SAFETY DATA SHEET

1. IDENTIFICATION

Product Name:	**MOLYBDENUM DISULFIDE IN ISOPROPANOL**
Product Type:	**Lubricant**
Restriction of Use:	**None Identified**
Region:	**United States**
Company Name:	**03432 Huron Industries, Inc.**
Company Address:	**2301 16th Street, Port Huron, MI 48060**
Company Phone:	**810-984-4213**
Company Fax:	**810-987-4199**
Company E-mail:	**neolube@comcast.net**
Emergency Response:	**INFOTRAC: 800-535-5053 DOMESTIC (HURON 89770)** **INFOTRAC: +1-352-323-3500 INTERNATIONAL (HURON 89770)**
National Stock Number:	**1HM 9150-01-206-3627 X3**
Contract Number:	**N/A**

2. HAZARD IDENTIFICATION

DANGER:

HIGHLY FLAMMABLE LIQUID AND VAPOUR
HARMFUL IF SWALLOWED
CAUSES SERIOUS EYE IRRITATION
SUSPECTED OF DAMAGING FERTILITY OR THE UNBORN CHILD
CAUSES DAMAGE TO ORGANS
CAUSES DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE

HAZARD CLASS	HAZARD CATEGORY
FLAMMABLE LIQUID	2
EYE CORROSIVE	2A
REPRODUCTIVE TOXIN	2
ORGAN TOXIN SINGLE EXPOXURE	1
ORGAN TOXIN REPEATED EXPOSURE	1
ACUTE TOXICITY – ORAL	4

PICTOGRAM(S)

PRECAUTIONARY STATEMENTS

PREVENTION: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment. Use only non-sparking tools. Take action to prevent static discharges. Do not breathe dust/fume/gas/mist/vapours/spray. Wash face, hands, and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear eye protection / face protection. Wear protective gloves/protective clothing/eye protection/face protection. Use personal protective equipment as required. Call a Poison Center or doctor if you feel unwell.

RESPONSE: Get medical advice/attention if you feel unwell. Specific treatment (see first aid treatment on SDS). IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse Mouth. IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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/attention. Get Medical advice/attention if you feel unwell. If exposed or concerned: Call a POISON CENTER or doctor/physician. In case of fire: Use Carbon Dioxide, Dry Chemical, Foam, Water Fog to extinguish.

STORAGE: Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

DISPOSAL: Dispose of contents and container in accordance with local regulations.

Classification complies with OSHA Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

SEE SECTION 11 FOR ADDITIONAL TOXICOLOGICAL INFORMATION

3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	WEIGHT BY %	---- EXPOSURE LIMITS---- ACGIH/TWA	OSHA/PEL/STEL/ACGIH
Molybdenum Disulfide MoS2	1317-33-5	65%	See Section 8	See Section 8
Isopropyl Alcohol	67-63-0	<35%	400 ppm STEL 200 ppm TWA	400 PPM TWA; 980 MG/M3 TWA

4. FIRST-AID MEASURES

EYE

Immediately flush eyes with water for a minimum of 15 minutes, occasionally lifting and lowering upper lids. Get medical attention promptly. Remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. (Note - Removal of contact lenses after an eye injury should only be undertaken by skilled personnel).

SKIN

Remove contaminated clothing. Wash skin with soap and water. Get medical attention. Wash clothing separately and clean shoes before reuse.

INHALATION

Rescuers should put on appropriate protective gear. Remove from area of exposure. Give artificial respiration if not breathing. If breathing is difficult, oxygen may be given by qualified personnel. To prevent aspiration, keep head below knees. Obtain medical attention.

INGESTION

Do not induce vomiting. Call a physician and/or transport to emergency facility immediately. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration of vomit into the lungs. Observe the patient carefully. Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.

NOTE TO PHYSICIAN

The decision to induce vomiting or not should be made by a physician. If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use water fog, foam, dry chemical, or carbon dioxide (CO2) to extinguish flames.
Inappropriate Extinguishing Media: Straight or direct water streams.

FIRE FIGHTING

Fire Fighting Instructions: Evacuate area. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop a leak. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire-exposed surfaces and to protect personnel.

Unusual Fire Hazards: Highly flammable liquid and vapor. Vapors/dust may cause flash fire or explosion. Vapors can travel to a source of ignition and flash back. Empty containers retain product reside (liquid and/or vapor) and can be dangerous. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. Also, do not reuse container without commercial cleaning or reconditioning. Hazardous material. Firefighters should consider protective equipment indicated in Section 8. Molybdenum Disulfide decomposes on heating and produces toxic fumes of sulfur oxides (SO2) and molybdenum trioxide. Molysulfide will react violently with hydrogen peroxide. Avoid reaction with hydrogen peroxide, potassium nitrate and stray oxidizers.

Hazardous Combustion Products: Smoke, Fume, Incomplete combustion products, Oxides of carbon

FLAMMABILITY PROPERTIES

Flash Point [Method]:	12°C (54°F)
Flammable Limits (Approximate volume % in air):	LEL: 3.0 UEL: N/E
Autoignition Temperature:	>350°C (662°F)

GENERAL HAZARD

Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reigniting has passed. Eliminate sources of ignition.

6. ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment, which exceed the applicable reportable quantity or oil spills, which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800) 424-8802.

PROTECTIVE MEASURES

Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required due to toxicity or flammability of the material. See Section 5 for firefighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

SPILL MANAGEMENT

Land Spill: Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do it without risk. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Prevent entry into waterways, sewer, basements, or confined areas. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Large Spills: Water spray may reduce vapor; but may not prevent ignition in closed spaces. Recover by pumping or with suitable absorbent.

Water Spill: Stop leak if you can do it without risk. Eliminate sources of ignition. Warn other shipping. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS

Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

7. HANDLING AND STORAGE

HANDLING

Avoid contact with eyes. Prevent exposure to ignition sources, for example use non-sparking tools and explosion-proof equipment. Potentially toxic/irritating fumes/vapors may be evolved from heated or agitated material. Use only with adequate ventilation. Use proper bonding and/or ground procedures. Peroxides may form upon prolonged storage. Exposure to light, heat, or air significantly increases peroxide formation. If evaporated to a residue, the mixture of peroxides residue and material vapor may explode when exposed to heat or shock. Prevent small spills and leakage to avoid slip hazard. General occupational hygiene measures are required to ensure safe handling of this substance. These measures involve good personal and housekeeping practices (i.e. regular cleaning with suitable cleaning devices), no eating, drinking and smoking at the workplace and wearing standard working clothes and shoes unless otherwise stated. Wash hands after contact with the powder or fume. Remove contaminated clothing and protective equipment before entering eating areas. Use showers and change clothes at end of work shift. Do not wear contaminated clothing home. Work clothes should be laundered separately and not at home.

Loading/Unloading Temperature: Ambient
Transport Temperature: Ambient
Transport Pressure: Ambient
Static Accumulator: This material is not a static accumulator.

STORAGE

Ample fire water supply should be available. A fixed sprinkler/deluge system is recommended. Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area. Outside or detached storage preferred. Storage containers should be grounded and bonded. Fixed storage containers, transfer containers, and associated equipment should be grounded and bonded to prevent accumulation of static charge. Keep container closed when not in use. Protect from direct sunlight.

Storage Temperature: Ambient
Storage Pressure: Ambient

Suitable Materials and Coatings (Chemical Compatibility): Carbon Steel; Stainless Steel; Polyester; Teflon; Polyethylene; Polypropylene; Copper Bronze; Epoxy Phenolic; Zinc; Vinyls.
Unsuitable Materials and Coatings: Aluminum; Cast iron; Polystyrene; Ethylene-proplyene-diene monomer (EPDM); Monel; Butyl Rubber; Natural Rubber

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

Substance Name / CAS	OSHA EXPOSURE LIMITS	ACGIH EXPOSURE LIMITS	OTHER EXPOSURE LIMITS
ISOPROPYL ALCOHOL 67-63-0	400 ppm TWA; 980 mg/m3 TWA	400 ppm STEL 200 ppm TWA	Niosh: 400 ppm TWA; 980 mg/m3 TWA 500 ppm STEL; 1225 mg/m3 STEL

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider: Adequate ventilation should be provided so that exposure limits are not exceeded. Use explosion-proof ventilation equipment.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration, and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level, which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include: Half-face filter respirator.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include: If prolonged or repeated contact is likely, chemical resistant gloves are recommended. If contact with forearms is likely, wear gauntlet style gloves.

Eye Protection: Chemical goggles are recommended. Emergency Eye Wash should be provided within the immediate work area if there is any possibility that the eyes may be exposed.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include: If prolonged or repeated contact is likely, chemical, and oil resistant clothing is recommended.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

ENVIRONMENTAL CONTROLS

Comply with applicable environmental regulations limiting discharge to air, water, and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

RECOMMENDED DECONTAMINATION FACILITIES

Eye bath, washing facilities, safety shower.

HYGENIC PRACTICES

Do not eat, drink, or smoke in areas where this material is used. Avoid breathing vapors. Remove contaminated clothing and wash before reuse. Wash thoroughly after handling. Wash hands.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM	Liquid
APPEARANCE & ODOR	Dark gray to black & alcohol odor
ODOR THRESHOLD	Not determined
PH	Not determined
FREEZING POINT	Not determined
MELTING POINT	-89°C (-128°F)
BOILING POINT/RANGE	82°C (180°F) - 83°C (181°F) [ASTM D1078]
VAPOR DENSITY (AIR = 1)	> 1 at 101 kPa
VAPOR PRESSURE	4.3 kPa (32.25 mm Hg) at 20 °C
EVAPORATION RATE (N-BUTYL ACETATE = 1)	3.9
LOG POW (N-OCTANOL/WATER PARTITION COEFFICIENT)	0.05
SOLUBILITY IN WATER	Complete
VISCOSITY	Not Available
RELATIVE DESNITY (H20 = 1)	0.786
FLAMMABILITY	Not determined
FLASH POINT (TEST METHOD)	54°F (12°C) T.C.C
AUTO IGNITION TEMPERATURE	>350°C (662°F)
FLAMMABLE LIMITS in AIR % by VOLUME	LEL: 3.0 UEL: N/E
PARTITION COEFFICIENT	Not determined
DECOMPOSITION TEMPERATURE	Not determined

10. STABILITY AND REACTIVITY

REACTIVITY: Stable under ambient temperatures and pressures. See sub-sections below.

STABILITY: Under normal storage conditions, peroxides may accumulate and explode when subjected to heat or shock. Distillation or evaporation increases peroxide formation and increases the explosion hazard.

CONDITIONS TO AVOID: Avoid impact, friction, heat, sparks, open flames, and other ignition sources.

MATERIALS TO AVOID: Aldehydes, Amines, Strong oxidizers, Caustics, Chlorinated Compounds, Alkanol amines, Hydrogen peroxide,

potassium nitrate and most oxidizers. Violent reaction with H_2O_2. Prevent contact with inorganic acids . Hazardous polymerization will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS: Toxic gases/fumes are given off during burning or thermal decomposition. During combustion carbon monoxide may be formed. During combustion carbon dioxide may be formed. Material does not decompose at ambient temperatures. Upon thermal decomposition may produce hazardous Molybdenum trioxide fumes and SO2 gas when burned.

POSSIBILITY OF HAZARDOUS REACTIONS: According to "Bretherick's Handbook" [40] molybdates react violently or explosively when reduced to molybdenum by heating with zirconium. Other hazardous reactions have not been identified. Otherwise, will not react or polymerize.

11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS ISOPROPYL ALCOHOL

ORAL TOXICITY LOSO: 1,870 mg/kg
DERMAL TOXICITY LD50: 4,059 mg/kg
INHALATION TOXITY LC50: 73 mg/L

ROUTES OF ENTRY: Inhalation, Ingestion, Skin Contact, Eye Contract

TARGET ORGANS: Eyes, Skin, Respiratory System

EMERGENCY OVERVIEW: Highly flammable liquid and vapor.

OTHER INFORMATION

For the product, itself: Vapor concentrations above recommended exposure levels are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anesthetic and may have other central nervous system effects. Prolonged and/or repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

The following ingredients are cited on the lists below: None.

--REGULATORY LISTS SEARCHED--

1 = NTP CARC	3 = IARC 1	5 = IARC 2B
2 = NTP SUS	4 = IARC 2A	6 = OSHA CARC

Information on toxicological effects for Molybdenum Disulfide: The information provided in this section is consistent with type of information provided in the other molybdenum compound REACH Chemical Safety Reports. For contact details, please refer to Section 16 of this data sheet.

Toxicity endpoints	Description of effects
Toxicokinetic: Absorption, Distribution, Metabolism and Excretion	Molybdenum is an essential element. Up taken Molybdenum Disulfide is relatively inert, any dissolved Molybdenum Disulfide exists predominantly in the form of the molybdate ion (MoO^{2-}). **Oral absorption**: Slow absorption through GI tract. **Inhalation absorption:** Absorption in human's dependent on particle size, deposition/clearance. **Dermal absorption:** Low to negligible. **Metabolism:** No metabolism. Up taken Molybdenum Disulfide is relatedly inert, any dissolved Molybdenum Disulfide exists predominantly in the form of the molybdate ion (MoO^{2-}). **Excretion:** Rapidly eliminated from plasma predominantly via renal excretion (>80%), and faeces (<10%).
(a) acute toxicity	No specific data available. Insoluble molybdenum compounds are characterized by low toxicity. LD_{50} (rat) > 5000 mg/kg
(b) skin corrosion/irritation	Not irritating / not corrosive to the skin. LD_{50} (rat) > 16000 mg/kg
(c) serious eye damage/irritation	Not irritant / not corrosive to the eyes.
(d) respiratory or skin sensitization	Molybdenum Disulfide is not sensitizing to the skin.
(e) germ-cell mutagenicity	Not a germ cell mutagen.
(f) carcinogenicity	Not a carcinogen.
(g) reproductive toxicity	There are currently no reliable scientific data available indicating adverse effects on reproduction or fertility.
(h) STOT-single exposure	There are no specific target organ effects after single exposure to diammonium dimolybdate.
(i) STOT-repeated exposure	No reliable scientific data available indicating adverse systemic effects after repeated exposure to molybdenum substances.
(j) aspiration hazard	Not applicable (not an aerosol/mist).

Other information

Molybdenum is an essential trace element required in nitrogen metabolism in the human body. It enhances cell function and is a component in the metabolic process. It is distributed throughout the body, with the greatest concentration in the liver, where it functions as a facilitator for liver detoxification. It is vital for the function and formation of several (at least 3) enzymes in the body, one of which regulates urinary excretion. Molybdenum contributes to the enzymes, which neutralize excess toxic compounds of sulfur in the body; assisting in the production of hemoglobin; and preventing dental caries. It may help to eliminate or neutralize carcinogenic nitrogen compounds, and may play a role in male sexual function. It has been researched for its role in cancer prevention. It also has been associated with a decrease in dental cavities.

Studies report that there is a 30 percent increase in cancer of the esophagus in areas of the United States where there is no molybdenum in the drinking water and in areas where food is grown in molybdenum- poor soils. Low molybdenum intake has been attributed to the high incidence of esophageal cancer in South Africa among the Bantu of Transkei and in Russia but maybe related to a lack of molybdenum in the soil used for farming. Another study of soft and hard drinking water in Taiwan indicated an increased risk of esophageal cancer when drinking soft water. Molybdenum is best known for its role in eradicating esophageal cancer that was prevalent in the Lin Xian region of China for almost 2,000 years. Once the soil was fortified with molybdenum and vitamin C was made available to the population, the occurrence of esophageal cancer has declined dramatically.

Some studies indicate an increased incidence of non-specific symptoms which including headache, weakness, fatigue, anorexia and joint and muscle weakness has been reported to occur in mining and metallurgy workers exposed to 60-600 mg (as Mo). In addition, investigators have attributed gout and elevated uric acid concentration found in some Armenians to result from exposures to Armenian soils rich in molybdenum, and exposure has been implicated as a cause of bone disease amongst Indians.

However, US National Research Council believes these reports as being highly speculative. As far as it is known, the recommended OELs incorporate a large margin of safety against potential pulmonary or systemic effects.

The use of vitamin supplements may provide the molybdenum needed to prevent cancer since molybdenum has anti-carcinogenic (anti-cancer) properties in regard to breast cancer in animals, esophageal cancer and stomach cancer in humans, which may be due to the copper-inhibiting effect of molybdenum, or possibility by molybdenum protecting the body from nitrosamine formation as a result of consuming foods high in nitrates or nitrites. Look for molybdenum compounds on vitamin labels.

12. ECOLOGICAL INFORMATION

Note: Data in this section is voluntarily in the U.S.A. but may be required in the EU and/or other countries.

The information given is based on data available for the material, the components of the material, and similar materials.

Isopropyl Alcohol:

ECOTOXICITY: Isopropyl Alcohol: 96 Hr LC50 Pimephales promelas: 9640 mg/L [flow-through]; 96 Hr LC50 Pimephales promelas: 11130 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: >1400000 µg/L
48 Hr EC50 Daphnia magna: 13299 mg/L
96 Hr EC50 Desmodesmus subspicatus: >1000 mg/L; 72 Hr EC50 Desmodesmus subspicatus: >1000 mg/L

Molybdenum Disulfide

Conclusion on the environmental classification and labelling: **Molybdenum Disulfide concentrate (also lube grade) is not hazardous to the aquatic environment** as:

- The lowest acute reference values for fish, invertebrates and algae are > 100 mg Mo/L
- The lowest aquatic NOEC for these three trophic levels is > 1 mg Mo/L (i.e., 43. 2 mg Mo/L for the rainbow trout)
- There is no evidence for bioaccumulation or bio-magnification in the environment

Acute Aquatic Toxicity: Tests conducted in 1990 at levels up to 750 mg/l of powdered (96 hour) Molybdenum Disulfide resulted in zero mortality to rainbow trout (Salmon Gardner).

Other: Persistence, degradability, bioaccumulation, and mobility are unknown

13. DISPOSAL CONSIDERATIONS

Note: Data in this section is voluntarily in the U.S.A. but may be required in the EU and/or other countries.

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, dispose of in accordance with local, state and federal regulations.

REGULATORY DISPOSAL INFORMATION

RCRA Information: Disposal of unused product may be subject to RCRA regulations (40 CFR 261). Disposal of the used product may also be regulated due to ignitability, corrosivity, reactivity, or toxicity as determined by the Toxicity Characteristic Leaching Procedure (TCLP). Potential RCRA characteristics: IGNITABILITY.

Empty Container Warning (where applicable)

Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

14. TRANSPORT INFORMATION

DOT NON-BULK & BULK

Proper Shipping Name
Isopropanol

Hazardous Class	ID Number	Packing Group
3	UN1219	II
ERG Guide	NMFC Number	Freight Class
129-Flammable Liquid	42690-2	65

AIR (IATA)

Proper Shipping Name: ISOPROPANOL
Hazard Class & Division: 3
UN Number: 1219
Packing Group: II
Label(s) / Mark(s): 3
Transport Document Name: UN1219, ISOPROPANOL, 3, II

ICAO/IATA

Cargo Packing Instruction	Passenger Packing Instruction
364	353

SEA (IMDG)

Proper Shipping Name: ISOPROPANOL
Hazard Class & Division: 3
EMS Number: F-E, S-D
UN Number: 1219
Packing Group: II
Marine Pollutant: No
Label(s): 3
Transport Document Name: UN1219, ISOPROPANOL, 3, II, (12°C c.c.)

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations, and rules relating to the transportation of the material

15. REGULATORY INFORMATION

Note: Data in this section is voluntarily in the U.S.A. but may be required in the EU and/or other countries.

OSHA HAZARD COMMUNICATION STANDARD: This material is considered hazardous in accordance with OSHA HazCom 2012, 29 CFR 1910.1200.

Listed or exempt from listing/notification on the following chemical inventories: AICS, DSL, ENCS, IECSC, KECI, PICCS, TSCA
EPCRA SECTION 302: This material contains no extremely hazardous substances.

SARA (311/312) REPORTABLE HAZARD CATEGORIES: Fire. Immediate Health. Delayed Health.

SARA (313) TOXIC RELEASE INVENTORY:

Chemical Name	CAS Number	Typical Value
ISOPROPYL ALCOHOL	67-63-0	100 %

Isopropyl alcohol is reportable under SARA 313 only when it is manufactured in a strong acid process.

The following ingredients are cited on the lists below:

Chemical Name	CAS Number	List Citations
ISOPROPYL ALCOHOL	67-63-0	1, 4, 13, 16, 17, 18, 19

--REGULATORY LISTS SEARCHED--

1 = ACGIH ALL	6 = TSCA 5a2	11 = CA P65 REPRO	16 = MN RTK
2 = ACGIH A1	7 = TSCA 5e	12 = CA RTK	17 = NJ RTK
3 = ACGIH A2	8 = TSCA 6	13 = IL RTK	18 = PA RTK
4 = OSHA Z	9 = TSCA 12b	14 = LA RTK	19 = RI RTK
5 = TSCA 4	10 = CA P65 CARC	15 = MI 293	

Code key: CARC=Carcinogen; REPRO=Reproductive

MOLYBDENUM DISULFIDE
U. S. Regulatory information

TSCA Inventory Status:	Y
TSCA 12 (b) Export Notification:	Not listed
CERCLA Section 103 (40 CFR 302.4):	N
SARA Section 302 (40 CFR 355.30):	N
SARA Section 304 (40 CFR 355.40):	N
SARA Section 313 (40 CFR 372.65):	N
OSHA Process Safety (29 CFR 1910.119):	N
SARA Hazard Categories, SARA Sections 311/312 (40 CFR 370.21) - Acute Hazard:	N
Chronic Hazard:	N
Fire Hazard:	N
Reactivity Hazard:	N
Sudden Release Hazard:	N

State Regulations:
Not listed on the California Proposition 65 list. Does not contain any contaminants or bi-products known to the State of California to cause cancer or reproductive toxicity.

Note – There are no known safety, health or environmental restrictions or prohibitions in any country where this product is produced, imported or marketed.

16. OTHER INFORMATION

NFPA Hazard ID:	Health:	2	Flammability:	3	Reactivity:	1
HMIS Hazard ID:	Health:	2*	Flammability:	3	Reactivity:	1

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks, which may vary from person to person.

This safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

The data contained herein are furnished for information only and are believed to be reliable. However, Huron Industries, Inc. ("HI") and its affiliates do not assume responsibility for any results obtained by persons over whose methods HI has no control. It is the user's responsibility to determine the suitability of HI's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any HI's products. In light of the foregoing, HI specifically disclaims all warranties, express, or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of HI's products. HI further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

REVISION NUMBER:	4	**ISSUE DATE:**	4/2/19
PREPARED BY:	DEBRA HARDY	Debra Hardy	