



Section 1: PRODUCT AND COMPANY INFORMATION

Product Name: Tiolube 70, Air Dry, Aerosol, Solid film Lubricant
MSDS Prep Date: 02/28/2013
MSDS Revision#: A
Supplier: Tiodize Co., Inc.
Address: 5858 Engineer Drive, Huntington beach, CA 92649
Phone #: 714-898-4377, Email: tiodize@tiodize.com
Emergency: 1-800-255-3924 (U.S. & Canada) or 1-813-248-0585 (International)

Section 2: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Preparation: Proprietary Formula – Specific Chemicals have been withheld

Chemical or Common Name	CAS Number	PEL:	TLV:	TWA:	% Vol
Molybdenum Disulfide	1317-33-5	-	5 mg/m3	-	14-30%
Organic Resin	25085-82-9	NE	NE	NE	10-20%
2 Butanone	78-93-3	-	200 ppm	-	45-60%
Propane	74-98-6	-	1000 ppm	-	10-15%
Isobutane	75-28-5	-	800 ppm	-	10-15%

NOTE: All SARA Title III materials have been reported. All ingredients contained in this formula are listed on the TSCA Inventory (Toxic Substances Chemical Inventory)

Section 3: HAZARDS IDENTIFICATION

Primary Routes of Entry: Inhalation, Ingestion, Skin, Eyes.

SIGNS & SYMPTOMS OF EXPOSURE:

Inhalation: Breathing high concentrations of vapors or mists may cause irritation of the nose and throat. Signs of nervous system depression. Respiratory symptoms associated with preexisting lung disorders may be aggravated by exposure to this material.
Ingestion: Moderately toxic. Ingestion of excessive quantities may cause irritation of the digestive tract. Signs of nervous system depression (e.g., drowsiness, dizziness, loss of coordination, and fatigue).
Skin Contact: This material may cause skin irritation. Prolonged or repeated exposure to this material may cause redness, burning, drying and cracking of the skin. Persons with preexisting skin disorders may be more susceptible to the effects of this material.
Eye Contact: This material is an eye irritant. Direct contact with the liquid or exposure to vapors or mists may cause burning, tearing, redness and swelling.

Section 4: FIRST AID MEASURES

Medical Conditions Generally Aggravated by Exposure: Long-term exposure or high concentrations of vapor may result in central nervous system depression and narcosis.
Signs and Symptoms of Exposure: Skin and eye irritation, drowsiness, lack of coordination.
Emergency and First Aid Procedures: When symptoms occur, remove to fresh air, provide oxygen when breathing is difficult; call physician immediately.
Carcinogenicity: Not carcinogenic
Health Hazards (acute and chronic): Moderately toxic; may cause nausea, diarrhea

Section 5: FIRE FIGHTING MEASURES

Flash Point: -5.5°C (22°F) PMCC (no propellant) **Flammability Limits:** LEL=1.8%, UEL=10% **Auto Ignition Threshold:** NA
Flash Point: -104°C (-156°F) PMCC (with propellant)

Extinguishing Media: ATL Foam Alcohol, Carbon Dioxide, Dry Chemical

Fire Fighting Procedures: Proper eye and skin protection should be used. Water is unsuitable, use extinguishing media.

Unusual Fire & Explosion Hazards: After ignition, the use of water can scatter the liquid thereby possibly spreading the fire. Ignition may also produce dense black smoke. Dangerous when exposed to heat or flame.



Section 6: ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: For small spills, vacuum into waste containers or absorb with dry sand or absorbent cloth. For large spills immediately evacuate the area and shut off potential ignition sources. Only personnel equipped with proper respiratory and skin/eye protection should be permitted in the area. Dike the area to contain the spill. Take precautions as necessary to prevent contamination of ground or surface waters. Recover with a wet vacuum or absorb spilled material in sawdust or vermiculite and sweep into closed containers for disposal. After all visible traces have been removed, thoroughly wet vacuum area again. **DO NOT FLUSH INTO SEWER.**

Section 7: HANDLING AND STORAGE

Precautions to be Taken in Storage & Handling: Keep away from open flame or other ignition sources. Do not store above 120°F. Maintain adequate ventilation and keep from children. Note that some vapors are heavier than air and can displace air in low areas or confined spaces such as pits or tanks. Do not enter those areas where large quantities of vapors are suspected or collecting until exchanging the air or using special breathing apparatus with an observer present for possible assistance.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection/Ventilation: Not required for normal work situations where adequate ventilation is provided (see next section). Use NIOSH approved self-contained positive pressure respirators for emergencies and in situations where air may be displaced by vapors or in confined areas with low air exchange rates. Follow OSHA Std. 29CFR 1910.134.

Ventilation: Use local exhaust at filling zones and where leakage is probable. Use mechanical ventilation for storage areas. For general dilution or local exhaust maintain adequate air exchange to avoid vapor build-up. All ventilation should be designed in accordance with OSHA Std. 29CFR 1910.94.

Skin Protection: Polyethylene, Neoprene or PVC protective gloves if there is prolonged and repeated contact with skin.

Eye Protection: Where there is reasonable probability of liquid contact, wear splash-proof goggles. Contact lenses should not be worn under such conditions.

Other Protective Clothing: Safety shower and eye-wash fountain in manufacturing areas. Personal protective clothing and use of equipment must be in accordance with 29CFR 1910.132 and 29CFR 1910.133.

Work and Hygienic Practices: Do not smoke, eat or drink while using this product. Wash hands with soap and water before smoking, eating, drinking or using toilet facilities. Launder contaminated clothing before reuse.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: 43.8°F (propane)	Specific Grav.: 0.806 g/ml	Melting Point: Not Established
Vapor Pres.: 46 mm Hg @ 20°C	Appearance: Black, dispersible	Evaporation Rate: 0.16 (Butyl Acetate=1)
Sol. in Water: Insoluble	Evaporation Rate: NA	Pour Point: Not Established
Vapor Density (Air=1): 2.41	Odor: Ketone Smell	VOC: (less than) 760 g/l

Section 10: STABILITY AND REACTIVITY

Stability: Stable **Incompatibility:** Avoid strong oxidizing agents and acids **Hazardous Polymerization:** Will not occur

Conditions to avoid: Sources of ignition such as sparks, hot spots, welding, flames, and cigarettes.

Hazardous Decomposition Products: Carbon Monoxide, Antimony compounds.

Section 11: TOXICOLOGICAL INFORMATION

Acute or Chronic Health Hazards: Moderately toxic, may cause nausea and/or diarrhea.

Signs and Symptoms of Exposure: Skin and eye irritation, drowsiness, lack of coordination.

Medical Conditions Generally Aggravated by Exposure: Long-term exposure or high concentrations of vapor may result in central nervous system depression and narcosis.

Emergency and First Aid Procedures: When symptoms occur, remove to fresh air, provide oxygen when breathing is difficult; call physician immediately.

NOTE: This material is not known to contain any carcinogen required to be listed under the *Hazard Communication Standard* 29CFR 1910.1200 from the *National Toxicology Program* (NTP) or the *International Agency for Research on Cancer* (IARC) sources.



Section 12: ECOLOGICAL INFORMATION: Not Established.

Section 13: DISPOSAL INFORMATION

Waste Disposal: Recovered liquids may be reprocessed, or incinerated, or treated in a permitted hazardous waste management facility. Care must be taken when using or disposing of chemical materials and/or their containers to prevent environmental contamination. Dispose of chemical materials and/or their containers in accordance with the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act, as well as any other Federal, State, or local laws and regulations regarding disposal.

Section 14: TRANSPORT INFORMATION

IATA Dangerous Goods Regulations: Air – Aerosols, Flammable, Class 2.1, UN1950

Ground – ORM-D;

Section 15: REGULATORY INFORMATION

Not established

Section 16: OTHER INFORMATION

SARA TITLE III NOTIFICATION: To comply with the reporting requirements of SARA Title III, EPA Regulations, the following is a list of the chemicals that are subject to customer written notification under section 313:

Substance	CAS Number
2 Butanone	78-93-3

RESPONSIBILITY:

The information contained herein is furnished without expressed warranty of any kind. Data contained herein has been assembled by the manufacturer based on its own studies and is believed to be correct as of the data issued. However, there is no warranty implied as to the accuracy, completeness, or Adequacy of the information obtained.

The manufacturer shall not be liable, regardless of fault, to the vendee, the vendee's employees, or anyone, for any direct, special or consequential damages arising out of or in connection with the normal safe usage of the product. If there are any questions, please contact: Tiodize Co, inc. at 714/898-4377.