TED PELLA, INC.
Microscopy Products for Science and Industry

**Material Safety Data Sheet**
**Product No. 16051 Aquadag® E Colloidal Graphite**

**Issue Date (07-25-05)**
**Review Date (04-12-12)**

## Section 1: Product and Company Identification

**Product Name: Aquadag® E Colloidal Graphite**
Synonym: Pelco® Conductive Graphite (Water based)
**Company Name**
**Ted Pella, Inc., P.O. Box 492477, Redding, CA 96049-2477**
**Domestic Phone (800) 237-3526 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)**
**International Phone (01) (530) 243-2200 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)**
**Chemtrec Emergency Number 1-800-424-9300 24 hrs a day.**

## Section 2: Composition / Information on Ingredients

| Principle Hazardous Component(s) (chemical and common name(s)) (Cas. No) | % | OSHA PEL mg/m3 | ACGIH TLV mg/m3 | NTP | IARC | OSHA regulated |
|---|---|---|---|---|---|---|
| (7732-18-5) Water | 60-100 | NE | NE | No | No | No |
| (7782-42-5) Graphite | 5-10 | 5.00 | 2.00 | No | No | No |
| (1336-21-6) Ammonium Hydroxide | 1-5 | 25.0 PPM | NE | No | No | No |

## Section 3: Hazard Identification

**Emergency overview**
Appearance: Thixotropic Black Paste.
Immediate effects: NIF
**Potential health effects**
Primary Routes of entry: Inhalation, ingestion.
Signs and Symptoms of Overexposure: ND
Eyes: This product contains a chemical or chemicals which may be corrosive and cause irreversible eye damage.
Skin: This product contains a chemical or chemicals which are corrosive to the skin. Excessive skin contact will result in chemical burns. The components of this product are not expected to be absorbed through the skin.
Ingestion: Harmful or fatal if swallowed

Inhalation: Vapors and mists irritate eyes, nose and throat. Dusts generated from sanding and grinding on surfaces coated with this product may be harmful if inhaled. Vapors and mists generated from this product may be harmful if inhaled.
Chronic Exposure: This product contains graphite which can accumulate in lung tissue after long-term exposure to the dust. The potential for such exposure from the use of this product is very limited.
Chemical Listed As Carcinogen Or Potential Carcinogen: None
See Toxicological Information (Section11)

**Potential environmental effects**

See Ecological Information (Section 12)

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**Section 4: First Aid Measures**

**If accidental overexposure is suspected**

Eye(s) Contact: If this product is splashed into the eyes, flush eyes immediately with plenty of water for at least 30 minutes. Consult a poison center, emergency room or eye specialist for additional information and guidance.
Skin Contact: If excessive skin contact with this product occurs, flush immediately with plenty of water, followed by waterless hand cleaner and washing with soap and water if the material appears to adhere to the skin. Consult a poison center,
emergency room or physician for additional information and guidance.
Inhalation: If excessive amounts of vapors or mists from this product are inhaled, remove to fresh air. Apply artificial respiration and other supportive measures as required. Consult a poison center, emergency room or lung specialist for additional information and guidance.
Ingestion: If swallowed, give 1 or 2 glasses of water, but do not induce vomiting.

**Note to physician**

Treatment: NIF
Medical Conditions generally Aggravated by Exposure: NIF

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**Section 5: Fire Fighting Measures**

Flash Point: NA
Flammable Limits: NA
Auto-ignition point: ND
Fire Extinguishing Media: Small Fire Fighting Instructions: Use extinguishing media appropriate for surrounding fire.
Large Fire Fighting Instructions: Use extinguishing media appropriate for surrounding fire.
General Fire Fighting Instructions: Move container from fire area if you can do it without risk. Apply cooling
water to sides of containers that are exposed to flames until well after fire is out. Stay away from ends of tanks.
Fire Fighting Equipment: As in any fire, wear self-contained breathing apparatus (SCBA) and full protective gear.
Special Fire Fighting Procedures: Move container from fire area if you can do it without risk. Apply cooling

water to sides of containers that are exposed to flames until well after fire is out. Stay away from ends of tanks.
Unusual Fire and Explosion Hazards: Material can splatter above $100^{O}$ C/$212^{O}$ F. Dried product can burn.
Container may explode in heat of fire.
Hazardous combustion products: Oxides of carbon and nitrogen.
DOT Class: None

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**Section 6: Accidental Release Measures**
Steps to be Taken in Case Material is Released or Spilled: Small Spills: Take up with sand, earth or other noncombustible absorbent material. Large Spills: Dike far ahead of liquid spill for later disposal.
Waste Disposal Methods: Dispose of waste according to Federal, State and Local Regulations. (See Section 13)

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**Section 7: Handling and Storage**
Precautions to be Taken in Handling and Storage: Keep container closed. Loosen closure cautiously before opening. Store in a cool and well ventilated place away from incompatible materials. Empty containers may retain hazardous properties. Follow all MSDS/Label warnings even after container is emptied.
Storage temperature: Ambient: Keep from freezing.
Storage Pressure: Atmospheric

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**Section 8: Exposure Controls / Personal Protection**
**Engineering Controls**
Ventilation required: Overexposures to vapors and mists may be prevented by ensuring ventilation controls, local exhaust and/or fresh air entry.
**Personal Protection Equipment**
Respiratory protection: Use fume hood. NIOSH/MSHA Schedule TC-23C- air purifying or a Schedule TC-19C- air supplied respirator may also be used to reduce exposures. Read the manufacturer's instructions and literature carefully to determine the type(s) of airborne contaminant(s) against which the respirator is effective and how it is to be properly fitted.
Protective gloves: Wear protective gloves
Skin protection: Due to the potentially severe nature of the effects from skin contact with this material, all exposed skin surfaces should be covered with impermeable clothing such as aprons, disposable suits and gloves. This protective equipment should be constructed of material(s) which are appropriate to prevent contact with the chemicals listed in the ingredient section of the MSDS.
Eye protection: Due to the severe nature of the eye irritation from contact due to splashing or spraying of liquid or from airborne particles or vapors, vapor tight chemical-type splash goggles and/or a full face shield should be worn when handling this product.
Additional clothing and/or equipment: ND
**Exposure Guidelines**
See Composition/Information on Ingredients (Section2)

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**Section 9 Physical and Chemical Properties**
Appearance and Physical State: Thixotropic Black Paste,
Odor (threshold): Ammoniacal.
Specific Gravity ($H_2O$=1): 1.12
Vapor Pressure (mm Hg): 17.00 mm Hg at $20^{O}$ C
Vapor Density (air=1): As water.
Percent Volatile by volume: ND
Viscosity (CPS): 6500-9000

Evaporation Rate (butyl acetate=1): As water
Boiling Point: $212^{O}$ F
Freezing point / melting point: $32^{O}$ F
pH: 10.0 to 10.5
Solubility in Water: Miscible
Molecular Weight: NA, Mixture.

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**Section 10: Stability and Reactivity**
Stability: Stable
Conditions to Avoid: Freezing and incompatible materials.
Materials to Avoid (Incompatibility): Strong oxidizers
Hazardous Decomposition Products: Oxides of carbon and nitrogen
Hazardous Polymerization: Will not occur.

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**Section 11: Toxicological Information**
Results of component toxicity test performed: ND
Human experience: ND
This product **does not** contain any compounds listed by NTP or IARC or regulated by OSHA as a carcinogen.

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**Section 12: Ecological Information**
Ecological Information: ND
Chemical Fate Information: ND

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**Section 13 Disposal Considerations**
RCRA 40 CFR 261 Classification: NIF. Care must be taken to prevent environmental contamination from the use of this
material. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and non-hazardous wastes.
Federal, State and local laws governing disposal of materials can differ. Ensure proper disposal compliance with proper authorities before disposal.

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**Section 14: Transportation Information**
US DOT Information: Not regulated
IATA: Not regulated

IMO: Not regulated
EMS: ND
MFAG: ND
Marine Pollutant: None
Canadian TDG: Not regulated
IMDG Page: ND

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**Section 15: Regulatory Information**

**United States Federal Regulations**

MSDS complies with OSHA's Hazard Communication Rule 29, CFR 1910.1200.
SARA: ND
SARA Title III: Section 313 Information (40 CFR 372): This product contains a chemical which is listed in Section 313 at or above DE MINIMIS concentration. The following listed chemicals are present:

| CAS Number | Description | Percent |
|---|---|---|
| 1336-21-6 | Ammonium Hydroxide | 1.58 |

RCRA: ND
TSCA: All components of this product are listed or are excluded from listing on the U.S. Toxic Substances Control ACT (TSCA) Chemical Substance Inventory.
CERCLA: ND

**State Regulations**

California Proposition 65: None

**International Regulations**

Canada WHMIS: All components of this product are listed or are excluded from listing on the Canadian Domestic Substances List (DSL) Inventory.
Europe EINECS Numbers: NIF

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**Section 16: Other Information**

Label Information:
European Risk and Safety Phrases: NIF
European symbols needed: NIF
Canadian WHMIS Symbols: NIF
Hazard Rating: Health: **ND**; Fire: **ND**; Reactivity: **ND**
(0=least, 1=Slight, 2=Moderate, 3=High, 4=Extreme)

**Abbreviations used in this document**

NE= Not established
NA= Not applicable
NIF= No Information Found
ND= No Data

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**Disclaimer**

Ted Pella, Inc. makes no warranty of any kind regarding the information furnished herein. Users should independently determine the suitability and completeness of information from all sources. While this data is presented in good faith and believed to be accurate, it should be considered only as a supplement to other information gathered by

the user. It is the User's responsibility to assure the proper use and disposal of these materials as well as the safety and health of all personnel who may work with or otherwise come in contact with these materials.