

MATERIAL SAFETY DATA SHEET

Orion 5000-EL



1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Orion 5000-EL**
Product Use: Engine Lubricant

CAS Number: Mixture

Company Identification: **Orion Industrial, LLC**
3520 Okemos Road, #6
Okemos, MI 48864 USA
1-(888) 785-8450 (For product information)
1-(800) 424-9300 (For Emergency information)

Prepared by: Paul Eigbrett MSDS Authoring Services
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2. COMPOSITION / INFORMATION ON INGREDIENTS

CONTAINING: HAZARDOUS AND/OR REGULATED COMPONENTS

<u>Ingredient Name</u>	<u>Amount</u>	<u>CAS#</u>	<u>OSHA PEL (ppm)</u>
Technical White oil	Proprietary	64742-54-7	N.E.
High Molecular weight Esters	Proprietary	118685-24-8	N.E.
Low Molecular weight Esters	Proprietary	Mixture	N.E.

COMPOSITION COMMENT: -- - Orion 5000-EL is an engine and fuel lubricant designed to provide advanced lubrication to internal combustion engines, thereby reducing friction, lowering operating temperatures, and decreasing harmful emissions while increasing fuel economy.

***California Prop 65:** This product does NOT contain an ingredient(s), above the safe harbor limits, which are known to the state of California to cause cancer, birth defects, or other reproductive harm.

HAZARDS DISCLOSURE: This product does not contain known hazardous materials in reportable levels as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING! MAY CAUSE MILD EYE OR SKIN IRRITATION. MAY BE HARMFUL IF SWALLOWED

HMIS/NFPA Rating: See Section 16

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POTENTIAL HEALTH EFFECTS

ROUTES OF ENTRY: Skin contact. Eye contact. Inhalation. Ingestion.

TARGET ORGANS: None known

INHALATION: Low vapor pressure indicates a low inhalation hazard. No current data.

INGESTION: Low to medium toxicity. May cause gastrointestinal irritation.

SKIN CONTACT: May cause mild irritation.

EYE CONTACT: Mild irritant. May cause reddening and slight pain.

CHRONIC EXPOSURE: No information found.

AGGRAVATION OF PRE-EXISTING CONDITIONS: No information found.

4. FIRST AID MEASURES

INHALATION FIRST AID: If a respiratory problem develops from vapors. Remove victim to fresh air and provide oxygen if breathing is difficult. Get medical attention. If the victim has difficulty breathing or tightness of the chest, is dizzy, vomiting or unresponsive, give 100% oxygen with rescue breathing or CPR as required and transport to the nearest medical facility.

SKIN CONTACT FIRST AID: Wash affected area with soap and water. Remove contaminated clothing and shoes. Get medical attention if redness, itching or a burning sensation develops. Wash clothing before reuse.

EYE CONTACT FIRST AID: If contact with eyes, check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

INGESTION FIRST AID: Induce vomiting only as directed by medical personnel. Never give anything by mouth to an unconscious person. Call a physician immediately.

STATEMENT OF PRACTICAL TREATMENT: Get medical attention if any symptoms develop or persist. Treat systematically.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES: Non-Combustible Liquid!

AUTO IGNITION TEMPERATURE: N.E.

FLASH POINT: 153°C (307°F) CC

FLAMMABLE LIMITS IN AIR, % by Volume: lel: N.E. uel: N.E.

EXTINGUISHING MEDIA: Dry chemical, alcohol foam or carbon dioxide may be used. Water spray may be used to keep fire exposed containers cool, dilute spills to nonflammable mixtures, protect personnel attempting to stop leak and disperse vapors.

FIRE & EXPLOSION HAZARDS: None known

SPECIAL INFORMATION:

Avoid contact with fire and sparks.

6. ACCIDENTAL RELEASE MEASURES

Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Dike or contain spill. Use non-sparking tools and equipment. Absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer!

US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802. Follow applicable OSHA regulations (29 CFR 1910.120).

7. HANDLING AND STORAGE

RECOMMENDED STORAGE CONDITIONS: Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Separate from incompatibles. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment. After this container has been emptied, it may contain explosive vapors; observe all warnings and precautions listed for the product. Do not cut, or weld on or near this container. Separate from flammables and sensitizers.

SHELF LIFE: See Label on packaging.

HANDLING (PERSONNEL): Avoid smoking, heat or ignition sources. When handling, DO NOT eat, drink or smoke. Avoid contact with incompatible materials. Keep containers securely sealed. Avoid physical damage to containers. Always wash hands with soap and water after handling. Work clothes should be laundered separately. Use good occupational work practices.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

AIRBORNE EXPOSURE LIMITS: See Section 2 above.

Technical White oil (64742-54-7):

- OSHA Permissible Exposure Limit (PEL): None Established ppm (TWA)
- ACGIH Threshold Limit Value (TLV): None Established ppm (TWA)

High Molecular weight Esters (118685-24-8):

- OSHA Permissible Exposure Limit (PEL): None Established ppm (TWA)
- ACGIH Threshold Limit Value (TLV): None Established ppm (TWA)

Low Molecular weight Esters (Mixture):

- OSHA Permissible Exposure Limit (PEL): None Established ppm (TWA)
- ACGIH Threshold Limit Value (TLV): None Established ppm (TWA)

VENTILATION SYSTEM: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

PERSONAL RESPIRATORS (NIOSH APPROVED): If the exposure limit is exceeded and engineering controls are not feasible, wear a supplied air, full-facepiece respirator, airtight hood, or full-facepiece self-contained breathing apparatus. Breathing air quality must meet the requirements of the OSHA respiratory protection standard (29CFR1910.134). Where respirators are required, you must have a written program covering the basic requirements in the OSHA respirator standard. These include training, fit testing, medical approval, cleaning, maintenance, cartridge change schedules, etc. See 29CFR1910.134 for details.

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SKIN PROTECTION: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

EYE PROTECTION: Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

FORM: Liquid

COLOR: Clear

ODOR: Mild odor

BOILING POINT: 226°C (438.8°F)

SOLUBILITY IN WATER: <0.1% @ 25 deg C

SPECIFIC GRAVITY: 0.887 g/ml at 15.6°C

MELTING/FREEZING POINT: N.E.

KINEMATIC VISCOSITY: 10.87 cSt at 40°C

AUTO IGNITION TEMPERATURE: N.E.

FLASH POINT: 153°C (307°F) CC

pH: Not Applicable

VAPOR PRESSURE: 0.5 @ 20°C

10. STABILITY AND REACTIVITY

STABILITY: Product is considered stable under ordinary use and conditions.

CONDITIONS TO AVOID: Heat, flames, ignition sources and incompatibles.

POLYMERIZATION: Hazardous polymerization will not occur.

INCOMPATIBILITY WITH OTHER MATERIALS: Strong acids or strong bases.

DECOMPOSITION: Carbon dioxide and carbon monoxide may form when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

Toxicological Data:

No Data Found for this product

Reproductive Toxicity: No Data.

Carcinogenicity:

Cancer Lists

---NTP Carcinogen---

<u>Ingredient</u>	<u>Known</u>	<u>Anticipated</u>	<u>IARC Category</u>
Technical White oil:	No	No	None
High Molecular weight Esters:	No	No	None
Low Molecular weight Esters:	No	No	None

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE: No Data Available

ENVIRONMENTAL TOXICITY: No Data Available

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13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Whatever cannot be saved for recovery or recycling should be handled as a non hazardous waste and sent to an approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of material in accordance with federal, state and local requirements.

CONTAMINATED MATERIALS: Wash contaminated clothing before reuse. Empty container retains product residue. Observe all hazard precautions.

14. TRANSPORTATION INFORMATION

Domestic (Land, D.O.T.), International (Water, I.M.O.), International (Air, I.C.A.O.)

CLASS: NON-REGULATED
PRODUCT LABEL: Orion 5000-EL
UN NUMBER: N/A
PACKING GROUP: N/A
D.O.T. SHIPPING NAME: Not regulated
PRODUCT RQ (LBS): N/A
ERG Guide Number: N/A
Quantity Limitations: Passenger aircraft: N/A Cargo aircraft only: N/A

15. REGULATORY INFORMATION

FEDERAL REGULATORY STATUS

TSCA (Toxic Substances Control Act) Regulations, 40 CFR 710:

All ingredients are listed on the TSCA Chemical Substance Inventory.

Federal, State & International Regulations - Part 1

Ingredient	<u>-SARA 302-</u>		<u>List</u>	<u>-SARA 313-</u>
	<u>RQ</u>	<u>TPQ</u>		<u>Chemical Catalog</u>
Technical White oil:	NO	NO	NO	NO
High Molecular weight Esters:	NO	NO	NO	NO
Low Molecular weight Esters:	NO	NO	NO	NO

Ingredient	<u>CERCLA</u>	<u>-RCRA-</u>	<u>-TSCA-</u>
		<u>261.33</u>	<u>8(d)</u>
Technical White oil:	NO	NO	NO
High Molecular weight Esters:	NO	NO	NO
Low Molecular weight Esters:	NO	NO	NO

Chemical Weapons Convention: No **TSCA 12(b):** No **CDTA:** Yes

Clean Water Act (CWA) 307 & 311: No products were found.

Clean Air Act (CAA) 112: No products were found.

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SARA 311/312 (Title III Hazard Classes): (Pure / Liquid)

Acute: Yes
Chronic: No
Fire: No
Pressure: No
Reactivity: No

STATE REGULATIONS: None

PROP 65 - WARNING: NONE

THIS PRODUCT DOES NOT CONTAIN A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

RCRA 40 CFR: NONE.

Australian Hazchem Code: None allocated.

Poison Schedule: None allocated.

WHMIS: This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

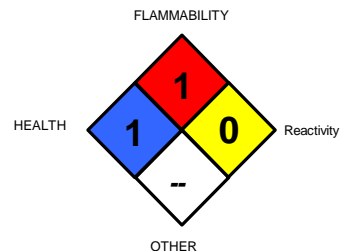
This material or all of its components are listed on the Inventory of Existing Chemical Substances under the Toxic Substance Control Act (TSCA). This material or all of its components are listed on the Canadian Domestic Substances List (DSL).

16. OTHER INFORMATION

Label Requirements: WARNING! MAY CAUSE MILD EYE OR SKIN IRRITATION. MAY BE HARMFUL IF SWALLOWED

Hazardous Material Information System (HMIS):	Health	1
	Flammability	1
	Physical Hazard	0
	Personal Protection	B

National Fire Protection Association (NFPA):



NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme

Protective Equipment: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES; CLASS B EXTINGUISHER.

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ADDITIONAL INFORMATION:

The data in this Material Safety Data Sheet relates only to the specific material designated herein. It does not relate to use in combination with any other material or in any process. This Material Safety Data Sheet (MSDS) has been reviewed to fully comply with the guidance contained in the ANSI MSDS standard (ANSI Z400.1-2004)

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Orion Industrial, LLC. The data on this sheet are related only to the specific material designated herein. Orion Industrial, LLC assumes no legal responsibility for use or reliance upon these data.

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever 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 hazards that exist.

END OF MSDS