

Safety Data Sheet

Product No. 16054 Graphite Extender

Issue Date (02-26-15)

Review Date (08-31-17)

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

Inside USA and Canada 1-800-237-3526 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)

Outside USA and Canada 1-530-243-2200 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)

CHEMTREC USA and Canada Emergency Contact Number 1-800-424-9300 24 hours a day

CHEMTREC Outside USA and Canada Emergency Contact Number +1-703-741-5970 24 hours a day

Section 2: Hazard Identification

2.1 Classification of the substance or mixture

GHS Pictograms



GHS02 GHS07

GHS Categories

GHS02	Flammable	
	Flamm. Liq. 2	H225: Highly flammable liquid and vapor.
GHS07	Irritant	
	Eye irritation 2	H319: Causes serious eye irritation.
	STOT SE 3	H336: May cause drowsiness or dizziness.

2.2 Label elements

Hazard Pictograms



Signal word: DANGER

Hazard statements

H225 Highly flammable liquid and vapor.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/eye protection/face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P312	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/ attention.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Other Hazards

Hazards not otherwise classified (HNOC) or not covered by GHS

May form explosive peroxides.

Health Effects:

NFPA Hazard Rating: Health: 2; Fire: 3; Reactivity: 0

HMIS® Hazard Rating: Health: 2; 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: Causes serious eye irritation. 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 (Section 11)

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 Flam. Liq. 2: H225 Eye Irrit. 2A: H319 STOT SE 3: H336	≤100	980 400 ppm	491 200 ppm	No	3	No

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

Handling: Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build-up of electrostatic charge.

Storage: 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

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
2-Propanol	67-63-0	TWA	200.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Central Nervous System impairment Upper Respiratory Tract irritation Eye irritation Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Not classifiable as a human carcinogen		
		TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Central Nervous System impairment Upper Respiratory Tract irritation Eye irritation Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Not classifiable as a human carcinogen		
		STEL	400 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Central Nervous System impairment Upper Respiratory Tract irritation Eye irritation Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Not classifiable as a human carcinogen		
		STEL	400.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Central Nervous System impairment Upper Respiratory Tract irritation Eye irritation Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Not classifiable as a human carcinogen		
		TWA	400.000000 ppm 980.000000 mg/m ³	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	Remarks	The value in mg/m ³ is approximate.		
		TWA	400.000000 ppm 980.000000 mg/m ³	USA. NIOSH Recommended Exposure Limits
		ST	500.000000 ppm 1,225.000000 mg/m ³	USA. NIOSH Recommended Exposure Limits

Biological occupational exposure limits

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
2-Propanol	67-36-0	Acetone	40.0000 mg/l	Urine	ACGIH - Biological Exposure Indices (BEI)

Remarks	End of shift at end of work week.
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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: Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Additional 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): Alcohol-like (ND)

Specific Gravity (H₂O=1): 0.785 g/mL at 25 °C

Vapor Pressure (mm Hg): 43.2 hPa (32.4 mmHg) at 20.0 °C (68.0 °F)

58.7 hPa (44.0 mmHg) at 25.0 °C (77.0 °F)

Vapor Density (air=1): ND

Percent Volatile by volume: ND

Evaporation Rate (butyl acetate=1): 3.0

Boiling Point: 82 °C (180 °F)

Melting point/range: -89.5 °C

pH: ND

Solubility in Water: Completely soluble

Formula: C₃H₈O

Molecular Weight: 60.10 g/mo

Surface tension: 20.8 mN/m at 25.0 °C (77.0 °F)

Section 10: Stability and Reactivity

Stability: Stable under normal conditions. Test for peroxide formation before distillation or evaporation or discard after 1 year.

Conditions to Avoid: Heat, sparks and flame.

Materials to Avoid (Incompatibility): Oxidizing agents, Acid anhydrides, Aluminum, Halogenated compounds, Acids

Possibility of hazardous reactions: Vapors may form explosive mixture with air.

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.

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.

This product **does not** contain any compounds listed by NTP or IARC or regulated by OSHA as a carcinogen.

Section 12: Ecological Information

Toxicity:

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 9,640.00 mg/l - 96 h

Toxicity to daphnia and other aquatic
6,851 mg/l - 24 h EC50 - Daphnia magna (Water flea) - 5,102.00 mg/l - 24 h
Immobilization EC50 - Daphnia magna (Water flea) - invertebrates

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: ND

Bioaccumulative potential: No bioaccumulation is to be expected (log Pow <= 4).

Mobility in soil: ND

Chemical Fate Information: ND

Section 13 Disposal Considerations

RCRA 40 CFR 261 Classification: ND

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

Contact a licensed professional waste disposal service to dispose of this material.

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

SDS 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

Massachusetts Right To Know Components

2-Propanol CAS-No. 67-63-0 Revision Date: 1987-01-01

Pennsylvania Right To Know Components

2-Propanol CAS-No. 67-63-0 Revision Date: 1987-01-01

New Jersey Right To Know Components

2-Propanol CAS-No. 67-63-0 Revision Date: 1987-01-01

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.

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.