

MATERIAL SAFETY DATA SHEET

Nanomyte™ PC-20

Product type: Proprietary Nanoparticle Suspension
 Last revised date: 08-March-06

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Nanomyte™ PC-20
 Application: Thermoplastic Additive

Manufacturer information: NEI Corporation
 400 Apgar Drive
 Unit E
 Somerset, NJ 08873

Phone: 732-868-3141

2. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture of: Organics, Metal Oxide

Component:	wt%:	CAS-No.:	Hazard classification:
Metal Oxide	20%	n/a	Non Hazardous as defined by the Dept of Transportation, nor is it a dangerous good as defined by ICAO for air Transportation (as dry dust) PEL:10mg/m3; TLV:10mg/m3
Trade Secret Ingredients	80%	n/a	Non Hazardous

Health Rating: 1 - Slight

Flammability Rating: 2 - Moderate

Reactivity Rating: 1 - Slight

Contact Rating: 2 - Moderate

Lab Protective Equip: GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES;
 CLASS B EXTINGUISHER

Storage Color Code: Red (Flammable)

3. HAZARDS IDENTIFICATION

Emergency overview:

DANGER: COMBUSTIBLE LIQUID. MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION. PROLONGED OR REPEATED CONTACT MAY RESULT IN DERMATITIS. INGESTION MAY CAUSE GASTRIC DISTURBANCES.

CONTAINS MATERIAL THAT MAY ADVERSELY AFFECT THE DEVELOPING FETUS BASED ON ANIMAL DATA.

THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

Use with local exhaust ventilation.
Wear chemical resistant protective gloves.
Avoid contact with the skin, eyes and clothing.

Potential Health effects

Inhalation:

Mild irritant if vapor or mist from heated solvent is inhaled. Coughing, possible breathing difficulties may be observed. Spray mist or dry dust may cause congestion, coughing, granuloma in lungs.

Ingestion:

Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea.

Skin Contact:

Mild irritant, may cause some discomfort if in contact with the skin for several hours.

Eye Contact:

Causes irritation, redness, and pain. May possibly cause corneal clouding.

Chronic Exposure:

Minor skin irritation on repeated contact.

Aggravation of Pre-existing Conditions:

No information found.

4. FIRST-AID MEASURES

Eye contact:

In case of contact with eyes, rinse immediately with plenty of water for 15 minutes. Seek immediate medical attention if irritation develops.

Skin contact:

Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Seek medical attention if irritation develops. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Ingestion:

Rinse mouth and give plenty of water. Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to a person who is unconscious or is having convulsions. Seek immediate medical attention.

Inhalation:

If inhaled, immediately remove the affected person to fresh air. Seek immediate medical attention.

5. FIRE FIGHTING MEASURES

Flash Point:	80-100°C
Auto Ignition:	300-400°C
Flammability Classification:	Combustible
Flammable limit in air % by volume:	LEL: .9-1.5 UEL: 3.2-10

Explosion: Above the flash point, explosive vapor-air mixtures may be formed.

Hazardous Combustion Products: Nitrous Gases

Extinguishing media: Dry chemical, foam, carbon dioxide (CO₂), water fog

Further information: Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems.

NFPA hazard codes: Health: 2 Fire: 2 Reactivity: 0 Special:

Fire fighting equipment/instructions:
Firefighters should wear full-face, self contained breathing apparatus and impervious protective clothing. Firefighters should avoid inhaling any combustion products.

Clean-Up procedures:
Wear appropriate protective equipment and clothing during clean-up. Absorb spill with inert material. Shovel material into appropriate container for disposal.

Evacuation procedures:
Isolate area. Keep unnecessary personnel away.

Special procedures:
No information available for the product.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:
Wear appropriate respiratory protection. Use personal protective clothing. Ensure adequate ventilation.

Environmental precautions:
This product is not regulated by RCRA. This product is not regulated by CERCLA ('Superfund').

Cleanup:
Spills should be contained, solidified, and placed in suitable containers for disposal.

For small amounts:
Pick up with absorbent material (e.g. sand, sawdust, general-purpose binder). Dispose of absorbed material in accordance with regulations.

For large amounts:
Pump off product.

7. HANDLING AND STORAGE

Handling procedures:
Avoid contact with skin and eyes. Wear suitable gloves and eye/face protection. Ensure thorough ventilation of stores and work areas. Observe good industrial hygiene practices and wash thoroughly after handling.

Technical measures:

Work practice should minimize contact.

Technical precautions:

Local exhaust is recommended.

Storage procedures:

Store in tightly closed original container in a cool, dry, well-ventilated place away from incompatible materials. Keep from freezing.

Storage stability:

Storage duration 24 months.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Airborne Exposure Limits:

AIHA Workplace Environmental Exposure Level (WEEL):10 ppm, 8-hour, TWA

Engineering controls:

Provide local exhaust ventilation to maintain recommended airborne exposure limits. Ventilation should effectively remove and prevent buildup of any vapor or mist generated from the handling of this product.

Personal protective equipment (PPE)

Eyes/Face:

Wear face shield or tightly fitting safety goggles (chemical goggles) if splashing hazard exists. Safety glasses with side-shields.

Skin:

Use chemical resistant protective gloves (EN 374). Use of impervious apron and boots are recommended

Respiratory:

If ventilation is not sufficient to effectively prevent buildup of aerosols or vapors, appropriate NIOSH certified (or equivalent) organic vapor respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear to light yellow with a slight cloudiness
Odor:	Slight
pH:	8-10
Physical State:	Liquid
Melting point:	Not determined
Boiling point:	Not determined
Vapor Pressure:	Low
Solubility (H ₂ O):	Fully miscible
% Volatiles:	Approx. 80% by weight
Density:	1.15g/cm ³ @ 20°C

10. STABILITY AND REACTIVITY

Chemical stability:

Stable under ordinary conditions of use and storage. Hygroscopic and basic.

Hazardous Decomposition Products:

Burning may produce carbon monoxide, carbon dioxide, nitrogen oxides.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Strong oxidants and acids.

Conditions to Avoid:

Heat, flames, ignition sources and incompatibles.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral:

LD50/rat: >3000 mg/kg

Inhalation:

LC50/rat: >4 mg/L / 4hr

Dermal:

LD50/rabbit: >5,000 mg/kg

Eye:

Rabbit: Irritant.

Sensitization: Skin sensitizing effects were not observed in animal studies.

Chronic toxicity

Genetic toxicity:

In the majority of studies performed with microorganisms and in mammalian cell culture, a mutagenic effect was not found. A mutagenic effect was also not observed in in-vivo tests.

Carcinogenicity:

Results from a number of long-term carcinogenicity studies and short term tests are available. Taking into account all of the information, there is no indication that the substance itself is carcinogenic.

Developmental toxicity/teratogenicity: No maternal toxicity.

Teratogenic.

Embryotoxic.

Effects observed at maternally toxic doses.

No embryotoxic effects.

No developmental effects.

Effects were observed only at high doses.

No teratogenic effects.

12. ECOLOGICAL INFORMATION

Environmental Fate:

When released into the soil, this material may biodegrade to a moderate extent.
When released into the soil, this material may evaporate to a moderate extent.
When released into water, this material is not expected to evaporate significantly. This material is not expected to significantly bioaccumulate.
When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet deposition.

Environmental Toxicity:

The LC50/96-hour values for fish are over 100 mg/l.

Mobility:

This product is water soluble and may spread in water systems.

13. DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. TRANSPORT INFORMATION

Not regulated.

15. REGULATORY INFORMATION

Federal regulations

Registration status:

TSCA, US released / listed

OSHA hazard category: Skin and/or eye irritant, Combustible liquid, Chronic target organ effects reported

State regulations

MA, PA State RTK

CA Prop. 65:

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16. OTHER INFORMATION

HMIS III rating

Health: 2* Flammability: 2 Physical hazard: 0

HMIS uses a numbering scale ranging from 0 to 4 to indicate the degree of hazard. A value of zero means that the substance possesses essentially no hazard; a rating of four indicates high hazard.

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This is the end of the Nanomyte™ PC-20 MSDS.