polymer electrolyte with lithium salt  
CAS Number: A CAS number has not been assigned to this material

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

Identified Uses: Laboratory chemicals; synthesis of substances; R&D

### 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  
ChemTel (North America): +1 (800) 255-3924 (during transportation only)  
ChemTel (International): +1 (813) 248-0585 (during transportation only – collect calls accepted)

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 Classification of the Substance or Mixture

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

Acute toxicity, Oral (Category 3), H301  
Acute toxicity, Dermal (Category 3), H311  
Skin corrosion (Category 1B), H314  
Serious eye damage (Category 1), H318  
Specific target organ toxicity - repeated exposure Oral (Category 2), Nervous system, H373  
Acute aquatic toxicity (Category 3), H402  
Chronic aquatic toxicity (Category 3), H412

### 2.2 GHS Label elements, including precautionary statements

Pictogram(s): 

Signal Word: Danger

#### Hazard Statement(s):

H301 + H311: Toxic if swallowed or in contact with skin  
H314 + H318: Causes severe skin burns and eye damage.  
H373: May cause damage to organs (nervous system) through prolonged or repeated exposure if swallowed.  
H412: Harmful to aquatic life with long lasting effects.

#### Precautionary Statement(s):

P260: Do not breathe dust / fume / gas / mist / vapors / spray.  
P264: Wash skin thoroughly after handling.  
P273: Avoid release to the environment.  
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P301 + P310 + P330: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth.  
P301 + P330 + P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

- P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304 + P340 + P310: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
- P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310: IF IN EYES: Immediately call a POISON CENTER or doctor/ physician.
- P314: Get medical advice/ attention if you feel unwell.
- P362: Take off contaminated clothing and wash before reuse.
- P405: Store locked up.
- P501: Dispose of contents/ container to an approved waste disposal plant.

## 2.3 Other Hazards (not otherwise classified)

None

## SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

### 3.1 Substances

Component	Formula	CAS #	Concentration
H-Polymer (proprietary polymer)	n/a	Not assigned	~83.33%
<b>Hazards:</b> No known hazards			
Bis(trifluoromethane)sulfonamide lithium salt	C <sub>2</sub> F <sub>6</sub> LiNO <sub>4</sub> S <sub>2</sub>	90076-65-6	~16.67%
<b>Hazards:</b> Acute Tox. (Cat. 3, H301, H311); Skin Corr. (Cat. 1B, H314); Eye Dam. (Cat. 1, H318); STOT RE (Cat. 2, H373); Aquatic Acute (Cat. 3, H402); Aquatic Chronic (Cat. 3, H412)			

For the full text of the H-Statements mentioned in this Section, see Section 2 and 16.

## 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. Seek immediate medical attention.

#### After Skin Contact:

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Seek immediate medical attention.

#### After Eye Contact:

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Remove contact lenses, if present and easy to do. Continue rinsing and seek immediate medical attention.

#### After Swallowing:

Give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible. Do not attempt to neutralize.

### 4.2 Most Important Symptoms and Effects, Both Acute and Delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) 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 extinguishing measures that are appropriate to local circumstances and the surrounding environment.

### 5.2 Hazardous Combustion Products

Not combustible. Ambient fire may liberate hazardous vapors: Carbon oxides, Nitrogen oxides (NO<sub>x</sub>), Sulfur oxides, Hydrogen fluoride, Lithium oxides

### 5.3 Advice for Firefighters

Wear self-contained breathing apparatus for firefighting if necessary. Prevent skin and eye contact.

### 5.4 Other Information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal Precautions, Protective Equipment, and Emergency Procedures

Use personal protective equipment. Avoid generation and inhalation of dusts in all circumstances. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

### 6.2 Environmental Precautions

Do not let product enter drains. Discharge into the environment must be avoided.

### 6.3 Methods and Materials for Containment and Cleaning Up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

### 6.4 Reference to Other Sections

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

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## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for Safe Handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

### 7.2 Conditions for Safe Storage (including any incompatibilities)

Keep container tightly closed in a dry and well-ventilated place. Storage class (TRGS 510): 6.1B: Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

### 7.3 Specific End Uses

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

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## SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control Parameters

#### Components with Workplace Control Parameters

Occupational exposure limit values are unknown for this product.

### 8.2 Exposure Controls

#### Appropriate Engineering Controls

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Keep away from food and beverages.

#### Personal Protective Equipment

##### Eye / Face Protection:

Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### Skin 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.

##### Body Protection:

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory Protection:**

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Control of Environmental Exposure**

Do not let product enter drains. Discharge into the environment must be avoided.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

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**9.1 Information on Basic Physical and Chemical Properties**

Form:	Solid
Color:	Yellowish / Off-white
Odor:	Odorless
pH (20 °C):	No Data Available
Melting Point / Range:	No Data Available
Boiling Point / Range:	No Data Available
Flash Point:	No Data Available
Evaporation Rate:	No Data Available
Flammability:	No Data Available
Upper Explosion Limit:	No Data Available
Lower Explosion Limit:	No Data Available
Vapor Pressure:	No Data Available
Vapor Density:	No Data Available
Relative Density:	No Data Available
Water Solubility:	No Data Available
Partition Coefficient:	No Data Available
Auto-ignition Temperature:	No Data Available
Decomposition Temperature:	No Data Available
Viscosity:	No Data Available
Explosive Properties:	No Data Available
Oxidizing Properties:	No Data Available

**9.2 Other Information**

No Data Available

**SECTION 10: STABILITY AND REACTIVITY**

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**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**

Avoid moisture.

**10.5 Incompatible Materials**

Strong oxidizing agents

## 10.6 Hazardous Decomposition Products

No Data Available; in the Event of Fire: See Section 5

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on Toxicological Effects

#### Acute Toxicity

Component	Oral LD50	Dermal LD50	Inhalation LC50
H-Polymer	No data available	No data available	No data available
Lithium Salt	210 mg/kg (Rat, female)	400 mg/kg (Rat, male & female)	No data available

#### Skin corrosion/irritation

**LiTFSI:** Skin – Rabbit; Result: Causes burns. - 4 h (OECD Test Guideline 404)

#### Serious eye damage/eye irritation

**LiTFSI:** Eyes – Rabbit; Result: Irreversible effects on the eye (OECD Test Guideline 405)

#### Respiratory or skin sensitization

**LiTFSI:** Maximization Test - Guinea pig; Result: Does not cause skin sensitization (OECD Test Guideline 406)

#### Germ cell mutagenicity

No Data Available

#### Carcinogenicity

No classification data on carcinogenic properties of this material is available from EPA, IRAC, NTP, OSHA or ACGIH.

#### 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)

**LiTFSI:** Oral - May cause damage to organs through prolonged or repeated exposure. – Central nervous system, Peripheral nervous system

#### Aspiration Hazard

No Data Available

#### Additional Information

Lithium Salt: Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. May cause shortness of breath, cough, headache, or nausea.  
To the best of our knowledge, the chemical, physical, and toxicological properties of this product have not been thoroughly investigated.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

Component	Green Algae (OECD 201)	Freshwater Fish (OECD 203)	Water Flea (OECD 202)
H-Polymer	No data available	No data available	No data available
Lithium Salt	ErC50: 178 mg/l - 72 h	LC50: 88.4 mg/l - 96 h (rainbow trout)	EC50: 14 mg/l - 48 h

### 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 / required.

## 12.6 Other Adverse Effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life with long lasting effects.

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## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste Treatment Methods – Product

Contact a licensed professional waste disposal service to dispose of this material. Offer surplus and non-recyclable solutions to a licensed disposal company.

### 13.2 Waste Treatment Methods – Contaminated Packaging

Dispose of as unused product, clean residue from packaging (do not allow in drains), & dispose of properly.

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## SECTION 14: TRANSPORT INFORMATION

### 14.1 Department of Transportation (DOT - US)

UN number: 2923                      Class: 8 (6.1)                      Packing Group: II  
 Proper Shipping Name: Corrosive solids, toxic, n.o.s. (Bis(trifluoromethane)sulfonimide lithium salt)  
 Poison Inhalation Hazard: No

### 14.2 International Maritime Dangerous Goods (IMDG)

UN number: 2923                      Class: 8 (6.1)                      Packing Group: II                      EMS-No: F-A, S-B  
 Proper Shipping Name: Corrosive solids, toxic, n.o.s. (Bis(trifluoromethane)sulfonimide lithium salt)

### 14.3 International Air Transport Association (IATA)

UN number: 2923                      Class: 8 (6.1)                      Packing Group: II  
 Proper Shipping Name: Corrosive solid, toxic, n.o.s.

### 14.4 Additional Transport Information

**HS Code:** 3909.50                      **Schedule B #:** 3909.50.1000

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## 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

Acute Health Hazard, Chronic Health Hazard

#### The following product components are cited on the lists below:

<u>Component</u>	<u>CAS #</u>	<u>List Citations</u>
Bis(trifluoromethane)sulfonimide lithium salt	90076-65-6	PA, NJ Right to Know

#### California Proposition 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

#### Toxic Substances Control Act (TSCA) Chemical Substance Inventory

**Components:** Bis(trifluoromethane)sulfonimide lithium salt (CAS #90076-65-6)

**15.2 Chemical Safety Assessment**

A chemical safety assessment was not carried out for this product

**SECTION 16: OTHER INFORMATION****Full Text of H-Statements referred to under Section 3**

Acute Tox.	Acute toxicity
Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
Eye Dam.	Serious eye damage

**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:	3
Flammability Hazard:	0
Physical Hazard:	0

**NFPA Rating**

Health Hazard:	3
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 –