Material Safety Data Sheet

Lawn-Boy, Inc.
8111 Lyndale Ave S
Bloomington, MN 55420

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Product Identification

Product Name:	Lawn-Boy 4 Cycle Oil (SAE 30 Summer Weight)	**Parts Number:** 89885
Product type:	Motor oil	
MSDS #	620903001	
Emergency Contact:	Chemtrec : 1-800-424-9300	
Contact Number:	1-952-888-8801	

Chemical Components

Chemical	**CAS #**	%	**ACGIH TLV**	**OSHA PEL**	**Other**
Highly-refined petroleum lubricant oils	Mixture	90 to 98			
The concentrations of the individual base oils will vary. The individual concentration ranges are as follows:					
Residual oil, petroleum, solvent refined	64742-01-4	0 - 15			
Distillates, petroleum, hydrotreated heavy paraffinic	64742-54-7	0 - 98			
Distillates, petroleum, solvent-refined heavy paraffinic	64741-88-4	0 - 90			
Distillates, petroleum, solvent-refined light paraffinic	64741-89-5	0 - 1			
Distillates, petroleum, hydrotreated light paraffinic	64742-55-8	0 - 1			
Component Name(s)					
Proprietary Ingredients	Proprietary Mixture	<10			
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3	<1			
Oil Mist, Mineral			5 mg/m$_3$	5 mg/m$_3$	10 mg/m$_3$

Physical and Chemical Properties

Characteristics	Physical Properties	Hazards Description	Physical Dangers

Physical State	Liquid
Color	Amber to black.
Odor	Mild petroleum odor

HMIS Rating

Health:	0
Flammability:	1
Physical Hazard:	0

Additional Properties:
Gravity, ºAPI (ASTM D287) = 27.5 @ 60º F
Density = 7.41 Lbs/gal.
Viscosity (ASTM D2161) = 548 SUS @ 100º F

Vapor pressure	<0.001 kPa (<0.01 mm Hg) (at 20°C)
pH	Not Applicable.
Boiling point/range:	Not available.
Melting point/range:	Not available.
Specific gravity	0.89 (Water = 1)
Vapor density	>1 (Air = 1)
Viscosity (cSt @ 40°C)	105
Solubility in water	Negligible solubility in cold water.
VOC content:	Negligible volatility.
Flash Point	Open cup: 248°C (478°F) (Cleveland.).

Chemical Stability: Stable
Hazardous Polymerization: Not expected to occur.
Hazardous Decomposition Products: No additional hazardous decomposition products were identified other than the combustion products identified in "Unusual Fire and Explosion Hazards".

CAUTION:
Hot oil can cause thermal burns on contact.
"Used" motor oil has been associated with skin cancer in laboratory animals following extended contact.
Spills may create a slipping hazard

Keep away from extreme heat, sparks, open flame, and strongly oxidizing conditions.

Materials Incompatibility: Strong oxidizers.

Health Hazards

Major Routes of Exposure:		Ingredients Considered Hazardous to Health	Potential Health Effects:
Inhalation		This product does not exhibit the hazard as defined in the OSHA Hazard Communication Standard (29 CFR 1910.1200). This product is not known to contain any components at concentrations above 0.1% which are considered carcinogenic by OSHA, IARC or NTP.	**Inhalation**. At elevated temperatures or in enclosed spaces, product mist or vapors may irritate the mucous membranes of the nose, the throat, bronchi, and lungs.
Skin	X	**Chronic Health Effects Summary:** This product contains a petroleum-based mineral oil. Prolonged or repeated skin contact can cause mild irritation and inflammation characterized by drying, cracking, (dermatitis) or oil acne. Repeated or prolonged inhalation of petroleum-based mineral oil mists at concentrations above applicable workplace exposure levels can cause respiratory irritation or other pulmonary effects.	**Skin contact** This product can cause mild, transient skin irritation with short-term exposure. Skin contact with hot material may result in severe burns.
Ingestion		Disorders of the following organs or organ systems that may be aggravated by significant exposure to this material or its components include: Skin	**Eye contact:**. This product can cause transient mild eye irritation with short-term contact with liquid sprays or mists. Symptoms include stinging, watering, redness, and swelling.
Eye		May cause damage to the following organs: skin.	**Ingestion:** If swallowed, this material can cause a laxative effect.

First Aid Measures	Personal Protection
Inhalation: Vaporization is not expected at ambient temperatures. This material is not expected to cause inhalation-related disorders under anticipated conditions of use. In case of overexposure, move the person to fresh air. **Eye Contact:** Check for and remove contact lenses. Flush eyes with cool, clean, low-pressure water while occasionally lifting and lowering eyelids. Seek medical attention if excessive tearing, redness, or pain persists. **Skin Contact:** If burned by hot material, cool skin by quenching with large amounts of cool water. For contact with product at ambient emperatures, remove contaminated shoes and clothing. Wipe off excess material. Wash exposed skin with mild soap and water. Seek medical attention if tissue appears damaged or if pain or irritation persists. Thoroughly clean contaminated clothing before reuse. Discard contaminated leather goods. If material is injected under the skin, seek medical attention immediately. **Ingestion:** Do not induce vomiting unless directed to by a physician. Do not give anything to drink unless directed to by a physician. Never give anything by mouth to a person who is not fully conscious. Seek medical attention immediately. **Notes to Physician:** INGESTION: The viscosity range of the product(s) represented by this MSDS is greater than 100 SUS at 100°F. There is a low risk of aspiration upon ingestion Careful gastric lavage or emesis may be considered to evacuate large quantities of material.	**Engineering Controls:** Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mists and/or vapors below the recommended exposure limits (see below). An eye wash station and safety shower should be located near the work-station. **Personal Protective Equipment:** Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to OSHA regulations. **Eye Protection:** Safety glasses equipped with side shields are recommended as minimum protection in industrial settings. Wear goggles if splashing or spraying is anticipated. Wear goggles and face shield if material is heated above 125°F (51°C). Have suitable eye wash water available. **Hand Protection:** Use gloves constructed of chemical resistant materials such as heavy nitrile rubber if frequent or prolonged contact is expected. Use heat-protective gloves when handling product at elevated temperatures. **Body Protection:** Avoid prolonged and/or repeated skin contact. Use clean protective clothing if splashing or spraying conditions are present. Protective clothing should include long-sleeves, apron, boots and additional facial protection. Remove oil contaminated clothing. Launder oil contaminated clothing before reusing. Contaminated leather goods should be removed promptly and discarded. **Respiratory Protection:** The need for respiratory protection is not anticipated under normal use conditions and with adequate ventilation. If elevated airborne concentrations above applicable workplace exposure levels are anticipated, a NIOSH-approved organic vapor respirator equipped with a dust/mist prefilter should be used. Protection factors vary depending upon the type of respirator used. Respirators should be used in accordance with OSHA requirements (29 CFR 1910.134). **General Comments:** Use good personal hygiene practices. Wash hands and other exposed skin areas with plenty of mild soap and water before eating, drinking, smoking, use of toilet facilities, or leaving work. DO NOT use gasoline, kerosene, solvents or harsh abrasives as skin cleaners. Since specific exposure standards/control limits have not been established for this product, the "Oil Mist, Mineral" exposure limits shown below are suggested as minimum control guidelines.

Fire and Explosion Hazards

Extinguishing Media	Special Fire Fighting Procedures	Unusual Fire and Explosion Hazards
Use dry chemical, foam, Carbon Dioxide or water fog. Water or foam may cause frothing. Carbon dioxide and inert gas can displace oxygen. Use caution when applying carbon dioxide or inert gas in confined spaces.	**NFPA Flammability Classification:** NFPA Class-IIIB combustible material. **Flash Point:** Open cup: 248°C (478°F) (Cleveland.). **Lower Flammable Limit:** No data. **Upper Flammable Limit:** No data. **Autoignition Temperature:** Not available. **Protection of Fire Fighters** Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies	**Hazardous Combustion Products:** Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and oxides of sulfur, phosphorus, zinc and/or nitrogen. This material can burn but will not readily ignite. This material will release vapors when heated above the flash point temperature that can ignite when exposed to a source of ignition. In enclosed spaces, heated vapor can ignite with explosive force. Mists or sprays may burn at temperatures below the flash point.

Handling and Storage

Accidental Release /Spill Measures to Take	Precautions for Storage	Handling
Take proper precautions to ensure your own health and safety before attempting spill control or clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective equipment. Slipping hazard; do not walk through spilled material. Stop leak if you can do so without risk. For small spills, absorb or cover with dry earth, sand, or other inert non-combustible absorbent material and place into waste containers for later disposal. Contain large spills to maximize product recovery or disposal. Prevent entry into waterways or sewers. In urban area, cleanup spill as soon as possible. In natural environments, seek cleanup advice from specialists to minimize physical habitat damage. This material will float on water. Absorbent pads and similar materials can be used. Comply with all laws and regulations.	Keep container closed. Do not store with strong oxidizing agents. Do not store at elevated temperatures. Avoid storing product in direct sunlight for extended periods of time. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers or waste residues of this product.	Avoid contamination and extreme temperatures to minimize product degradation. Empty containers may contain product residues that can ignite with explosive force. Do not pressurize, cut, weld, braze solder, drill, grind or expose containers to flames, sparks, heat or other potential ignition sources. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers and/or waste residues of this product.

Disposal/Transportation

Disposal Method	Transportation
Hazard characteristic and regulatory waste stream classification can change with product use. Accordingly, it is the responsibility of the user to determine the proper storage, transportation, treatment and/or disposal methodologies for spent materials and residues at the time of disposition. Conditions of use may cause this material to become a "hazardous waste", as defined by federal or state regulations. It is the responsibility of the user to determine if the material is a "hazardous waste" at the time of disposal. Transportation, treatment, storage, and disposal of waste material must be conducted in accordance with RCRA regulations (see 40 CFR 260 through 40 CFR 271). State and/or local regulations may be more restrictive. Contact your regional US EPA office for guidance concerning case specific disposal issues. Empty drums and pails retain residue. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose this product's empty container to heat, flame, or other ignition sources. DO NOT attempt to clean it. Empty drums and pails should be drained completely, properly bunged or sealed, and promptly sent to a reconditioner.	The shipping description below may not represent requirements for all modes of transportation, shipping methods or locations outside of the United States. **US DOT Status** Not regulated by the U.S. Department of Transportation as a hazardous material. **Proper Shipping Name** Not regulated. **Hazard Class** Not regulated. **UN/NA Number** Not regulated. **Packing Group(s)** Not applicable. **Reportable Quantity** A Reportable Quantity (RQ) has not been established for this material. **Emergency Response Guide No.** Not applicable. **MARPOL III Status** Not a DOT "Marine Pollutant" per 49 CFR 171.8.

Regulations

TSCA Inventory This product and/or its components are listed on the Toxic Substances Control Act (TSCA) inventory.
SARA 302/304 Emergency Planning and Notification The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to Subparts 302 and 304 to submit emergency planning and notification information based on Threshold Planning Quantities (TPQs) and Reportable Quantities (RQs) for "Extremely Hazardous Substances" listed in 40 CFR 302.4 and 40 CFR 355. No components were identified.
SARA 311/312 Hazard Identification The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to this subpart to submit aggregate information on chemicals by "Hazard Category" as defined in 40 CFR 370.2. This material would be classified under the following hazard categories: No SARA 311/312 hazard categories identified.
SARA 313 Toxic Chemical Notification and Release Reporting This product contains the following components in concentrations above de minimis levels that are listed as toxic chemicals in 40 CFR Part 372 pursuant to the requirements of Section 313 of SARA: No components were identified.

CERCLA The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center concerning release of quantities of "hazardous substances" equal to or greater than the reportable quantities (RQ's) listed in 40 CFR 302.4. As defined by CERCLA, the term "hazardous substance" does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically designated in 40 CFR 302.4. Chemical substances present in this product or refinery stream that may be subject to this statute are: Zinc and Zinc Compounds, Concentration: <1%
Clean Water Act (CWA) This material is classified as an oil under Section 311 of the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA). Discharges or spills which produce a visible sheen on waters of the United States, their adjoining shorelines, or into conduits leading to surface waters must be reported to the EPA's National Response Center at (800) 424-8802.
California Proposition 65 This material may contain the following components which are known to the State of California to cause cancer, birth defects or other reproductive harm, and may be subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5): Toluene: <0.001%
New Jersey Right-to-Know Label Motor oil
Additional Regulatory Remarks No additional regulatory remarks.

Toxicology Information

Toxicity Data: Distillates, petroleum, hydrotreated heavy paraffinic:
ORAL (LD50): Acute: >5000 mg/kg [Rat].
DERMAL (LD50): Acute: >2000 mg/kg [Rabbit].
Mineral oil mists derived from highly refined oils are reported to have low acute and sub-acute toxicities in animals. Effects from single and short-term repeated exposures to high concentrations of mineral oil mists well above applicable workplace exposure levels include lung inflammatory reaction, lipoid granuloma formation and lipoid pneumonia. In acute and sub-acute studies involving exposures to lower concentrations of mineral oil mists at or near current work place exposure levels produced no significant toxicological effects. In long term studies (up to two years) no carcinogenic effects have been reported in any animal species tested.
Distillates, petroleum, solvent-refined heavy paraffinic :
ORAL (LD50): Acute: >5000 mg/kg [Rat].
DERMAL (LD50): Acute: >2000 mg/kg [Rabbit].
Mineral oil mists derived from highly refined oils are reported to have low acute and sub-acute toxicities in animals. Effects from single and short-term repeated exposures to high concentrations of mineral oil mists well above applicable workplace exposure levels include lung inflammatory reaction, lipoid granuloma formation and lipoid pneumonia. In acute and sub-acute studies involving exposures to lower concentrations of mineral oil mists at or near current work place exposure levels produced no significant toxicological effects. In long term studies (up to two years) no carcinogenic effects have been reported in any animal species tested. Analyses conducted by method IP 346 indicate that the concentration of DMSO extractables in this mineral oil is below 3.0 weight percent.
Residual oils, petroleum, solvent-refined:
ORAL (LD50): Acute: >5000 mg/kg [Rat].
DERMAL (LD50): Acute: >2000 mg/kg [Rabbit].
Mineral oil mists derived from highly refined oils are reported to have low acute and sub-acute toxicities in animals. Effects from single and short-term repeated exposures to high concentrations of mineral oil mists well above applicable workplace exposure levels include lung inflammatory reaction, lipoid granuloma formation and lipoid pneumonia. In acute and sub-acute studies involving exposures to lower concentrations of mineral oil mists at or near current work place exposure levels produced no significant toxicological effects. In long term studies (up to two years) no carcinogenic effects have been reported in any animal species tested.
Engine oil:
Used motor oil was associated with cancer in lifetime skin painting studies with laboratory animals. Avoid prolonged or repeated contact with used motor oil. Use of good hygiene practices will reduce the liklihood of potential health effects.

Ecological Information

Ecotoxicity: Analysis for ecological effects has not been conducted on this product. However, if spilled, this product and any contaminated soil or water may be harmful to human, animal, and aquatic life. Also, the coating action associated with petroleum and petroleum products can be harmful or fatal to aquatic life and waterfowl.
Environmental Fate: An environmental fate analysis is not available for this specific product. Plants and animals may experience harmful or fatal effects when coated with petroleum-based products. Petroleum-based (mineral) lube oils will normally float on water. In stagnant or slow-flowing waterways, an oil layer can cover a large surface area. As a result, this oil layer might limit or eliminate natural atmospheric oxygen transport into the water. With time, if not removed, oxygen depletion in the waterway can result in a loss of marine life or create an anaerobic environment. This material

contains phosphorus which is a controlled element for disposal in effluent waters in most sections of North America. Phosphorus is known to enhance the formation of algae. Severe algae growth can reduce oxygen content in the water possibly below levels necessary to support marine life.

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