



Material Safety Data Sheet

Section 1: Chemical Product and Company Identification

Material Name: BOSS VNGEO 10W30

Product Use: Natural gas engine oil

If this product is used in combination with other products, refer to the Material Safety Data Sheet for those products.

Synonyms: Petroleum oil; Lube oil; Petroleum hydrocarbon; Lubricant.

Boss Lubricants

112, 6303 30 St. SE

Calgary, AB

T2C 1R4

Issue Date: April 8, 2015

Supersedes Issue Date: January 1, 2012

Emergency Phone Number(s)

Business: (800) 844-9457

Fax #: (403) 279-2272

Section 2: Hazardous Identification

EMERGENCY OVERVIEW Appearance: Amber liquid, petroleum odor.

Signal Word CAUTION!

Physical Hazards: Will burn at high temperatures.

Health Hazards

May be harmful if swallowed

May cause irritation to skin and eyes.

POTENTIAL HEALTH EFFECTS

Inhalation: This product is not likely to present an inhalation hazard at normal temperatures and pressures. However, when aerosolizing, misting, or heating this product, high concentrations of generated vapor or mist may irritate the respiratory tract (nose, throat, and lungs).

Eyes: May cause irritation.

Skin: May cause irritation. Not likely to be absorbed through the skin in harmful amounts.

Ingestion: May be harmful if swallowed. May cause throat irritation, nausea, vomiting, and diarrhea. Breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

Medical Conditions Aggravated by Exposure: Individuals with pre-existing respiratory tract (nose, throat, and lungs), eye, and/or skin disorders may have increased susceptibility to the effects of exposure.

Chronic: Prolonged or repeated inhalation of oil mist may cause oil pneumonia, lung tissue inflammation, and/or fibrous tissue formation. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis). Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis).

Cancer Information: No known carcinogenicity. For more information, see **SECTION 11: MUTAGENICITY** and **CARCINOGENICITY**. Also see **SECTION 15: CALIFORNIA**.

Environmental Hazards: Not available. Also see **SECTION 12: ECOLOGICAL INFORMATION**.

Section 3: Composition / Information on Ingredients

| CAS # | Component | Percent |
|-------------|--|---------|
| 64742-58-1 | Lubricating oils, petroleum, hydrotreated spent | 60-100 |
| 113706-15-3 | Phosphorodithioic acid, mixed O,O-bis(sec-butyl and isooctyl) esters, zinc salts | 0.1-1 |
| 68457-79-4 | Phosphorodithioic acid, mixed O,O-bis(isobutyl and pentyl) esters, zinc salts | 0.1-1 |

Section 4: First Aid Measures

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Oxygen should only be administered by qualified personnel. Someone should stay with victim. Get medical attention if breathing difficulty persists.

Eyes: If irritation or redness from exposure to vapor develops, move away from exposure into fresh air. Upon contact, immediately flush eyes with plenty of lukewarm water, holding eyelids apart, for 15 minutes. Get medical attention. **Skin** Remove affected clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if irritation or pain develops or persists. If product is injected under pressure into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, a physician should immediately evaluate the individual as a medical emergency. Wash contaminated clothing before reuse.

Ingestion: Do NOT induce vomiting. Immediately get medical attention. Call 1-800-468-1760 for additional information. If spontaneous vomiting occurs, keep head below hips to avoid breathing the product into the lungs. Never give anything by mouth to an unconscious person.

Notes to Physicians: Treat symptomatically and supportively. Treatment may vary with condition of victim and specifics of incident.
Call 1-800-468-1760 for additional information.

Section 5: Fire Fighting Measures

Hazardous Combustion Products: Decomposition and combustion materials may be toxic. Decomposition products include sulfur oxides, aldehydes, ketones, oxides of carbon, metal oxides, nitrogen oxides, hydrogen sulfide, oxides of phosphorus, oxides of zinc, smoke, and/or unidentified organic compounds.

Conditions of Flammability: Sparks or flame. Product may burn, but does not ignite readily.

Extinguishing Media: Carbon dioxide, regular foam, dry chemical, water spray, or water fog. Water or foam may cause frothing.

Fire Fighting Equipment/Instructions: A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

NFPA Ratings: Health: 1 Fire: 1 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Fire and Explosion Hazards: Heated containers may rupture. "Empty" containers may retain residue and can be dangerous. Product is not sensitive to mechanical impact or static discharge.



Section 6: Accidental Release Measures

Remove all ignition sources. Do not touch or walk through spilled product. Stop leak if you can do it without risk. Wear protective equipment and provide engineering controls as specified in **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or sorb with compatible sorbent material and shovel with a clean, spark proof tool into a sealable container for disposal.

Additionally, for large spills: Dike far ahead of liquid spill for collection and later disposal.

Section 7: Handling and Storage

Handling Procedures: Keep away from sparks, or flame. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean tools and explosion-proof equipment. When transferring large volumes of product, metal containers, including trucks and tank cars, should be grounded and bonded. This product has a low vapor pressure and is not expected to present an inhalation hazard under normal temperatures and pressures. However, when aerosolizing, misting, or heating this product, do not breathe vapor or mist. Use in a well ventilated area. Avoid contact with eyes, skin, clothing, and shoes.

Shipping and Storing: Keep container tightly closed when not in use and during transport. Store containers in a cool, dry place. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Keep containers away from flame, sparks, static electricity, or other sources of ignition. Empty product containers may retain product residue and can be dangerous.

Section 8: Exposure Controls / Personal Protection

Exposure Guidelines

Component Exposure Limits: ACGIH, OSHA, and NIOSH have not developed exposure limits for any of this product's components.

Engineering Controls: Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits.

Personal Protective Equipment

Respiratory: No respiratory protection is normally required. Use NIOSH-certified P- or R- series particulate filter and organic vapor cartridges when concentration of vapor or mist exceeds applicable exposure limits. Protection provided by air purifying respirators is limited. Do not use N-rated respirators. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4. Consult a qualified Industrial Hygienist or Safety Professional for respirator selection guidance.

Eyes/Face: Where eye contact is likely, wear safety glasses; contact lens use is not recommended.

Skin: Where skin contact is likely, wear chemical impervious gloves; use of natural rubber or equivalent gloves is not recommended. When product is heated and skin contact is likely, wear heat-resistant gloves, boots, and other protective clothing. To avoid prolonged or repeated contact where spills and splashes are likely, wear appropriate chemical-resistant face shield, boots, apron, coveralls, long sleeve shirts, or other protective clothing.

Personal Hygiene: Use good personal hygiene. Wash thoroughly with soap and water after handling product and before eating, drinking, or using tobacco products. Clean affected clothing, shoes, and protective equipment before reuse. Discard leather articles, such as shoes, saturated with this product.

Other Personal Protective Equipment: Where spills and splashes are likely, facilities storing or using this product should be equipped with an emergency eyewash and shower, both equipped with clean water, in the immediate work area.

Section 9: Physical & Chemical Properties

| | | | |
|-----------------------------------|-------------------------------|----------------------------|--------------------------------|
| Appearance/Odor: | Amber liquid, petroleum odor. | pH: | Not applicable |
| Odor Threshold: | Not available | Freezing Point: | Not available |
| Boiling Point: | 475°F (246°C)(approx.) | Melting Point: | Not available |
| Solubility (H2O): | Insoluble | Specific Gravity: | 0.87 (water =1)(approximately) |
| Density: | Not available | Octanol/H2O Coeff.: | Not available |
| Evaporation Rate: | Not available | Molecular Weight: | Not applicable |
| Auto Ignition Temperature: | Not available | LFL: | Not available |
| Flash Point: | Not available | UFL: | Not available |
| Viscosity: | Not available | Vapor Pressure: | Not available |
| Flammability Class: | Not available | Vapor Density: | Not available |

Section 10: Chemical Stability & Reactivity Information

| | |
|--|---|
| Stability: | Stable under normal temperatures and pressures. |
| Incompatibility: | Avoid oxidizing agents. |
| Reactivity: | Polymerization is not known to occur under normal temperature and pressures. Not reactive with water. |
| Hazardous Decomposition Products: | None under normal temperatures and pressures. See also SECTION 5: HAZARDOUS COMBUSTION PRODUCTS. |
| Conditions to Avoid: | Avoid sparks or flame. |

Section 11: Toxicological Information

Toxicity Data

Component Analysis - LD50/LC50

Lubricating oils, petroleum, hydrotreated spent (64742-58-1)

Oral LD50 Rat >2000 mg/kg; Dermal LD50 Rat >2000 mg/kg; Dermal LD50 Rabbit >4480 mg/kg

Phosphorodithioic acid, mixed O,O-bis(isobutyl and pentyl) esters, zinc salts (68457-79-4) Oral LD50 Rat 1830 mg/kg; Dermal LD50 Rabbit >3160 mg/kg

Acute Effects: May be harmful if swallowed. May irritate eyes and skin. May cause throat irritation, nausea, vomiting, and diarrhea. Aspiration hazard: breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

Repeated Dose Effects: No information is available.

Component Carcinogenicity: None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

Target Organ Effects: No information available.

Sensitization: Based on best current information, there is no known human sensitization associated with this product.

Mutagenicity: Experimental evidence suggests that this product does not cause mutagenesis.

Reproductive Toxicity: Based on best current information, there is no known reproductive toxicity associated with this product. Also see **SECTION 15: CALIFORNIA. Teratogenicity**
Based on best current information, there is no known teratogenicity associated with this product.

Toxicologically Synergistic Products: Based on best current information, there are no known toxicologically synergistic products associated with this product.

Section 12: Ecological Information

Component Analysis - Ecotoxicity - Aquatic Toxicity

Lubricating oils, petroleum, hydrotreated spent (64742-58-1)

| Duration/Test/Species | Concentration/Conditions | Notes |
|--------------------------------|--------------------------|-------|
| 96 Hr LC50 Brachydanio rerio | 79.6 mg/L [semi-static] | |
| 96 Hr LC50 Pimephales promelas | 3.2 mg/L [semi-static] | |

Phosphorodithioic acid, mixed O, O-bis(isobutyl and pentyl) esters, zinc salts (6 8457-79-4)

| Duration/Test/Species | Concentration/Conditions | Notes |
|--|--------------------------|-------|
| 96 Hr LC50 Pimephales promelas | >100 mg/L [semi-static] | |
| 96 Hr LC50 Pimephales promelas | 25 - 50 mg/L [static] | |
| 96 Hr EC50 Pseudokirchneriella subcapitata | 1.0 - 5.0 mg/L | |

Persistence/Degradability: No information available for this product.

Mobility in Environmental Media: No data available for this product.

Other Adverse Effects: No additional information available.

Section 13: Disposal Considerations

Disposal Instructions: Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact BOSS Lubricants regarding proper recycling or disposal.

US EPA Waste Number & Descriptions: This product, if discarded, is not expected to be a characteristic or listed hazardous waste. If recycled in the USA, this product can be managed in accordance with the used oil exemption under 40 CFR Part 279. Processing, use, or contamination by the user may change the waste code(s) applicable to the disposal of this product.

Section 14: Transportation Information

Emergency Response Guide Number

Not applicable. Reference *North American Emergency Response Guidebook*.

DOT: Not regulated as a hazardous material.

TDG: Not regulated as dangerous goods.

IATA Information: Not regulated as a hazardous material.

IMDG Information: Not regulated as a hazardous material.

Section 15: Regulatory Information

Volatile Organic Compounds (As regulated)

Negligible, As per 40 CFR Part 51.100(s)

SARA Sections 311/312

This product poses the following health hazard(s) as defined in 40 CFR Part 370 and is subject to the requirements of sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA):

Immediate (Acute) Health Hazard

SARA 302/304

Component Analysis: Based on the ingredient(s) listed in SECTION 3, this product does not contain any "extremely hazardous substances" listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B.



SARA Section 313

Component Analysis: This product does not contain any "toxic" chemical subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.

CERCLA

Component Analysis: Based on the ingredient(s) listed in SECTION 3, this product does not contain any "hazardous substance" listed under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4.

TSCA: All the components of this product are listed on, or are exempted from the requirement to be listed on, the TSCA Inventory.

Component Analysis

| Component | CAS # | TSCA |
|---|-------------|------|
| Lubricating oils, petroleum, hydrotreated spent | 64742-58-1 | Yes |
| Phosphorodithioic acid, mixed O,O-bis(sec-butyl and isoctyl) esters, zinc salts | 113706-15-3 | Yes |
| Phosphorodithioic acid, mixed O,O-bis(isobutyl and pentyl) esters, zinc salts | 68457-79-4 | Yes |

U.S. State Regulations: None of this product's components are listed on the state lists from CA, MA, MN, NJ or PA. No components are listed under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65).

California: This product does not contain any chemical known to the State of California to cause cancer. This product does not contain any chemical known to the State of California to cause cancer or other reproductive harm.

Canadian Regulations: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations.

Component Analysis

| Component | CAS # | CAN |
|---|-------------|-----|
| Lubricating oils, petroleum, hydrotreated spent | 64742-58-1 | DSL |
| Phosphorodithioic acid, mixed O,O-bis(sec-butyl and isoctyl) esters, zinc salts | 113706-15-3 | DSL |
| Phosphorodithioic acid, mixed O,O-bis(isobutyl and pentyl) esters, zinc salts | 68457-79-4 | DSL |

Canadian WHMIS Information: D2B

Canadian Environmental Protection Act (CEPA): All the components of these products are listed on, or are automatically included as "substance occurring in nature" on, or are exempted from the requirements to be listed on, the Canadian Domestic Substances List (DSL).

Section 16: Other Information

Label/Other Information: Not available.

Revision Information: New MSDS

Disclaimer

User assumes all risks incident to the use of this (these) product(s). To the best of our knowledge, the information contained herein is accurate. However, BOSS Lubricants assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either express or implied, or merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to information or the product to which information refers. The data contained on this sheet apply to the product(s) as supplied to the user.





Material Safety Data Sheet

Section 1: Chemical Product and Company Identification

Material Name: BOSS VNGEO 15W40

Product Use: Natural gas engine oil

If this product is used in combination with other products, refer to the Material Safety Data Sheet for those products.

Synonyms: Petroleum oil; Lube oil; Petroleum hydrocarbon; Lubricant.

Boss Lubricants

112, 6303 30 St. SE

Calgary, AB

T2C 1R4

Issue Date: April 8, 2015

Supersedes Issue Date: January 1, 2012

Emergency Phone Number(s)

Business: (800) 844-9457

Fax #: (403) 279-2272

Section 2: Hazardous Identification

EMERGENCY OVERVIEW Appearance: Amber liquid, petroleum odor.

Signal Word CAUTION!

Physical Hazards: Will burn at high temperatures.

Health Hazards

May be harmful if swallowed

May cause irritation to skin and eyes.

POTENTIAL HEALTH EFFECTS

Inhalation: This product is not likely to present an inhalation hazard at normal temperatures and pressures. However, when aerosolizing, misting, or heating this product, high concentrations of generated vapor or mist may irritate the respiratory tract (nose, throat, and lungs).

Eyes: May cause irritation.

Skin: May cause irritation. Not likely to be absorbed through the skin in harmful amounts.

Ingestion: May be harmful if swallowed. May cause throat irritation, nausea, vomiting, and diarrhea. Breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

Medical Conditions Aggravated by Exposure: Individuals with pre-existing respiratory tract (nose, throat, and lungs), eye, and/or skin disorders may have increased susceptibility to the effects of exposure.

Chronic: Prolonged or repeated inhalation of oil mist may cause oil pneumonia, lung tissue inflammation, and/or fibrous tissue formation. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis). Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis).

Cancer Information: No known carcinogenicity. For more information, see **SECTION 11: MUTAGENICITY** and **CARCINOGENICITY**. Also see **SECTION 15: CALIFORNIA**.

Environmental Hazards: Not available. Also see **SECTION 12: ECOLOGICAL INFORMATION**.

Section 3: Composition / Information on Ingredients

| CAS # | Component | Percent |
|-------------|--|---------|
| 64742-58-1 | Lubricating oils, petroleum, hydrotreated spent | 60-100 |
| 113706-15-3 | Phosphorodithioic acid, mixed O,O-bis(sec-butyl and isooctyl) esters, zinc salts | 0.1-1 |
| 68457-79-4 | Phosphorodithioic acid, mixed O,O-bis(isobutyl and pentyl) esters, zinc salts | 0.1-1 |

Section 4: First Aid Measures

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Oxygen should only be administered by qualified personnel. Someone should stay with victim. Get medical attention if breathing difficulty persists.

Eyes: If irritation or redness from exposure to vapor develops, move away from exposure into fresh air. Upon contact, immediately flush eyes with plenty of lukewarm water, holding eyelids apart, for 15 minutes. Get medical attention. **Skin** Remove affected clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if irritation or pain develops or persists. If product is injected under pressure into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, a physician should immediately evaluate the individual as a medical emergency. Wash contaminated clothing before reuse.

Ingestion: Do NOT induce vomiting. Immediately get medical attention. Call 1-800-468-1760 for additional information. If spontaneous vomiting occurs, keep head below hips to avoid breathing the product into the lungs. Never give anything by mouth to an unconscious person.

Notes to Physicians: Treat symptomatically and supportively. Treatment may vary with condition of victim and specifics of incident.
Call 1-800-468-1760 for additional information.

Section 5: Fire Fighting Measures

Hazardous Combustion Products: Decomposition and combustion materials may be toxic. Decomposition products include sulfur oxides, aldehydes, ketones, oxides of carbon, metal oxides, nitrogen oxides, hydrogen sulfide, oxides of phosphorus, oxides of zinc, smoke, and/or unidentified organic compounds.

Conditions of Flammability: Sparks or flame. Product may burn, but does not ignite readily.

Extinguishing Media: Carbon dioxide, regular foam, dry chemical, water spray, or water fog. Water or foam may cause frothing.

Fire Fighting Equipment/Instructions: A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

NFPA Ratings: Health: 1 Fire: 1 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Fire and Explosion Hazards: Heated containers may rupture. "Empty" containers may retain residue and can be dangerous. Product is not sensitive to mechanical impact or static discharge.



Section 6: Accidental Release Measures

Remove all ignition sources. Do not touch or walk through spilled product. Stop leak if you can do it without risk. Wear protective equipment and provide engineering controls as specified in **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or sorb with compatible sorbent material and shovel with a clean, spark proof tool into a sealable container for disposal.

Additionally, for large spills: Dike far ahead of liquid spill for collection and later disposal.

Section 7: Handling and Storage

Handling Procedures: Keep away from sparks, or flame. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean tools and explosion-proof equipment. When transferring large volumes of product, metal containers, including trucks and tank cars, should be grounded and bonded. This product has a low vapor pressure and is not expected to present an inhalation hazard under normal temperatures and pressures. However, when aerosolizing, misting, or heating this product, do not breathe vapor or mist. Use in a well ventilated area. Avoid contact with eyes, skin, clothing, and shoes.

Shipping and Storing: Keep container tightly closed when not in use and during transport. Store containers in a cool, dry place. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Keep containers away from flame, sparks, static electricity, or other sources of ignition. Empty product containers may retain product residue and can be dangerous.

Section 8: Exposure Controls / Personal Protection

Exposure Guidelines

Component Exposure Limits: ACGIH, OSHA, and NIOSH have not developed exposure limits for any of this product's components.

Engineering Controls: Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits.

Personal Protective Equipment

Respiratory: No respiratory protection is normally required. Use NIOSH-certified P- or R- series particulate filter and organic vapor cartridges when concentration of vapor or mist exceeds applicable exposure limits. Protection provided by air purifying respirators is limited. Do not use N-rated respirators. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4. Consult a qualified Industrial Hygienist or Safety Professional for respirator selection guidance.

Eyes/Face: Where eye contact is likely, wear safety glasses; contact lens use is not recommended.

Skin: Where skin contact is likely, wear chemical impervious gloves; use of natural rubber or equivalent gloves is not recommended. When product is heated and skin contact is likely, wear heat-resistant gloves, boots, and other protective clothing. To avoid prolonged or repeated contact where spills and splashes are likely, wear appropriate chemical-resistant face shield, boots, apron, coveralls, long sleeve shirts, or other protective clothing.

Personal Hygiene: Use good personal hygiene. Wash thoroughly with soap and water after handling product and before eating, drinking, or using tobacco products. Clean affected clothing, shoes, and protective equipment before reuse. Discard leather articles, such as shoes, saturated with this product.

Other Personal Protective Equipment: Where spills and splashes are likely, facilities storing or using this product should be equipped with an emergency eyewash and shower, both equipped with clean water, in the immediate work area.

Section 9: Physical & Chemical Properties

| | | | |
|-----------------------------------|-------------------------------|----------------------------|--------------------------------|
| Appearance/Odor: | Amber liquid, petroleum odor. | pH: | Not applicable |
| Odor Threshold: | Not available | Freezing Point: | Not available |
| Boiling Point: | 475°F (246°C)(approx.) | Melting Point: | Not available |
| Solubility (H2O): | Insoluble | Specific Gravity: | 0.87 (water =1)(approximately) |
| Density: | Not available | Octanol/H2O Coeff.: | Not available |
| Evaporation Rate: | Not available | Molecular Weight: | Not applicable |
| Auto Ignition Temperature: | Not available | LFL: | Not available |
| Flash Point: | Not available | UFL: | Not available |
| Viscosity: | Not available | Vapor Pressure: | Not available |
| Flammability Class: | Not available | Vapor Density: | Not available |

Section 10: Chemical Stability & Reactivity Information

| | |
|--|---|
| Stability: | Stable under normal temperatures and pressures. |
| Incompatibility: | Avoid oxidizing agents. |
| Reactivity: | Polymerization is not known to occur under normal temperature and pressures. Not reactive with water. |
| Hazardous Decomposition Products: | None under normal temperatures and pressures. See also SECTION 5: HAZARDOUS COMBUSTION PRODUCTS. |
| Conditions to Avoid: | Avoid sparks or flame. |

Section 11: Toxicological Information

Toxicity Data

Component Analysis - LD50/LC50

Lubricating oils, petroleum, hydrotreated spent (64742-58-1)

Oral LD50 Rat >2000 mg/kg; Dermal LD50 Rat >2000 mg/kg; Dermal LD50 Rabbit >4480 mg/kg

Phosphorodithioic acid, mixed O,O-bis(isobutyl and pentyl) esters, zinc salts (68457-79-4) Oral LD50 Rat 1830 mg/kg; Dermal LD50 Rabbit >3160 mg/kg

Acute Effects: May be harmful if swallowed. May irritate eyes and skin. May cause throat irritation, nausea, vomiting, and diarrhea. Aspiration hazard: breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

Repeated Dose Effects: No information is available.

Component Carcinogenicity: None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

Target Organ Effects: No information available.

Sensitization: Based on best current information, there is no known human sensitization associated with this product.

Mutagenicity: Experimental evidence suggests that this product does not cause mutagenesis.

Reproductive Toxicity: Based on best current information, there is no known reproductive toxicity associated with this product. Also see **SECTION 15: CALIFORNIA. Teratogenicity**
Based on best current information, there is no known teratogenicity associated with this product.

Toxicologically Synergistic Products: Based on best current information, there are no known toxicologically synergistic products associated with this product.

Section 12: Ecological Information

Component Analysis - Ecotoxicity - Aquatic Toxicity

Lubricating oils, petroleum, hydrotreated spent (64742-58-1)

| Duration/Test/Species | Concentration/Conditions | Notes |
|--------------------------------|--------------------------|-------|
| 96 Hr LC50 Brachydanio rerio | 79.6 mg/L [semi-static] | |
| 96 Hr LC50 Pimephales promelas | 3.2 mg/L [semi-static] | |

Phosphorodithioic acid, mixed O, O-bis(isobutyl and pentyl) esters, zinc salts (6 8457-79-4)

| Duration/Test/Species | Concentration/Conditions | Notes |
|--|--------------------------|-------|
| 96 Hr LC50 Pimephales promelas | >100 mg/L [semi-static] | |
| 96 Hr LC50 Pimephales promelas | 25 - 50 mg/L [static] | |
| 96 Hr EC50 Pseudokirchneriella subcapitata | 1.0 - 5.0 mg/L | |

Persistence/Degradability: No information available for this product.

Mobility in Environmental Media: No data available for this product.

Other Adverse Effects: No additional information available.

Section 13: Disposal Considerations

Disposal Instructions: Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact BOSS Lubricants regarding proper recycling or disposal.

US EPA Waste Number & Descriptions: This product, if discarded, is not expected to be a characteristic or listed hazardous waste. If recycled in the USA, this product can be managed in accordance with the used oil exemption under 40 CFR Part 279. Processing, use, or contamination by the user may change the waste code(s) applicable to the disposal of this product.

Section 14: Transportation Information

Emergency Response Guide Number

Not applicable. Reference *North American Emergency Response Guidebook*.

DOT: Not regulated as a hazardous material.

TDG: Not regulated as dangerous goods.

IATA Information: Not regulated as a hazardous material.

IMDG Information: Not regulated as a hazardous material.

Section 15: Regulatory Information

Volatile Organic Compounds (As regulated)

Negligible, As per 40 CFR Part 51.100(s)

SARA Sections 311/312

This product poses the following health hazard(s) as defined in 40 CFR Part 370 and is subject to the requirements of sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA):

Immediate (Acute) Health Hazard

SARA 302/304

Component Analysis: Based on the ingredient(s) listed in SECTION 3, this product does not contain any "extremely hazardous substances" listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B.



SARA Section 313

Component Analysis: This product does not contain any "toxic" chemical subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.

CERCLA

Component Analysis: Based on the ingredient(s) listed in SECTION 3, this product does not contain any "hazardous substance" listed under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4.

TSCA: All the components of this product are listed on, or are exempted from the requirement to be listed on, the TSCA Inventory.

Component Analysis

| Component | CAS # | TSCA |
|---|-------------|------|
| Lubricating oils, petroleum, hydrotreated spent | 64742-58-1 | Yes |
| Phosphorodithioic acid, mixed O,O-bis(sec-butyl and isoctyl) esters, zinc salts | 113706-15-3 | Yes |
| Phosphorodithioic acid, mixed O,O-bis(isobutyl and pentyl) esters, zinc salts | 68457-79-4 | Yes |

U.S. State Regulations: None of this product's components are listed on the state lists from CA, MA, MN, NJ or PA. No components are listed under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65).

California: This product does not contain any chemical known to the State of California to cause cancer. This product does not contain any chemical known to the State of California to cause cancer or other reproductive harm.

Canadian Regulations: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations.

Component Analysis

| Component | CAS # | CAN |
|---|-------------|-----|
| Lubricating oils, petroleum, hydrotreated spent | 64742-58-1 | DSL |
| Phosphorodithioic acid, mixed O,O-bis(sec-butyl and isoctyl) esters, zinc salts | 113706-15-3 | DSL |
| Phosphorodithioic acid, mixed O,O-bis(isobutyl and pentyl) esters, zinc salts | 68457-79-4 | DSL |

Canadian WHMIS Information: D2B

Canadian Environmental Protection Act (CEPA): All the components of these products are listed on, or are automatically included as "substance occurring in nature" on, or are exempted from the requirements to be listed on, the Canadian Domestic Substances List (DSL).

Section 16: Other Information

Label/Other Information: Not available.

Revision Information: New MSDS

Disclaimer

User assumes all risks incident to the use of this (these) product(s). To the best of our knowledge, the information contained herein is accurate. However, BOSS Lubricants assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either express or implied, or merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to information or the product to which information refers. The data contained on this sheet apply to the product(s) as supplied to the user.

