



SPECIALIZED LUBRICANTS

1. Substance/Product Identification

Product Name: 161 Moly Airline Oil ISO 22, 32 and 46 Grades

Company/Address: Schaeffer Mfg
102 Barton Street
Saint Louis, Missouri 63104
USA

Synonyms:

Preparation/Revision Date: 01/03/2012

Product Use/Type: Petroleum base airline, pneumatic and compressor oil

Emergency Phone Number: +1 314 865-4105 (24-hour response number)
+ 1 314 865-4100 (Business hours 8:30AM-5:00PM)
1-800-325-9962 (US & Canada)

Website: www.schaefferoil.com

MSDS Number: 160 Version 1.0

2. Hazards Identification

Appearance: Blue color

Odor: Petroleum Odor

Principal Hazards: Eye, skin and upper respiratory irritation

**Hazardous Materials Information System
(U.S.A)**

**Health: 1
Fire: 1
Reactivity: 0**

**National Fire Protection Agency System
(U.S.A.)**

**Health: 1
Fire: 1
Reactivity: 0**

See Section 11 for complete health hazard information

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3. Composition and Information on Ingredients

Hazardous Ingredients

Ingredient Name	CAS No.	EU Number	Percentage (by wt.)
Complex Mixture of Petroleum Base Oils	64742-54-7 64741-88-4 64742-65-0 64742-01-4 64742-52-5 64742-01-4 64742-62-7	265-157-1 265-090-8 265-169-7 265-101-6 265-155-0 265-101-6 265-166-0	0 - 100
Zinc dialkyldithiophosphate	4259-15-8	224-235-5	<0.5
2,6-di-tert butylphenol	128-39-2	204-884-0	<0.1
Proprietary Additives - Specific Chemical Identity withheld (trade secret)	Complex Mixture of Chemicals Trade Secret	Complex Mixture of Chemicals Trade Secret	<2
Molybdenum di(2-Ethylhexyl phosphorodithiolate)	72030-25-2	273-381-6	<1

The petroleum base oils contained in this product have been highly refined by various processes including severe hydrotreating and hydrocracking to reduce their aromatic content and to improve performance properties. The highly refined petroleum base oils contain <3% w/w DMSO extracts according to the IP 346 Test method and are not considered to be carcinogenic.

4. First Aid Measures

Ingestion: If swallowed, do not induce vomiting. Give the person a glass of water or milk to drink and get immediate medical attention. Never give anything by mouth to an unconscious person.

Eyes: Flush eyes with running water immediately while holding the eyelids open. Remove contact lenses, if worn, after initial flushing, and continue flushing for at least 15 minutes. Get immediate medical attention.

Inhalation: Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue.

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5. Fire Fighting Measures:

Flash Point: 400° - 485°F (204°-252°C) Cleveland Open Cup ASTM D-92

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

Firefighting Procedures: This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus

Unusual Fire & Explosion: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

6. Accidental Release Measures

Spill Procedures and Cleanup methods: Eliminate all sources of ignition in vicinity of spilled material. Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible sorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

Personal Precautions: Wear appropriate personal protective equipment when cleaning up spills.

Environmental Precautions: U.S.A. regulations may require reporting spills of this material that could reach any surface waters. Report spills to all applicable Federal, National, State, Provincial and local authorities and/or the United States National Response Center at (800) 424-8802 as appropriate or required

7. Handling & Storage

Handling: Avoid all contact of product with eyes and skin. Wash thoroughly after handling and before eating, smoking or using toilet facilities. Do not swallow product. Do not inhale vapors or mists. Do not eat, drink or smoke in work areas.

Storage: Do not store product at elevated temperatures. Store in a cool dry place that has adequate ventilation. Do not store near food or feed products. Keep containers closed when not in use.

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8. Exposure Controls and Personal Protection

Occupational Exposure Limits

Ingredient	OSHA TWA	OSHA STEL	ACGIH TWA	ACGIH STEL
Complex Mixture of Petroleum Base Oils	5 mg/m ³		5 mg/m ³	
Zinc dialkyldithiophosphate	N/E		N/E	
2,6-di-tert butylphenol	N/E		N/E	
Proprietary Additives - Specific Chemical Identity withheld (trade secret)	N/E		N/E	
Molybdenum di(2-Ethylhexyl phosphorodithiolate)	15 mg/m ³		10 mg/m ³	

- (s)-Skin exposure
- (p) proposed limit
- (c) – Ceiling limit
- (l) Recommended exposure limit
- (u) supplier limit
- (N/E) – not established

Other Exposure Limits

Engineering Controls: If user operations generate an oil mist, determine if airborne concentrations are below the OSHA Permissible Limit (PEL) of 5 mg/m³ for mineral oil mist. If not, wear a NIOSH approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge.

Personal Protective Equipment

Gloves: Nitrile or oil resistant gloves

Protective Clothing: Wear impervious protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted. Users should determine acceptable performance characteristics of protective clothing. Consider physical requirements and other substances present when selecting protective clothing.

Eye Protection: Wear eye protection such as safety glasses, chemical goggles, or face shields if engineering controls or work practices are not adequate to prevent eye contact.

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8. Exposure Controls and Personal Protection continued

Personal Protective Equipment continued

Skin Protection: Wear impervious protective clothing to prevent skin contact.

Respiratory Protection: If user operations generate an oil mist, determine if airborne concentrations are below the OSHA Permissible Limit (PEL) of 5 mg/m³ or other applicable standards for mineral oil mist. If not, wear a NIOSH approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge

9. Physical and Chemical Properties

Flash Point: 400° - 485°F (204°-252°C) Cleveland Open Cup ASTM D-92

Specific Gravity: 0.84 – 0.865

Upper Flammable Limit (UEL): Not Determined

Lower Flammable Limit (LEL): Not Determined

Vapor Pressure: Not Determined

Vapor Density (air =1): >1

Percent Volatile: Negligible

Evaporation Rate: Not Determined

pH: Not Applicable

Boiling Point: >600°F (>315°C)

Melting Point: Not Applicable

Appearance: Blue color

Odor: Petroleum

Solubility in Water: Negligible

The above data are typical values and do not constitute a specification. Vapor pressure data are calculated unless otherwise specified

10. Stability and Reactivity

Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Materials to Avoid: Strong acids, bases and oxidizers

Polymerization: Not expected to occur during conditions of normal use.

Thermal Decomposition: Not determined

Conditions to Avoid: May react with oxygen and strong oxidizing agents, such as chlorates, peroxides, etc.

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11. Toxicological Information:

Ingestion: Ingestion may cause a laxative effect. This material can directly enter the lungs, if swallowed, or if subsequently vomited. Once in the lungs it is very difficult to remove and can cause severe injury or death.

Eye Contact: Slight irritation and redness to eyes

Skin Contact: Contact with skin is not expected to cause prolonged or significant irritation

Inhalation: Contains petroleum base oils. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit.

Dermal Sensitization: Product may be a dermal sensitizer

Inhalation Sensitization: Not expected to be an inhalation sensitizer.

Carcinogenicity: This product does not contain any of the chemicals listed on the United States National Toxicology Program Annual Reports on Carcinogens, The International Agency for Cancer Research Monographs and the United States' Occupational Safety and Health Administrations 29CFR 1910.10 Subpart Z List.
Ames Test: Negative

The highly refined petroleum base oils contain <3% w/w DMSO extracts according to the IP 346 Test method and are not considered to be carcinogenic.

Additional Toxicological Information: No data available to indicate the product or any of its components are present at greater than 0.1% are mutagenic, genotoxic or teatogenic

Acute toxicity

Petroleum base oils

Acute Inhalation Toxicity: LC50 >5,000 mg/m³ (rat)

Acute Oral Toxicity LD50: >2,000 mg/kg (rat)

Acute Dermal Toxicity: LD50: >2,000 mg/kg (rabbit)

Proprietary Additives

Acute Oral Toxicity: LD50 / rat / 2,000 - 5000 mg/kg based on data from components or similar materials

Acute Dermal Toxicity: LD50 / rat / > 5000 mg/kg based on data from components or similar materials

Molybdenum di (2-Ethylhexyl phosphorodithiolate)

Acute Oral Toxicity: LD50 / rat / 7,350 mg/kg

Acute Dermal Toxicity: LD50 / rat / 10,800 mg/kg

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12. Environmental and Ecological Information

Ecotoxicity

Petroleum Base Oils

- 96 hour(s) / LC50 / Fresh water fish (*Oncorhynchus mykiss*) / >5,000 mg/l
- 48 hour(s) / EC50 / water flea (*Daphnia magna*) / >1,000 mg/l
- 96 hour(s) / LC50 / Rainbow trout (*Salmo gairdneri*) / >1,000 mg/l

Proprietary Additive System

- 96 hour(s) / LC50 / Rainbow trout (*Salmo gairdneri*) / 1-10 mg/l
- 96 hour/LC50/ saltwater fish /10-100 mg/l

Biodegradation: This material is not expected to be readily biodegradable

Bioaccumulation: Not established

Water Class Hazard (Germany): Water Hazard Class 2 1 according to appendix 4 VwVwS dated 27.7.2005

13. Disposal Considerations

Waste Handling and Disposal: This product in its neat state when discarded or disposed of is not a hazardous waste according to United States Federal Regulations 40CFR 261.4 (b)(4). Dispose of product in accordance with all applicable Federal, National, State, Provincial and local laws and regulations. Under United States RCRA regulations, it is the responsibility of the user of this product to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Do not re-use empty containers

14. Transport Information

US DOT Classification Non-Bulk: Not regulated as a hazardous material or dangerous good for transportation.

US DOT Classification Bulk: Not regulated as a hazardous material or dangerous good for transportation.

IMDG Classification: Not regulated as a hazardous material or dangerous good for transportation.

IATA/ICAO Classification: Not regulated as a hazardous material or dangerous good for transportation

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15. Regulatory Information

Hazard Symbols

EU



Xi Irritant

GHS



Relevant R Phrases

R36/38 Irritating to skin and eyes

Relevant Hazard Phrases

H304 May be fatal if swallowed and enters airways

H315 Causes Skin irritation

H318 Causes irritation to eyes

US Regulations

TSCA Inventory: All of the components in this material are on the US TSCA Inventory or are exempt.

State of California Proposition 65: This product does not contain any of the chemical listed on the State of California's Proposition 65 List for chemicals classified as potential reproductive or cancer causing agents.

US EPA SARA Title III and CERCLA Listings and Reportable Quantities

This product contains <0.5% of Zinc alkyl dithiophosphate which listed on the US EPA's SARA Title III and CERCLA Lists as Zinc and Zinc Compounds.

US EPA Section 311/313 Classifications

None

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15. Regulatory Information

US EPA Section 313 Chemicals

This product contains <0.5% of Zinc alkyl dithiophosphate which listed on the US EPA's Section 313 List as Zinc and Zinc Compounds

US Tariff Heading Number: 2710.19.3020

Schedule B Number: 2710.19.3020

Other Regulations:

Canada: All of the ingredients of this product are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substance List

Canadian WHMIS Classifications and Symbols: This product is not considered to be a WHMIS hazard

EEC: All components are in compliance with the EC Seventh Amendment Directive 92/32/EEC

16. Other Information

For additional information call +1 314-865-4100 (outside the US and Canada) or 1-800-325-9962 inside the United States and Canada.

Although the information and recommendations set forth herein (hereafter referred to as information) are presented in good faith and believed to be accurate and factual as of the date hereof, Schaeffer Mfg. Company makes no representation as to the completeness or accuracy thereof. Information is supplied upon the condition that the person receiving the same will make their own determination as to its safety and suitability for their purposes prior to use. In no event will Schaeffer Mfg. Company be responsible for damages of any natures whatsoever resulting from the use or reliance upon information. **No representation or warranty, either expressed or implied, of merchantability or fitness for a particular purpose is made with respect to information of the product to which the information refers. Compliance with all applicable federal, state, and local regulations remains the responsibility of the user.**