TED PELLA, INC.
Microscopy Products for Science and Industry

Safety Data Sheet

Product No. 16054 Graphite Extender
Issue Date (06-18-14)
Review Date (12-19-14)

Section 1: Product and Company Identification
Product Name: Graphite Extender
Synonym: 2-Propanol, Isopropanol, sec-Propyl alcohol, Isopropyl alcohol.
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: Hazard Identification
GHS Pictograms:

Flammable Irritant

GHS Categories: Flam. Liq. 2; Eye Irrit. 2; STOT SE 3; H225, H319, H336
Flammable liquids (Category 2), H225
Eye irritation (Category 2), H319
Specific target organ toxicity - single exposure (Category 3), H336
Hazard statement(s)
H225 Highly flammable liquid and vapor.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
Precautionary statement(s)
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove
contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard Statements: None

Signal Word: DANGER
Health Effects:
NFPA Hazard Rating: Health: 1; Fire: 3; Reactivity: 0
HMIS® Hazard Rating: Health: 1; Fire: 3; Reactivity: 0
(0=least, 1=Slight, 2=Moderate, 3=High, 4=Extreme)

Results of PBT and vPvB assessment: Assessment not available, as chemical safety assessment not required/not conducted.
PBT: ND
vPvB: ND

Emergency overview
Appearance: Clear liquid
Immediate effects: H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness.
Potential health effects
Primary Routes of entry: Inhalation, Ingestion and eye and skin contact.
Signs and Symptoms of Overexposure: Central nervous system depression, prolonged or repeated exposure can cause:, Nausea, Headache, Vomiting, narcosis, Drowsiness, Overexposure may cause mild, reversible liver effects., Aspiration may lead to:, Lung oedema, Pneumonia. Kidney - Irregularities - Based on Human Evidence
General advice: Consult a physician. Show this safety data sheet to the doctor in attendance.
Eyes: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin: Wash off with soap and plenty of water. Consult a physician
Ingestion: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician
Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician
Chronic Exposure: Central nervous system depression, prolonged or repeated exposure can cause:, Nausea, Headache, Vomiting, narcosis, Drowsiness, Overexposure may cause mild, reversible liver effects
Chemical Listed As Carcinogen Or Potential Carcinogen: None
See Toxicological Information (Section11)
Potential environmental effects
See Ecological Information (Section 12)

Section 3: 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
2-Propanol (67-63-0) EC-No. 200-661-7 Index-No. 603-117-00-0	≤100	980 400 ppm	491 200 ppm	No	3	No

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Section 4: First Aid Measures
If accidental overexposure is suspected
Eye(s) Contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin Contact: Wash off with soap and plenty of water. Consult a physician.
Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Ingestion: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Note to physician
Treatment: General advice, consult a physician. Show this safety data sheet to the doctor in attendance.
Medical Conditions generally Aggravated by Exposure: ND

Section 5: Fire Fighting Measures
Flash Point: 12.0 °C - closed cup.
Flammable Limits: Upper explosion limit: 12.7 %(V), Lower explosion limit: 2 %(V).
Auto-ignition point: 425.0 °C
Fire Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Special Fire Fighting Procedures: Wear self-contained breathing apparatus for firefighting if necessary. Use water spray to cool unopened containers.
Unusual Fire and Explosion Hazards: . Beware of vapors accumulating to form explosive concentrations.
Hazardous combustion products: Carbon oxides.
DOT Class: Flammable

Section 6: Accidental Release Measures
Steps to be Taken in Case Material is Released or Spilled: Personal precautions, protective equipment and emergency procedures Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Waste Disposal Methods: Dispose of waste according to Federal, State and Local Regulations.

Section 7: Handling and Storage
Precautions to be taken in Handling and Storage: Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build-up of electrostatic charge.
Conditions for safe storage: including any incompatibilities. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Handle and store under inert gas. Hygroscopic.
Storage temperature: Store in cool place.
Storage Pressure: NA

Section 8: Exposure Controls / Personal Protection

Engineering Controls

Ventilation required: Wear gas mask with filter type A if conc. in air > exposure limit. Use with good ventilation or use in chemical fume hood.

Personal Protection Equipment

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) 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).
Protective gloves: 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
Skin protection: Wear protective clothing and gloves.
Eye protection: Wear tight fitting goggles or face shield.
Additional clothing and/or equipment: Eye wash station.

Exposure Guidelines

See Composition/Information on Ingredients (Section 3)

Section 9 Physical and Chemical Properties

Appearance and Physical State: Colorless liquid
Odor (threshold): ND
Specific Gravity (H_2O=1): 0.785 g/mL at 25 °C
Vapor Pressure (mm Hg): 43.2 hPa at 20.0 °C and 58.7 hPa at 25.0 °C
Vapor Density (air=1): ND
Percent Volatile by volume: ND

Evaporation Rate (butyl acetate=1): 3.0
Boiling Point: 82 °C
Freezing point / melting point: -89.5 °C
pH: ND
Solubility in Water: Soluble. Hygroscopic.
Formula: C3H8O
Molecular Weight: 60.10 g/mo

Section 10: Stability and Reactivity

Stability: Stable under normal conditions. Test for peroxide formation before distillation or evaporation. Test for peroxide formation or discard after 1 year.
Conditions to Avoid: Heat, Sparks and Flame.
Materials to Avoid (Incompatibility): Oxidizing agents, Acid anhydrides, Aluminum, Halogenated compounds, Acids

Hazardous Decomposition Products: ND
Hazardous Polymerization: ND

Section 11: Toxicological Information
Results of component toxicity test performed:
Acute toxicity
LD50 Oral - rat - 5,045 mg/kg: Remarks: Behavioral: Altered sleep time (including change in righting reflex). Behavioral: Somnolence (general depressed activity).
LC50 Inhalation - rat - 8 h - 16000 ppm.
LD50 Dermal - rabbit - 12,800 mg/kg.
Skin corrosion/irritation: Skin – rabbit Result: Mild skin irritation.
Serious eye damage/eye irritation: Eyes – rabbit: Result: Eye irritation - 24 h.
Respiratory or skin sensitisation: No data available.
Germ cell mutagenicity: No data available.
Carcinogenicity: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.
IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (2-Propanol).
Reproductive toxicity: No data available.
Specific target organ toxicity - single exposure: Inhalation, Oral - May cause drowsiness or dizziness.
Specific target organ toxicity - repeated exposure: No data available.
Aspiration hazard: No data available.
RTECS: NT8050000.
Human experience: Central nervous system depression, prolonged or repeated exposure can cause: Nausea, Headache, Vomiting, narcosis, Drowsiness, Overexposure may cause mild, reversible liver effects. Aspiration may lead to:, Lung oedema, Pneumonia.
Kidney - Irregularities - Based on Human Evidence
This product **does not** contain any compounds listed by NTP or IARC or regulated by OSHA as a carcinogen.

Section 12: Ecological Information
Ecological Information:
Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 9,640.00 mg/l - 96 h
Toxicity to daphnia and EC50 - Daphnia magna (Water flea) - 5,102.00 mg/l - 24 h
Immobilization EC50 - Daphnia magna (Water flea) - 6,851 mg/l - 24 h
Toxicity to algae EC50 - Desmodesmus subspicatus (green algae) - > 2,000.00 mg/l - 72 h
EC50 - Algae - > 1,000.00 mg/l - 24 h
Persistence and degradability: No data available.
12.3 Bioaccumulative potential: No bioaccumulation is to be expected (log Pow <= 4).
12.4 Mobility in soil: No data available.
Chemical Fate Information: ND

Section 13 Disposal Considerations
RCRA 40 CFR 261 Classification:

Federal, State and local laws governing disposal of materials can differ. Ensure proper disposal compliance with proper authorities before disposal.

Section 14: Transportation Information
US DOT Information: Proper shipping name: Isopropanol
Hazard Class: 3
Packaging group: II
UN Number: UN1219
IATA: Proper shipping name: Isopropanol
Hazard Class: 3
Packing group: II
UN Number: UN1219
Marine Pollutant: No
Canadian TDG: Isopropanol

Section 15: Regulatory Information
United States Federal Regulations
MSDS complies with OSHA's Hazard Communication Rule 29, CFR 1910.1200.
SARA Title III: Listed on SARA Section 313 (Specific toxic chemical listings).
RCRA: ND
TSCA: Listed on the United States TSCA (Toxic Substances Control Act) inventory.
CERCLA: ND
State Regulations
California Proposition 65:
International Regulations
Canada WHMIS: Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision B - Toxic material causing other toxic effects
Europe EINECS Numbers: 200-661-7

Section 16: Other Information
Label Information: Flammable, Irritant.
European Risk and Safety Phrases: F, Xi, R11 - R36 - R67
European symbols needed: ND
Canadian WHMIS Symbols: ND
Abbreviations used in this document
NE= Not established
NA= Not applicable
NIF= No Information Found
ND= No Data

Full text of H-Statements referred to under sections 2 and 3.
Eye Irrit. Eye irritation
Flam. Liq. Flammable liquids
H225 Highly flammable liquid and vapor.
H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.
STOT SE Specific target organ toxicity - single exposure
Full text of R-phrases referred to under sections 2 and 3
F Highly flammable
Xi Irritant
R11 Highly flammable.
R36 Irritating to eyes.
R67 Vapors may cause drowsiness and dizziness

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.