

U.S. Oil Co., Inc.

Lubricants Division

425 S. Washington St. Combined Locks, WI 54113
Phone 920-735-8298

MATERIAL SAFETY DATA SHEET

Section 1: Product and Company Identification

Manufacturer: U.S. Oil Co., Inc. Telephone: CHEMTREC (Spill Emergency Only): 1-800-424-9300
425 S. Washington St. Information: 1-800-490-4900
Combined Locks, WI 54113

Product Code	538 ISO 10	539 ISO 15	540 ISO 22	541 ISO 32	542 ISO 46	543 ISO 68
Product Code	544 ISO 100	545 ISO 150	546 ISO 220	547 ISO 320	548 ISO 460	549 ISO 680

Product Label Name..... Synthetic Gear and Bearing Oil
Product Use LUBRICATING OIL

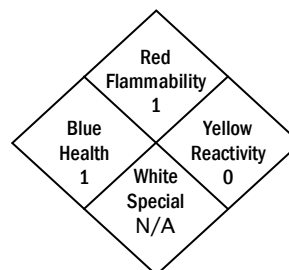
Section 2: Composition/Information on Ingredients

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

This product is not formulated to contain ingredients that have exposure limits exceeding those established by US agencies.

*See Section 8 for exposure limits.

NFPA & HMIS Rating



Section 3: Hazards Identification

POTENTIAL HEALTH EFFECTS: Minor eye, inhalation and skin irritant.
*See Section 11 for toxicological information.

Section 4: First Aid Measures

- EYE:** Flush with water for 15-20 minutes. Seek medical attention if irritation develops.
- SKIN:** Wash immediately with soap and water. Remove contaminated clothing and launder before reuse. Discard shoes and leather articles saturated with the product. Obtain medical advice if irritation occurs.
- INHALATION:** Remove exposed person to fresh air. If breathing is labored give oxygen. If breathing has stopped apply artificial respiration. Get immediate medical attention.
- INGESTION:** DO NOT INDUCE VOMITING. If conscious, give 2 glasses of water. If vomiting does occur, keep head below hips to reduce risk of aspiration. Get immediate medical attention.

Section 5: Fire Fighting Measures

FLAMMABILITY PROPERTIES:

	538 ISO 10	539 ISO 15	540 ISO 22	541 ISO 32	542 ISO 46	543 ISO 68
Flash Point	369°F (187°C)	408°F(209°C)	459°F(237°C)	507°F(264°C)	495°F(257°C)	496°F(258°C)
	544 ISO 100	545 ISO 150	546 ISO 220	547 ISO 320	548 ISO 460	549 ISO 680
Flash Point	507°F(264°C)	547°F(286°C)	538°F(281°C)	540°F(282°C)	540°F(282°C)	540°F(282°C)

Method COC ASTM D-92
LFL/UFLNot Determined
Auto-ignition Temperature.....Not Determined

EXTINGUISHING MEDIA: Carbon dioxide, dry chemical, and alcohol foam.

FIREFIGHTING EQUIPMENT: Full bunker gear recommended including a positive pressure self-contained breathing apparatus.

Section 6: Accidental Release Measures

Isolate spill area. Provide adequate ventilation. Wear appropriate personal protection. Recover free product for recycle and/or disposal. Add sand, earth or other suitable absorbent to spill area. Prevent entry into sewers and waterways. Check under Transportation and Labeling (DOT/CERCLA) and Other Regulator Information Section (SARA) for hazardous substances to determine regulatory reporting requirements for spill.

Section 7: Handling and Storage

HANDLING: Keep containers closed. Avoid contact with eyes, skin or clothing. Wash hands after handling. Empty container may retain product residue which may exhibit hazards of product.

STORAGE: Keep away from heat or flame.

Section 8: Exposure Controls/Personal Protection

VENTILATION: Use adequate general or local exhaust ventilation to keep airborne concentrations below exposure limits.

RESPIRATORY: Use a NIOSH approved respirator when necessary.

SKIN: Use Viton or Nitrile gloves to avoid prolonged or repeated skin contact.

EYE: Use splash goggles or face shield where splashing is expected or can occur.

EXPOSURE LIMITS: The Threshold Limit Value (TLV) of 5 mg/m³ is suggested for oil mist.

Section 9: Physical and Chemical Properties

	538 ISO 10	539 ISO 15	540 ISO 22	541 ISO 32	542 ISO 46	543 ISO 68
Physical State	Liquid					
Boiling Point	Not Determined					
Freezing/Melting Point	-90°F (-68°C)	-90°F (-68°C)	-90°F (-68°C)	-63°F (-45°C)	-58°F (-50°C)	-54°F (-48°C)
Vapor Pressure	Negligible					
Vapor Density (Air=1)	Not Determined					
Evaporation Rate	Not Determined					
Solubility in Water	Negligible					
Specific Gravity (Water=1)	0.8193	0.8234	0.8319	0.8393	0.8418	0.8504
Density, lb./gal.	6.822	6.930	6.926	6.989	7.009	7.081
Volatility (Volume)	Not Determined					
VOC	Not Determined					
PH	Essentially Neutral					
Odor	Mild, Bland Hydrocarbon Odor					
Odor Threshold	Not Determined					
Appearance	Light Straw Transparent Fluid					
Viscosity, cSt @ 100°C	2.86	3.60	4.65	6.18	7.59	10.27
Viscosity, cSt @ 40°C	10.73	15.12	22.11	33.11	43.66	67.75
Viscosity Index	115	123	130	137	142	138

	544 ISO 100	545 ISO 150	546 ISO 220	547 ISO 320	548 ISO 460	549 ISO 680
Physical State	Liquid					

Boiling Point	Not Determined					
Freezing/Melting Point	-49°F(-45°C)	-42°F(-41°C)	-38°F(-39°C)	-31°F(-35°C)	-26°F(-32°C)	-25°F(-31°C)
Vapor Pressure	Negligible					
Vapor Density (Air=1)	Not Determined					
Evaporation Rate	Not Determined					
Solubility in Water	Negligible					
Specific Gravity (Water=1)	0.8550	0.8811	0.8916	0.8871	0.8922	0.8961
Density, lb./gal.	7.119	7.337	7.424	7.387	7.429	7.462
Volatility (Volume)	Not Determined					
VOC	Not Determined					
PH	Essentially Neutral					
Odor	Mild, Bland Hydrocarbon Odor					
Odor Threshold	Not Determined					
Appearance	Light Straw Transparent Fluid					
Viscosity, cSt @ 100°C	13.63	19.35	25.81	32.85	42.77	54.89
Viscosity, cSt @ 40°C	100.48	155.77	232.23	334.18	484.62	691.80
Viscosity Index	136	142	142	139	139	139

Section 10: Stability and Reactivity

STABILITY: Stable under moderately elevated temperatures and pressures.

INCOMPATIBILITY: Avoid contact with strong oxidants.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION OF PRODUCT: Toxic oxides of carbon, aldehydes and other products of incomplete combustion.

Section 11: Toxicological Information

ACUTE EXPOSURE

- Eye Irritation: Moderate to strong eye irritation. Based on data from components or similar material.
- Skin Irritation: Not expected to be a primary skin irritant. Based on data from components or similar material. Prolonged or repeated skin contact as from clothing wet with material may cause dermatitis. Symptoms may include redness, edema, drying, defatting, and cracking of the skin.
- Respiratory Irritation: If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract similar to that observed with mineral oil. Based on data from components or similar materials. Under good industrial hygiene practices where all exposure limits are observed, respiratory irritation should not be a problem.

CHRONIC EXPOSURE

- Chronic Toxicity: No data available to indicate product present at greater than 1.0% are chronic health hazards.
- Carcinogenicity: No data available to indicate product present at greater than 0.1% are a carcinogenic hazard.
- Mutagenicity: No data available to indicate product present at greater than 1.0% present a mutagenic or genotoxic hazard.
- Reproductive Toxicity: No data available to indicate product present at greater than 1.0% present a reproductive hazard.
- Teratogenicity: No data available to indicate product present at greater than 1.0% present a teratogenic hazards.

ADDITIONAL INFORMATION

Exposure Limits: Under conditions which may generate mists, observe the OSHA PEL of 5 mg per cubic meter.

Section 12: Ecological Information

No data available on the adverse effects of this product on the environment.

Section 13: Disposal Considerations

If this product as supplied becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Section 14: Transport Information

This product is not classified as hazardous material for DOT shipping. For further information relative to spills resulting from transportation incidents, refer to the latest DOT Emergency Response Guidebook for Hazardous Materials.

Section 15: Regulatory Information

U.S. Federal Regulations

OSHA Table Z.....Synthetic Base Stock (mist)
TSCA.....Not Applicable
CERCLA 40 CFR 302.4Not Applicable
SARA Title III
Section 302 Extremely HazardousNot Applicable
Section 311/312
Fire Hazard..... Yes
Reactive HazardNo
Release of PressureNo
Acute Health Hazard..... Yes
Chronic Health Hazard.....No
Section 313 Toxic Chemical.....Not Applicable

U.S. State Regulations

California (Prop 65)
Does not contain chemicals known to the state of California to cause cancer.

International Regulations

WHMIS All components listed

Section 16: Other Information

The information and recommendations contained herein are, to the best of our knowledge and belief, accurate and reliable as of the date issued. We make no warranty or guarantee, expressed or implied, of their accuracy or reliability, and we shall not be liable for any loss or damage based upon the criteria supplied by the developers of these rating systems, together with our interpretation of the available data.