

EMS CATALOG NO: 12661
EMS PRODUCT: Colloidal Graphite Extender
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PAGE NUMBER: One of 9

MATERIAL SAFETY DATA SHEET

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FOR PRODUCT AND SALES INFORMATION

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PRODUCT IDENTIFICATION

PRODUCT NAME:	Colloidal Graphite, Extender (unspecified proprietary alcohols)
CHEMICAL NAME:	2-Propanol, 100%
MOLECULAR FORMULA:	C ₃ H ₈ O
CAS NUMBER:	67-63-0
HAZARD SYMBOL:	F

PRECAUTIONARY MEASURES

WARNING! Flammable liquid, May cause central nervous system depression. May cause kidney damage. May cause eye and skin irritation. May cause respiratory and digestive tract irritation. Target Organs: Kidneys, central nervous system.

Chemical Name	ACGIH	NIOSH	OSHA-Final PELs
2-propanol	400 ppm; 983 mg/m ³ 500 ppm STEL; 1230 mg/m ³ STEL	400 ppm TWA; 980 mg/m ³ TWA 500 ppm STEL; 1225 mg/m ³ STEL	400 ppm TWA; 980 mg/m ³ TWA

OSHA VACATED PEL'S: 2-propanol
980 mg/m³ TWA; 500 ppm STEL; 1225 mg/m³ STEL

PHYSICAL DATA

MELTING POINT: -90°C
MOLECULAR WEIGHT: 60.0554
BOILING POINT: 82°C (180°F)
EVAPORATION RATE: 2.3 (n-butyl acetate=1)
VAPOR PRESSURE: 96 (mm Hg)
VAPOR DENSITY (AIR=1): 2.1
VISCOSITY: 2.1 cP at 11°F
SOLUBILITY IN WATER: Infinite
SPECIFIC GRAVITY: 0.78 (water=1)
MOLECULAR WEIGHT: 60.10
APPEARANCE: Clear colorless liquid
ODOR: Solvent odor.

HAZARDOUS INGREDIENTS DATA

HAZARDOUS INGREDIENTS: Not applicable.
NFPA RATINGS: Health:1; Flammability: 3; Reactivity: 0
(Scale: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe)
DOT CLASS: Flammable Liquid

FIRE AND EXPLOSION DATA

FLAMMABLE LIQUID

FLASH POINT: 12.78°C (55°F)

LOWER EXPLOSION LIMIT: 2.25 AT 79°F

UPPER EXPLOSION LIMIT: 12.1 AT 150°F

AUTOIGNITION TEMPERATURE: 432.22°C (810°F)

FIRE EXTINGUISHING MEDIA: For small fires use dry chemical, carbon dioxide, water spray or alcohol resistant foam. Use water spray to cool fire exposed containers. Water may be ineffective.

GENERAL INFORMATION: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors can travel to a source of ignition and flash back. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. This chemical poses an explosion hazard.

HEALTH HAZARD DATA

ROUTES ON ENTRY: Inhalation, ingestion, skin contact, eye contact.

EXPOSURE/HEALTH EFFECTS:

INHALATION:

Inhalation of high concentrations may cause central nervous system effects characterized by headache, dizziness, unconsciousness and coma. Inhalation of vapor may cause respiratory tract irritation.

INGESTION:

May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause kidney damage. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure.

SKIN CONTACT:

Prolonged and / or repeated contact may cause defatting of the skin and dermatitis. May cause irritation with pain and stinging, especially if the skin is abraded.

EYE CONTACT:

Produces irritation, characterized by a burning sensation,

redness, tearing, inflammation, and possible corneal injury.
CHRONIC EXPOSURE:

Prolonged contact with skin may cause defatting and dermatitis.

AGGRAVATION OF PRE-EXISTING CONDITIONS:

Persons with pre-existing skin disorders, eye problems or impaired respiratory functions may be more susceptible to the effects of the substance.

EMERGENCY FIRST AID PROCEDURES

INHALATION:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

INGESTION: If victim is conscious and alert, give 2-3 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

SKIN EXPOSURE:

Remove contaminated clothing. Wash skin with soap or mild detergent and water for at least 15 minutes. Get medical attention if irritation develops or persists.

EYE EXPOSURE:

Wash eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

NOTES TO PHYSICIAN:

Urine acetone test may be helpful in diagnosis.

ANTIDOTE: None Reported

TOXICITY DATA

Oral Rat LD50: 5840 mg/kg. Skin rabbit LD50:13 gm/kg. Inhalation rat LC50: 16000 ppm/8H. Mutation references cited. Aquatic Toxicity rating TLm96: 1000-10 ppm.

REACTIVITY DATA

STABILITY:

Stable under ordinary conditions of use and storage. Heat

and sunlight can contribute to instability.

INCOMPATIBILITIES WITH OTHER MATERIALS:

Strong oxidizers, acetaldehyde, chlorine, ethylene oxide, acids and isocyanates, hydrogen + palladium, nitroform, oleum, phosgene, potassium t-butoxide, oxygen, trinitromethane, barium perchlorate, tetrafluoroborate, chromium trioxide, sodium dichromate + sulfuric acid, aluminum, and aluminum triisopropoxide.

HAZARDOUS POLYMERIZATION: Has not been reported.

HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon monoxide, carbon dioxide, acrid smoke and fumes.

CONDITIONS TO AVOID: Heat, contact with ignition source.

OCCUPATIONAL CONTROL MEASURES

OSHA PERMISSIBLE EXPOSURE LIMIT (PEL): 400 ppm (TWA).

ACGIH THRESHOLD LIMIT VALUE (TLV): 400 ppm (TWA); 500 ppm (STEL).

VENTILATION SYSTEM:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits.

PERSONAL RESPIRATORS:

A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected. A respiratory protection program that meets OSHA's 29 CFR 1010.34 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

SKIN PROTECTION:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls to prevent skin contact.

EYE PROTECTION:

Use chemical safety goggles and/or a full face shield where splashing is possible. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work area.

LEAK/SPILL DISPOSAL INFORMATION

Absorb spill with inert material, (e.g., dry sand or earth), then place into a chemical waste container. Remove all

sources of ignition.

DISPOSAL CONSIDERATIONS:

Dispose of in a manner consistent with federal, state, and local regulations.

RCRA D-SERIES CHRONIC TOXICITY REFERENCE LEVELS: Not Listed.

RCRA F-SERIES: Not listed.

RCRA P-SERIES: Not listed.

RCRA U-SERIES: Not listed.

Not listed as a material banned from land disposal according to RCRA.

STORAGE AND SPECIAL INFORMATION

Keep away from heat, sparks, and flame. Keep away from sources of ignition. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind or exposure such containers to heat, sparks or open flames. Keep container tightly closed. Avoid ingestion and inhalation.

REGULATORY STATUS

HAZARD CATEGORIES FOR SARA SECTION 311/312 REPORTING:

Acute, Chronic, Fire

PRODUCT: Graphite extender

COMPONENTS OF PRODUCT: Unspecified Proprietary Alcohols.

SARA SECTION 313 NAME LIST: Yes.

SARA SECTION 313 CHEMICAL CATEGORY: No.

SARA EHS SECTION 302 CHEMICAL CATEGORY: No.

CERCLA SECTION 103 RQ (LBS); RCRA SEC. 261.33: No.

CHEM. KEY: ISLAC

SARA SECTION 302 EHS RQ:

Reportable Quantity of Extremely Hazardous Substance,

listed at 40 CFR 355.

SARA SECTION 302 EHT TPQ:

Threshold Planning Quantity of Extremely Hazardous Substance. An asterisk (*) following a Threshold Planning Quantity signifies that if the material is sold and has a particle size equal to or larger than 100 micrometers, the Threshold Planning Quantity = 10,000 LBS.

SARA SECTION 313 CHEMICALS:

Toxic substances subject to annual release reporting requirements listed at 40 CFR 372.65.

CERCLA SECTION 103:

Comprehensive Environmental Response, Compensation and Liability Act (Superfund). Releases to air, land or water of these hazardous substances which exceed the Reportable Quantity (RQ) must be reported to the National Response Center, (800-424-8802); Listed at 40 CFR 302.4

RCRA:

Resource Conservation and Reclamation Act. Commercial chemical product wastes designated as acute hazards and toxic under 40 CFR 261.33.

TOXICOLOGICAL INFORMATION

RTECS#

CAS # 67-63-0: NT8050000

LD50/LC50:

CAS # 67-63-0: Oral, mouse: LD50 = 360 mg/kg; Oral, rabbit: LD50 = 6410 mg/kg; Oral, rat: LD50=5045 mg/kg; Skin, rabbit: LD50=12800 mg/kg.

CARCINOGENICITY: 2-propanol-IARC: Group 3 carcinogen

EPIDEMIOLOGY: Early epidemiological studies suggested an association between the strong acid manufacture of isopropyl alcohol and paranasal sinus cancer in workers. The risk of laryngeal cancer may also be increased in these workers, However, it has not been tested adequately in animals to assess its carcinogenicity.

TERATOGENICITY: No data available.

REPRODUCTIVE EFFECTS: No data available.

NEUROTOXICITY: No data available.

MUTAGENICITY: No data available.

OTHER STUDIES: No data available.

ECOLOGICAL INFORMATION

ECOTOXICITY:

Acute aquatic effects; Flathead minnow; LC50=1000 mg/L/96 Hr.

Golden orfe: LC50=8970 mg/L/48 Hr.

Goldfish: LC50=5000 mg/L/24 Hr.

ENVIRONMENTAL FATE:

This chemical has a low potential to affect aquatic organisms, secondary waste treatment microorganisms, and the germination and growth of some plants. It is readily biodegradable and is not expected to persist in an aquatic environment. It is not likely to bioconcentrate.

TRANSPORT INFORMATION

US DOT:

SHIPPING NAME: ISOPROPANOL

HAZARD CLASS: 3

UN NUMBER: UN1219

PACKING GROUP: II

IMO: No information available.

IAT: No information available.

RID/ADR: No information available.

CANADIAN TDG: No information available.

REGULATORY INFORMATION

FEDERAL

TSCA:

CAS # 67-63-0 is listed on the TSCA inventory Health and Safety Reporting List.

CAS # 67-63-0: Effective Date: December 15, 1986 Chemical Test Rules

CAS # 67-63-0: Testing required by: manufacturers; importers; processor.

SECTION 12B:

CAS # 67-63-0: export notification required-Section 4

TSCA SIGNIFICANT NEW USE RULE: None of the chemicals in this material have a SNUR under TSCA.

SARA:

SECTION 302 (RQ): None of the chemicals in this material have and RQ.

SECTION 302 (TPQ): None of the chemicals in this material
have and TPQ.

SARA CODES: CAS # 67-63-0: acute, chronic, flammable.

SECTION 313