

Safety Data Sheet  
MicroKote Copper

**SECTION I - IDENTIFICATION**

**PRODUCT IDENTIFIER:** MicroKote Copper  
**PRODUCT CODE:** 9527, 9879, 8427  
**RECOMMENDED USE:** Lubricant  
**RESTRICTIONS ON USE:** None known  
**COMPANY NAME:** Tifco Industries  
**COMPANY ADDRESS:** PO Box 40277, Houston, TX 77240-0277  
**COMPANY PHONE:** 281-469-4800  
**EMERGENCY PHONE:** 800-255-3924

**SECTION II – HAZARDS IDENTIFICATION**

**CLASSIFICATION:** Flammable Aerosol: Category 1  
Gases Under Pressure: Liquefied Gas  
Eye Irritant: Category 2A  
Specific Target Organ Toxicity (Single Exposure): Category 3  
Aspiration Hazard: Category 1

**HAZARD STATEMENT(S): DANGER:** Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Causes eye irritation. May cause drowsiness or dizziness. May be fatal if swallowed and enters airways.

This product contains the following percentage of chemicals of unknown toxicity: N/A

**PRECAUTIONARY STATEMENTS:** Keep away from heat, sparks, open flames, and hot surfaces. -No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Store in a well-ventilated place. Wash hands thoroughly after handling. Wear eye protection. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention. Avoid breathing mist, vapors or spray. Use only outdoors or in a well-ventilated area. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell. Store in a well-ventilated place. If swallowed: Immediately call a poison center or doctor. Do NOT induce vomiting. Dispose of contents and container in accordance with local, state and federal regulations.

**SYMBOL:**



**HAZARDS NOT OTHERWISE CLASSIFIED:** N/A

**SECTION III – COMPOSITION/INFORMATION ON INGREDIENTS**

HAZARDOUS INGREDIENT	CAS NUMBER	PERCENT
n-Butane	106-97-8	20-30%
Acetone	67-64-1	10-20%
Propane	74-98-6	5-15%
Heptane	142-82-5	5-10%
Distillates (petroleum), hydrotreated light	64742-47-8	5-10%

**Trade Secret Information:** A specific chemical identity and/or percentage of composition has been withheld as a trade secret.

**SECTION IV - FIRST AID MEASURES**

**EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

**INGESTION:** Rinse mouth out with water. Do not induce vomiting unless directed by medical authority. Keep head below hips if vomiting occurs. Seek immediate medical attention. Aspiration hazard. Never give anything by mouth to an unconscious person.

**INHALATION:** If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell.

**SKIN:** If on skin: Wash with plenty of water. If skin irritation occurs: get medical attention.

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**ACUTE HEALTH HAZARDS:** Prolonged contact with skin may cause irritation. Causes eye irritation including redness, tearing, and pain. Inhalation of vapors may cause nausea, dizziness and drowsiness. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

**CHRONIC HEALTH HAZARDS:** Dermatitis may occur due to long-term irritation. May cause liver and kidney damage.

**NOTE TO PHYSICIAN:** Treatment of overexposure should be directed at the control of symptoms and the clinical condition. If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

### SECTION V – FIRE-FIGHTING MEASURES

**EXTINGUISHING MEDIA:** Dry chemical, carbon dioxide, water spray, alcohol-resistant foam.

**UNSUITABLE EXTINGUISHING MEDIA:** Water spray/stream.

**SPECIAL FIRE FIGHTING PROCEDURES:** Wear full protective clothing and NIOSH approved SCBA with full facepiece operated in positive pressure or pressure demand. Use water mist to keep material cool in fire situations.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** EXTREMELY FLAMMABLE. Contents under pressure. Exposure to temperatures above 120°F may cause bursting. Keep away from heat, sparks, open flames and other sources of ignition. Cool containers with water spray. Rapid depolymerization can occur in a fire and produce flammable vapors. May depolymerize at temperatures above 392°F (200°C) with the production of extremely flammable butene monomers. Vapor may cause fire. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

**HAZARDOUS COMBUSTION PRODUCTS:** Oxides of carbon.

### SECTION VI – ACCIDENTAL RELEASE MEASURES

**PERSONAL PROTECTIVE EQUIPMENT:** Refer to section VIII for proper Personal Protective Equipment.

**SPILL:** Eliminate all sources of ignition. Wear appropriate personal protective equipment. Clean up using rag or use some non-combustible material like vermiculite, sand or earth. Prevent spill from entering sewers, storm drains and natural waterways. Place waste in proper containers for disposal. Dispose of in accordance with local, state and federal regulations. U.S. regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll-free number for the U.S. Coast Guard National Response Center is 800-424-8802.

**WASTE DISPOSAL:** Dispose of in accordance with local, state and federal regulations. Do not dump in sewers.

**RCRA STATUS:** Waste likely considered D001 (Ignitable waste), under RCRA, however product should be fully characterized prior to disposal (40 CFR 261).

### SECTION VII – HANDLING AND STORAGE

**HANDLING AND STORAGE:** Avoid contact with skin, eyes and clothing. Do not inhale mist or vapor. Wear proper personal protective equipment when using this product. Store in a cool, dry area. Keep away from heat, open flames, or other sources of ignition. Wash hands after use. Protect from sunlight. Store in a well ventilated area. Do not expose to temperatures exceeding 50°C/122°F. Pressurized container: Do not pierce or burn, even after use. Do not use or store with strong oxidizers.

**OTHER PRECAUTIONS:** Keep out of the reach of children. Read and follow the directions on the product label. They are the best guide to using the product in the most effective manner. The label also gives you the necessary safety precautions to protect your health.

**INCOMPATIBILITY:** Strong acids, strong alkalis, strong oxidizing agents, chemically active metals, such as aluminum, barium, lithium, sodium, magnesium, potassium, titanium, beryllium, concentrated nitric acid some plastics, rubbers, and coatings.

### SECTION VIII – EXPOSURE CONTROLS/PERSONAL PROTECTION

HAZARDOUS INGREDIENT	OSHA PEL	ACGIH TLV
n-Butane	Not Established	1000 ppm
Acetone	1000 ppm	250 ppm
Propane	1000 ppm	1000 ppm
Heptane	500 ppm	400 ppm
Distillates (petroleum), hydrotreated light	Not Established	200 mg/m <sup>3</sup> (Referenced as Kerosene total hydrocarbon vapor).

**ENGINEERING CONTROLS / VENTILATION:** Local ventilation/exhaust may be needed in confined spaces.

**RESPIRATORY PROTECTION:** Wear NIOSH/MSHA approved organic vapor respiratory protection if listed exposure limits (Section VIII) are exceeded.

**PERSONAL PROTECTIVE EQUIPMENT:** Safety glasses/goggles and chemical resistant gloves.

**ADDITIONAL MEASURES:** Do not touch eyes when using this product. Wash hands thoroughly with soap and water after use.

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**SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES**

**APPEARANCE:** Copper spray  
**ODOR:** Solvent.  
**ODOR THRESHOLD:** N/D  
**pH:** N/A  
**MELTING POINT/FREEZING POINT:** N/D  
**INITIAL BOILING POINT AND BOILING RANGE:** N/D  
**FLASH POINT:** N/D  
**EVAPORATION RATE:** N/D  
**FLAMMABILITY (solid/gas):** Extremely flammable aerosol.  
**UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS:**  
**LOWER FLAMMABILITY LIMIT:** N/D  
**UPPER FLAMMABILITY LIMIT:** N/D  
**EXPLOSIVE LIMIT LOWER (%):** N/D  
**EXPLOSIVE LIMIT UPPER (%):** N/D  
**VAPOR PRESSURE (mm Hg):** N/D  
**VAPOR DENSITY (AIR=1):** N/D  
**RELATIVE DENSITY (H<sub>2</sub>O=1):** 0.87 - 0.89 @ 77 °F (25 °C)  
**SOLUBILITY(IES):** N/D  
**PARTITION COEFFICIENT: n-OCTANOL/WATER (K<sub>ow</sub>):** N/D  
**AUTOIGNITION TEMPERATURE:** N/D  
**DECOMPOSITION TEMPERATURE:** N/D  
**VISCOSITY:** N/D

**SECTION X – STABILITY AND REACTIVITY**

**REACTIVITY:** Certain plastics, rubber and coatings.  
**CHEMICAL STABILITY:** Stable.  
**POSSIBLE HAZARDOUS REACTIONS:** None known.  
**CONDITIONS TO AVOID:** Temperatures greater than 122°F (50°C) and sources of ignition. Avoid incompatible materials.  
**INCOMPATIBLE MATERIALS:** Strong acids, strong alkalis, strong oxidizing agents, chemically active metals, such as aluminum, barium, lithium, sodium, magnesium, potassium, titanium, beryllium, concentrated nitric acid some plastics, rubbers, and coatings.  
**HAZARDOUS DECOMPOSITION PRODUCTS:** None known.

**SECTION XI – TOXICOLOGICAL INFORMATION**

**TOXICOLOGICAL INFORMATION:** **n-Butane** (106-97-8): LC<sub>50</sub> (Inhalation, Rat, 4h) 30957 mg/m<sup>3</sup>. **Acetone** (67-64-1): LD<sub>50</sub> (Oral, Rat) 5800 mg/kg; LD<sub>50</sub> (Oral, Mouse) 3000 mg/kg; LD<sub>50</sub> (Oral, Rabbit) 5340 mg/kg; LC<sub>50</sub> (Inhalation, Rat, 8h) 50100 mg/m<sup>3</sup>; LC<sub>50</sub> (Inhalation, Mouse, 4h) 44,000 mg/m<sup>3</sup>. **Propane** (74-98-6): LC<sub>50</sub> (Inhalation, Rat, 4h) 658 mg/L. **Heptane** (142-82-5): LD<sub>50</sub> (Oral, Rat) > 15000 mg/kg; LD<sub>50</sub> (Dermal, Rabbit) > 3160 mg/kg; LC<sub>50</sub> (Inhalation, Rat, 4h) 103 mg/L. **Distillates (petroleum), hydrotreated light** (64742-47-8): LD<sub>50</sub> (Oral, Rat) 5 g/kg; LD<sub>50</sub> (Dermal, Rabbit) 2 g/kg; LC<sub>50</sub> (Inhalation, Rat, 4h) 5 mg/L. **Copper** (7440-50-8): LD<sub>50</sub> (Oral, Rat) 300 - 500 mg/kg; LD<sub>50</sub> (Dermal Rat) > 2000 mg/kg.  
**ROUTES OF ENTRY:** Eyes, Ingestion, Inhalation, Skin  
**EYES:** Causes irritation, redness, tearing.  
**INGESTION:** May cause gastrointestinal irritation, nausea, diarrhea, vomiting. Harmful if swallowed. Aspiration hazard. Can enter the lungs during swallowing or vomiting and cause chemical pneumonia or edema.  
**INHALATION:** May cause respiratory tract irritation, dizziness, headaches, drowsiness, unconsciousness.  
**SKIN:** May cause irritation, redness, and dermatitis.  
**MEDICAL CONDITION AGGRAVATED:** Pre-existing disorders of the skin, respiratory system, and eyes will be aggravated by over exposure.  
**ACUTE HEALTH HAZARDS:** Prolonged contact with skin may cause irritation. Causes eye irritation including redness, tearing, and pain. Inhalation of vapors may cause nausea, dizziness and drowsiness. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.  
**CHRONIC HEALTH HAZARDS:** Dermatitis may occur due to long-term irritation. May cause liver and kidney damage.  
**CARCINOGENICITY:** OSHA: No ACGIH: No NTP: No IARC: No OTHER: CA Prop 65

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**SECTION XII – ECOLOGICAL INFORMATION**

**ECOTOXICITY:** This material is toxic to aquatic life. **Acetone** (67-64-1): LC<sub>50</sub> (*Oncorhynchus mykiss*, 96h) 5540 mg/L; EC<sub>50</sub> (*Daphnia magna*, 48h) 6100 mg/L; EC<sub>50</sub> (*Selenastrum quadricauda*, 8d) 7500 mg/L; EC<sub>50</sub> (*Psuedomonas putida*, 16h) 1700 mg/L. **n-Heptane** (142-82-5): EC<sub>50</sub> (*Daphnia magna*, 48h) 1.50 mg/L. **Distillates (petroleum), hydrotreated light** (64742-47-8): LC<sub>50</sub> (*Daphnia*, 48h) > 1000 mg/L; EC<sub>50</sub> (*Algae*, 72h) > 1000 mg/L. **Copper** (7440-50-8): LC<sub>50</sub> (*Pimephales promelas*, 96h) 0.0068 - 0.0156 mg/L; LC<sub>50</sub> (*Oncorhynchus mykiss*, 96h, flow-through) 0.052 mg/L; LC<sub>50</sub> (*Lepomis machrochirus*, 96h, static) 1.25 mg/L; LC<sub>50</sub> (*Cyrinus carpio*, 96h, semi-static) 0.3 mg/L; LC<sub>50</sub> (*Poecilia reticulata*, 96h, flow-through) 0.112 mg/L; EC<sub>50</sub> (*Daphnia magna*, 48h, ststic) 0.03 mg/L; EC<sub>50</sub> (*Pseudokirchneriella subcapitata*, 72h) 0.0426 - 0.0535 mg/L.

**PERSISTENCE AND DEGRADABILITY:** Component or components of this product are not biodegradable.

**BIOACCUMULATIVE POTENTIAL:** Components in this mixture can bioaccumulate in aquatic organisms.

**MOBILITY IN SOIL:** This product is mobile in soil.

**OTHER ADVERSE EFFECTS:** None known.

**SECTION XIII – DISPOSAL CONSIDERATIONS**

**WASTE DISPOSAL:** Dispose of in accordance with local, state and federal regulations. Do not dump in sewers.

**RCRA STATUS:** Waste likely considered D001 (Ignitable waste), under RCRA, however product should be fully characterized prior to disposal (40 CFR 261).

**SECTION XIV - TRANSPORT INFORMATION**

**PROPER SHIPPING NAME:** Aerosols, Ltd. Qty.

**HAZARD CLASS/DIVISION:** 2.1

**UN/NA NUMBER:** UN1950

**PACKING GROUP:** N/A

**AIR SHIPMENT**

**PROPER SHIPPING NAME:** Aerosols, flammable.

**HAZARD CLASS/DIVISION:** 2.1

**UN/NA NUMBER:** UN1950

**PACKING GROUP:** N/A

**SHIPPING BY WATER:**

**VESSEL (IMO/IMDG)**

**PROPER SHIPPING NAME:** Aerosols.

**HAZARD CLASS/DIVISION:** 2.1

**UN/NA NUMBER:** UN1950

**PACKING GROUP:** N/A

**ENVIRONMENTAL HAZARDS WATER:** N/A

**SECTION XV - REGULATORY INFORMATION**

**TSCA STATUS:** All chemicals are listed or exempt.

**CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT):** **Acetone** (67-64-1) Reportable Quantity = 5,000 pounds. **Copper** (7440-50-8) (Code "&" = No Reportable Quantity Assigned to Copper Compounds).

**SARA 311/312 HAZARD CATEGORIES:** Flammable (gases, aerosols, liquids, solids). Gas under pressure. Serious eye damage or eye irritation. Specific target organ toxicity (single or repeated exposure). Aspiration hazard.

**SARA 313 REPORTABLE INGREDIENTS:** **Copper** (7440-50-8).

**CLEAN WATER ACT:** **Copper** (7440-50-8) is a priority pollutant and a toxic pollutant. **Acetone** (67-64-1) is a hazardous substance.

**STATE REGULATIONS: California Proposition 65: WARNING:** This product can expose you to chemicals including Ethylene Oxide, which is known to the State of California to cause cancer, birth defects and other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov). **Acetone** (67-64-1): Included on State Hazardous Substances Inventories, Right-to-Know lists and/or Air Quality or Air Pollutants lists for the following states: CA, DE, ID, ME, MA, MN, NJ, PA, RI, WA.

**Heptane** (142-82-5): Included on State Hazardous Substances Inventories, Right-to-Know lists and/or Air Quality or Air Pollutants lists for the following states: CA, IL, MA, NJ, PA, RI. **Copper** (7440-50-8): Included on State Hazardous Substances Inventories, Right-to-Know lists and/or Air Quality or Air Pollutants lists for the following states: NJ, PA, RI.

**INTERNATIONAL REGULATIONS:** No information available.

**VOLATILE ORGANIC COMPOUNDS (VOC):** 39.82%

**NFPA HEALTH:** 1

**HMIS HEALTH:** 1

**NFPA FLAMMABILITY:** 3

**HMIS FLAMMABILITY:** 3

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**NFPA REACTIVITY:** 1  
**NFPA OTHER:** None

**HMIS REACTIVITY:** 1  
**HMIS PROTECTION:** B

**SECTION XVI - OTHER INFORMATION**

**PREPARATION BY:** Craig Bernard

**DATE PREPARED:** 04/15/2014

**REVISION DATE:** 04/15/2024

N/A = Not Applicable; N/D = Not Determined

**DISCLAIMER:** To the best of our knowledge, information contained herein is accurate. However, there is no assumption of liability for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazard which exists. The information contained in this SDS was obtained from current and reliable sources; however, the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions or handling, storage and disposal of this product are beyond the control of the manufacturer, the manufacturer will not be responsible for loss, injury, or expense arising out of the products improper use. No warranty, expressed or inferred, regarding the product described in this SDS shall be created or inferred by any statement in this SDS. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this SDS. The user is responsible for full compliance.