

SECTION 1: PRODUCT & COMPANY IDENTIFICATION

1.1 Product Identifiers

Product Name: NANOMYTE® UVP-100 (Part A)

CAS Number: A CAS number has not been assigned to this product.

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

Identified Uses: Laboratory chemicals, coating, surface treatment

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)

Flammable Liquids (Category 3), H226 [PGME]

Eye irritation (Category 2A), H319 [2-Butanol, Ethanol]

Acute toxicity, Oral (Category 3), H301 [Methanol]

Acute toxicity, Dermal (Category 3), H311 [Methanol]

Acute toxicity, Inhalation (Category 3), H331 [Methanol]

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335 [2-Butanol]

Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336 [2-Butanol, PGME]

Specific target organ toxicity - single exposure (Category 1), H370 [Methanol]

Short-term (acute) aquatic hazard (Category 1), H400 [ZnO]

Long-term (chronic) aquatic hazard (Category 1), H410 [ZnO]

2.2 GHS Label elements, including precautionary statements

Pictogram(s): 

Signal Word: Danger

Hazard Statement(s):

H226 Flammable liquid and vapor

H319 Causes serious eye irritation

H301 + H311 + H331 Toxic if swallowed, in contact with skin, or if inhaled

H335 May cause respiratory irritation

H336 May cause drowsiness or dizziness

H370 Causes damage to organs

H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statement(s):

P210 Keep away from heat / sparks / open flames / hot surfaces — no smoking

NANOMYTE® UVP-100 (Part A)

- 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.
- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304 + P340 + P311 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.
- P363 Wash contaminated clothing before reuse
- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
- P412 Store at temperatures not exceeding 5 °C / 41 °F. Keep cool.
- 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 explosive peroxides (2-Butanol)

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Component Name	Formula	CAS #	Weight %
Water	H ₂ O	7732-18-5	52 – 56%
Hazard Classification: None			
PGME (1-Methoxy-2-propanol)	C ₄ H ₁₀ O ₂	107-98-2	14 – 18%
Hazard Classification: Flam. Liq. (Cat. 3, H226); STOT SE (Cat. 3, H336); contains <0.3% 2-methoxypropanol (1589-47-5)			
Proprietary Resin	n/a	n/a	12 – 15%
Hazard Classification: Unknown			
Ethanol	C ₂ H ₆ O	64-17-5	4 – 8%
Hazard Classification: Flam. Liq. (Cat. 2, H225); Eye Irrit. (Cat. 2A, H319)			
2-Butanol	C ₄ H ₁₀ O	78-92-2	2 – 5%
Hazard Classification: Flam. Liq. (Cat. 3, H226); Eye Irrit. (Cat. 2A, H319); STOT SE (Cat. 3, H335, H336)			
Methanol	CH ₃ OH	67-56-1	2 – 5%
Hazard Classification: Flam. Liq. (Cat. 2, H225); Acute Tox. (Cat. 3: Oral, H301; Inhalation, H331; Dermal, H311); STOT SE (Cat. 1, H370)			
Zinc Oxide nanoparticles	ZnO	1314-13-2	1 – 4%
Hazard Classification: Aquatic Acute (Cat. 1, H400); Aquatic Chronic (Cat. 1, H410)			

For the full text of the Classification statements mentioned in this Section, see Section 2 & 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid Measures

General Advice:

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

After Inhalation:

If breathed in, remove person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. Seek medical attention if you feel unwell.

After Skin Contact:

Immediately remove all contaminated clothing. Wash off with soap and plenty of water. Consult a physician.

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.

After Ingesting:

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Call a POISON CENTER or doctor/physician IF you feel unwell.

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 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

Dry powder, dry sand; Do NOT use water jet.

5.2 Special Hazards Arising from the Substance or Mixture

Carbon oxides, Aluminum oxide, Zinc/zinc oxides

Flash back possible over considerable distance. Container explosion may occur under fire conditions. Vapors may form explosive mixture with air. May form peroxides of unknown stability.

5.3 Advice for Firefighters

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

5.4 Other Information

Use water spray to cool unopened containers

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment, and Emergency Procedures

Use personal protective equipment. Ensure adequate ventilation. Avoid breathing vapors, mist, or gas. Keep unprotected persons away. Eliminate all sources of ignition. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. Ventilate area and wash spill site after material pickup is complete.

6.2 Environmental Precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and Materials for Containment and Cleaning Up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite). Dispose of as a chemical waste in accordance with current local, state and federal regulations.

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 good ventilation or extraction. Avoid contact with eyes, skin, and clothing. Avoid inhalation of vapor or mist. Keep away from heat, sparks, flames and other sources of ignition. No smoking. Take measures to prevent the build-up of electrostatic charge.

7.2 Conditions for Safe Storage (including any incompatibilities)

For best coating performance, keep container tightly sealed and store in a dry and cool area. Containers which are opened must be carefully resealed and kept upright to prevent leakage. May form peroxides explosive peroxides on prolonged storage. Keep away from sources of ignition. Storage class (TRGS 510): 3: Flammable liquids

7.3 Specific End Uses

Apart 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 #	Wt. %	Value	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Propylene glycol methyl ether (PGME)	107-98-2	30 – 35%	TWA	50 ppm	n/a	100 ppm 360 mg/m ³
			STEL	100 ppm	n/a	150 ppm 540 mg/m ³
Remarks:	Upper Respiratory Tract irritation; Eye irritation; Not classifiable as a human carcinogen					
Ethanol	64-17-5	3 – 9%	TWA	n/a	1,000 ppm 1,900 mg/m ³	1,000 ppm 1,900 mg/m ³
			STEL	1,000 ppm	n/a	n/a
Remarks:	Upper Respiratory Tract irritation; Confirmed animal carcinogen with unknown relevance to humans					
2-Butanol	78-92-2	2 – 4%	TWA	100 ppm	150 ppm 450 mg/m ³	100 ppm 305 mg/m ³
			STEL	n/a	n/a	150 ppm 455 mg/m ³
Remarks:	Central Nervous System impairment; Upper Respiratory Tract irritation					
Methanol	67-56-1	1 – 3%	TWA	200 ppm	200 ppm 260 mg/m ³	200 ppm 260 mg/m ³
				250 ppm	n/a	250 ppm 325 mg/m ³
Remarks:	Headache, nausea, dizziness, eye damage, danger of cutaneous absorption					
Zinc Oxide	1314-13-2	1 – 4%	TWA	2 mg/m ³	5 mg/m ³	5 mg/m ³
Remarks:	Metal fume fever					

Notes: PEL – Permissible Exposure Limit; TLV – Threshold Limit Values; REL – Recommended Exposure Limits;
STEL – Short Term Exposure Limit; TWA – Time Weighted Average

8.2 Exposure Controls

Appropriate Engineering Controls

Handle in accordance with good industrial hygiene and safety practice. Keep away from food and beverages. Provide good ventilation or extraction. Safety shower and eye bath recommended. Wash hands before breaks & after workday.

Personal Protective Equipment

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).

Eye / Face Protection:

Face shield and/or safety glasses should be worn. 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 chemical resistant 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 after use.

Skin and 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.

Control of Environmental Exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties

Form: Liquid, clear
 Color: Colorless
 Odor: No data available
 pH: No data available
 Freezing point/range: No data available
 Initial Boiling point/range: No data available
 Flashpoint: No data available
 Evaporation Rate: No data available
 Flammability (solid, gas): No data available
 Upper Explosion Limit: No data available
 Lower Explosion Limit: No data available
 Vapor Pressure: No data available
 Relative Density: No data available
 Water Solubility: 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 additional information available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

No Data Available

10.2 Chemical Stability

May form peroxides on prolonged storage. Date container and periodically test for peroxides. The product is chemically stable under recommended storage conditions (see Section 7.2) at room temperature.

10.3 Possibility of Hazardous Reactions

Vapors may form explosive mixture with air

10.4 Conditions to Avoid

Heat, flames and sparks

10.5 Incompatible Materials

Acid chlorides, acid anhydrides, strong oxidizing agents, alkali metals, reducing agents, strong acids, strong bases, halogens, peroxides, rubber, various plastics, magnesium, zinc alloys, vinyl compounds, ethylene oxide, chlorine trifluoride, oxygen difluoride, sodium nitrate

10.6 Hazardous Decomposition Products

Other decomposition products: no data available; Under fire conditions: see Section 5

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

Acute Toxicity

Component	Oral LD50	Dermal LD50	Inhalation LC50
PGME	11,700 mg/kg (mouse)	13,000 mg/kg (rabbit)	10,000 ppm (rat – 5 hrs)

(cont.)

Component	Oral LD50	Dermal LD50	Inhalation LC50
Ethanol	10,470 mg/kg (rat)	No data available	124.7 mg/l (rat – 4hrs)
2-Butanol	2,193 mg/kg (rat)	> 2,000 mg/kg (rat)	No data available
Methanol	143 mg/kg (LDLo – human)	17,100 mg/kg (rabbit)	131.25 mg/l (rat – 4hrs)
ZnO	7.95 mg/kg (mouse)	No data available	2,500 mg/m ³ (mouse – 4hrs)

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

May cause eye irritation (based on data of individual components)

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC, NTP, or OSHA.

Reproductive toxicity

No data available

Teratogenicity

No data available

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

May cause damage to eyes, nausea, vomiting, or irritation symptoms in the respiratory tract (based on data of individual components)

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

No data available

Aspiration hazard

No data available

Additional Information

Exposure Routes: inhalation, ingestion, skin and/or eye contact

RTECS #: UB7700000 (PGME); KQ6300000 (Ethanol); EO1750000 (2-Butanol); PC1400000 (Methanol)

The chemical, physical, and toxicological properties of this product have not been thoroughly investigated.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Component	Green Algae	Freshwater Fish	Water Flea
PGME	No data available	No data available	No data available
Ethanol	ErC50: 275 mg/l – 72 hr	LC50: 15,300 mg/l – 96 hr (minnow)	LC50: 5,012 mg/l – 48hr
2-Butanol	No data available	LC50: 3,670 mg/l – 96 hr (minnow)	EC50: 4,227 mg/l – 48 hr
Methanol	ErC50: 22,000.0 mg/l – 96 hr	LC50: 15,400.0 mg/l – 96 hr (bluegill)	EC50: 18,260 mg/l – 96 hr
ZnO	No data available	LC50: 1.1 mg/l – 96 hr (rainbow trout)	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

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Contains a component that is very toxic to aquatic life with long lasting effects (ZnO).

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated Packaging

Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

14.1 Department of Transportation (DOT - US)

UN number: 1866

Class: 3

Packing Group: III

Proper Shipping Name: Resin Solution, flammable

14.2 International Maritime Dangerous Goods (IMDG)

UN number: 1866

Class: 3

Packing Group: III

Proper Shipping Name: Resin Solution, flammable

14.3 International Air Transport Association (IATA)

UN number: 1866

Class: 3

Packing Group: III

Proper Shipping Name: Resin Solution, flammable

14.4 Additional Transport Information

Ground Limited Quantities: 5L (net) / 30kg (gross)

Air Excepted Quantities (EQ): 30mL (net) / 1L (gross) [E1]

Air Limited Quantities (LQ): 10L (gross) [Y344]

HS Classification #: 3208.90

Schedule B: 3208.90.0000

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

The following components are subject to reporting levels established by SARA Title III, Section 313:

Methanol (CAS #67-56-1); 2-Butanol (CAS #78-92-2)

SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Right to Know Components

Components: PGME (CAS #107-98-2); Ethanol (CAS #64-17-5); 2-Butanol (CAS #78-92-2); Methanol (CAS #67-56-1);

Zinc Oxide (CAS # 1314-13-2)

Toxic Substances Control Act (TSCA) Chemical Substance Inventory

Components: PGME (CAS #107-98-2); Ethanol (CAS #64-17-5); 2-Butanol (CAS #78-92-2); Methanol (CAS #67-56-1); Zinc Oxide (CAS # 1314-13-2)

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

Flam. Liq.: Flammable Liquid

Cat.: Category

STOT SE: Specific target organ toxicity, single exposure

Eye Irrit.: Eye irritation

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: 2

Flammability Hazard: 3

Physical Hazard: 0

NFPA Rating

Health Hazard: 2

Flammability Hazard: 3

Reactivity Hazard: 0

IMPORTANT

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 –