



VERSION
PCMOS.001

Liquid Guardian Synthetic Blend CK-4

SAFETY DATA SHEET

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

SECTION 1: IDENTIFICATION

1.1 PRODUCT IDENTIFIER

Product Form: Mixture

Product Name: Liquid Guardian Syn-Blend HD CK-4, Synthetic HD CK-4

Product Grades: 5W-40, 10W-30, 10W-40, 15W-40

Synonyms: Engine Oil

1.2 INTENDED USE OF THE PRODUCT

Engine Oil

1.3 NAME, ADDRESS, AND TELEPHONE OF THE RESPONSIBLE PARTY

Christensen Inc.

1060 Jadwin Ave. Richland, WA 99352

(509) 882-2115

www.ChristensenUSA.com

1.4 EMERGENCY TELEPHONE NUMBER

Emergency Number: 1-800-424-9300, CHEMTREC

SECTION 2: HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Classification (GHS-US)

Aquatic Acute 2 - H411

Full text of H-phrases: (see section 16).

2.2 LABEL ELEMENTS

GHS-US Labeling

Hazard Pictograms (GHS-US): None

Signal Word (GHS-US): None

Hazard Statements (GHS-US): H411 - Toxic to aquatic life with long lasting effects.

Precautionary Statements (GHS-US):

Prevention

P273: Avoid release into the environment.

P391: Collect Spillage.

Storage: None

P501: Dispose of contents/container in accordance with local, regional, national, and international regulations.



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2.3 OTHER HAZARDS

No other hazards noted.

2.4 UNKNOWN ACUTE TOXICITY (GHS-US)

20.73% of the mixture consists of ingredient(s) of unknown acute toxicity.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 SUBSTANCES

Not applicable

3.2 MIXTURE

Name	Product Identifier	% (w/w)	Classification (GHS-US)
heavy paraffinic, Distillates, petroleum, hydrotreated heavy paraffinic	(CAS No) 64742-54-7	45 – 51, 55 - 67	Asp. Tox. 1, H304
Paraffin oils*	(CAS No) 8012-95-1	0 - 0.1, 0.1- 1, 1 - 5	Asp. Tox. 1, H304 Aquatic Chronic 4, H413
1-Decene, homopolymer, hydrogenated	(CAS No) 68037-01-4	25 – 42, 20 - 30	Asp. Tox. 1, H304
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	(CAS No) 68649-42-3	2.7 - 11.75	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 2, H401 Aquatic Chronic 2, H411

* The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret within the meaning of the OSHA Hazard Communication Standard [29 CFR 1910.1200].

* More than one of the ranges of concentration prescribed by Controlled Products Regulations has been used where necessary, due to varying composition.

Full text of H-phrases: (see section 16)

SECTION 4: FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

Inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

Skin Contact: Remove contaminated clothing. Drench affected area with water or soap and water for at least 15 minutes. Wash contaminated clothing before reuse. Obtain medical attention if irritation develops or persists.

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

Ingestion: Do **NOT** induce vomiting. Rinse mouth. Call a **POISON CENTER** or doctor/physician if you feel unwell.



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4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS BOTH ACUTE AND DELAYED

General: No known significant effects or critical hazards.

Inhalation: Overexposure may be irritating to the respiratory system.

Skin Contact: Repeated or prolonged skin contact may cause irritation.

Eye Contact: Direct contact with the eyes is likely irritating.

Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: No known significant effects or critical hazards.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: FIRE-FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Fire Hazard: Not flammable but will support combustion.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

5.3 ADVICE FOR FIREFIGHTERS

Precautionary Measures Fire: Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

Fire Fighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Under fire conditions, may produce fumes, smoke, oxides of carbon and hydrocarbons.

Other Information/Reference to Other Sections: Refer to Section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

General Measures: Avoid all contact with skin, eyes, or clothing. Avoid breathing (vapor, mist, spray).

6.1.1 FOR NON-EMERGENCY PERSONNEL

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2 FOR EMERGENCY PERSONNEL

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Stop leak if safe to do so. Eliminate ignition sources. Ventilate area.



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6.2 ENVIRONMENTAL PRECAUTIONS

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Spills should be contained with mechanical barriers. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

6.4 REFERENCE TO OTHER SECTIONS

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Additional Hazards When Processed: Any proposed use of this product in elevated-temperature processes should be thoroughly evaluated to assure that safe operating conditions are established and maintained. Practice good housekeeping – spillage can be slippery on smooth surface either wet or dry.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible Materials: Strong acids, strong bases, strong oxidizers.

7.3 SPECIFIC END USE(S)

Engine Oil

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

PARAFFIN OILS (8012-95-1)

USA ACGIH	ACGIH TWA (mg/m ³)	5 mg/m ³ (excluding metal working fluids, highly & severely refined-inhalable fraction)
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen highly and severely refined, Suspected Human Carcinogen highly and severely refined
USA OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	5 mg/m ³



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PARAFFIN OILS (8012-95-1) CONT'D

USA NIOSH	NIOSH REL (STEL) (mg/m ³)	10 mg/m ³
USA IDLH	US IDLH (mg/m ³)	2500 mg/m ³
Alberta	OEL STEL (mg/m ³)	10 mg/m ³
Alberta	OEL TWA (mg/m ³)	5 mg/m ³
British Columbia	OEL TWA (mg/m ³)	0.2 mg/m ³ (mildly refined) 1 mg/m ³ (severely refined)
Manitoba	OEL TWA (mg/m ³)	5 mg/m ³ (excluding metal working fluids, highly & severely refined-inhalable fraction)
New Brunswick	OEL STEL (mg/m ³)	10 mg/m ³
New Brunswick	OEL TWA (mg/m ³)	5 mg/m ³ (as sampled by a method that does not collect vapor)
Newfoundland & Labrador	OEL TWA (mg/m ³)	5 mg/m ³ (excluding metal working fluids, highly & severely refined-inhalable fraction)
Nova Scotia	OEL TWA (mg/m ³)	5 mg/m ³ (excluding metal working fluids, highly & severely refined-inhalable fraction)
Nunavut	OEL STEL (mg/m ³)	10 mg/m ³
Nunavut	OEL TWA (mg/m ³)	5 mg/m ³
Northwest Territories	OEL STEL (mg/m ³)	10 mg/m ³
Northwest Territories	OEL TWA (mg/m ³)	5 mg/m ³
Ontario	OEL TWA (mg/m ³)	5 mg/m ³ (pure, highly and severely refined, excluding metal working fluids-inhalable)
Prince Edward Island	OEL TWA (mg/m ³)	5 mg/m ³ (excluding metal working fluids, highly & severely refined-inhalable fraction)
Québec	VECD (mg/m ³)	10 mg/m ³ (mist)
Québec	VEMP (mg/m ³)	5 mg/m ³ (mist)
Saskatchewan	OEL STEL (mg/m ³)	10 mg/m ³
Saskatchewan	OEL TWA (mg/m ³)	5 mg/m ³
Yukon	OEL STEL (mg/m ³)	10 mg/m ³
Yukon	OEL TWA (mg/m ³)	5 mg/m ³



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8.2 EXPOSURE CONTROLS

Appropriate Engineering Controls: Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.

Personal Protective Equipment: Protective goggles. Gloves. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: Chemical goggles or safety glasses.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

Environmental Exposure Controls: Do not allow the product to be released into the environment.

Consumer Exposure Controls: Do not eat, drink or smoke during use.

SECTION 9: PHYSICAL AND CHEMICAL

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Amber
Odor	Slight Hydrocarbon
Odor Threshold	Not available
pH	Not available
Evaporation Rate	Not available
Melting Point	Not available
Boiling Point	> 280 °C (536 °F)
Flash Point	> 200 °C (COC) (392 °F)
Auto-ignition Temperature	> 320 °C (COC) (608 °F)
Decomposition Temperature	Not available
Flammability (solid, gas)	Not available
Lower Flammable Limit	Not available



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9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES (CONT'D)

Upper Flammable Limit	Not available
Vapor Pressure	Not available
Relative Vapor Density at 20 °C	Not available
Relative Density	Not available
Specific Gravity	0.85
Solubility	Negligible
Partition Coefficient: N-Octanol/Water	Not available
Viscosity	Not available
Viscosity, Kinematic	Not available
Explosive Properties	Product is not explosive
Explosion Data – Sensitivity to Mechanical Impact	Not expected to present an explosion hazard due to mechanical impact
Explosion Data – Sensitivity to Static Discharge	Not expected to present an explosion hazard due to static discharge

SECTION 10: STABILITY AND REACTIVITY

10.1 REACTIVITY

Hazardous reactions will not occur under normal conditions.

10.2 CHEMICAL STABILITY

Stable under recommended handling and storage conditions (see section 7).

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

Hazardous polymerization will not occur.

10.4 CONDITIONS TO AVOID

Direct sunlight, extremely high or low temperatures, heat, hot surfaces, sparks, open flames, incompatible materials, and other ignition sources.

10.5 INCOMPATIBLE MATERIALS

Strong acids, strong bases, strong oxidizers.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

Thermal decomposition generates: carbon oxides (CO, CO₂). Hydrocarbons.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS - PRODUCT

Acute Toxicity: Not classified

LD50 and LC50 Data: Not available

Skin Corrosion/Irritation: Not classified

Eye Damage/Irritation: Not classified



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Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not classified

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Overexposure may be irritating to the respiratory system.

Symptoms/Injuries After Skin Contact: Repeated or prolonged skin contact may cause irritation.

Symptoms/Injuries After Eye Contact: Direct contact with the eyes is likely irritating.

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse gastrointestinal effects.

Chronic Symptoms: Not Classified

11.2 INFORMATION ON TOXICOLOGICAL EFFECTS - INGREDIENT(S)

LD50 and LC50 Data

PARAFFIN OILS (8012-95-1)

LC50 Inhalation Rat	2062 ppm/4h
ATE US (gases)	2,062.00 ppmV/4h

HEAVY PARAFFINIC, DISTILLATES, PETROLEUM, HYDROTREATED HEAVY PARAFFINIC (64742-54-7)

LD50 Oral Rat	> 2000 mg/kg
LD50 Dermal Rabbit	> 2 g/kg

PETROLEUM DISTILLATES, SOLVENT DEWAXED (64742-65-0)

LD50 Oral Rat	> 5000 mg/kg
LD50 Dermal Rabbit	> 5 g/kg

PARAFFIN OILS (8012-95-1)

IARC Group	1
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SECTION 12: ECOLOGICAL INFORMATION

12.1 TOXICITY

Ecology - General: Toxic to aquatic life.

PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS (68649-42-3)

LC50 Fish 1	1.0 - 5.0 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 1	1 - 1.5 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC 50 Fish 2	10.0 - 35.0 mg/l (Exposure time: 96 h - Species: Pimephales promelas [semi-static])

PETROLEUM DISTILLATES, SOLVENT DEWAXED (64742-65-0)

EC50 Daphnia 1	> 1000 mg/L (Exposure time: 48 h - Species: Daphnia magna)
LC50 Fish 1	> 5000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)

DISTILLATES, PETROLEUM, HYDROTREATED HEAVY PARAFFINIC (64742-54-7)

LC50 Fish 1	> 5000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia 1	> 1000 mg/l (Exposure time: 48 h - Species: Daphnia magna)

12.2 PERSISTENCE AND DEGRADABILITY

Not available

12.3 BIOACCUMULATIVE POTENTIAL

Not available

12.4 MOBILITY IN SOIL

Not available

12.5 OTHER ADVERSE EFFECTS

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

Sewage Disposal Recommendations: Do not empty into drains; dispose of this material and its container in a safe way. Do not empty into drains. Do not dispose of waste into sewer.**Waste Disposal Recommendations:** Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

SECTION 14: TRANSPORT INFORMATION

14.1 IN ACCORDANCE WITH DOT	Not regulated for transport
14.2 IN ACCORDANCE WITH IMDG	Not regulated for transport
14.3 IN ACCORDANCE WITH IATA	Not regulated for transport
14.4 IN ACCORDANCE WITH TDG	Not regulated for transport



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SECTION 15: REGULATORY INFORMATION

15.1 US FEDERAL REGULATIONS

SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard
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15.2 US STATE REGULATIONS

PARAFFIN OILS (8012-95-1)

U.S. - Massachusetts - Right To Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

15.3 CANADIAN REGULATIONS

WHMIS Classification	Not Classified
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PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS (68649-42-3)

Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class D Division 2 Subdivision B - Toxic material causing other toxic effects

PARAFFIN OILS (8012-95-1)

Listed on the Canadian DSL (Domestic Substances List) Listed on the Canadian IDL (Ingredient Disclosure List) IDL Concentration 1 %	
WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects

PETROLEUM DISTILLATES, SOLVENT DEWAXED (64742-65-0)

Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

DISTILLATES, PETROLEUM, HYDROTREATED HEAVY PARAFFINIC (64742-54-7)

Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.



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SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date: 05/16/2015

Other Information: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS FULL TEXT PHRASES

Aquatic Acute 2	Hazardous to the aquatic environment - Acute Hazard Category 2
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Aquatic Chronic 4	Hazardous to the aquatic environment - Chronic Hazard Category 4
Asp. Tox. 1	Aspiration hazard Category 1
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Skin Irrit. 2	Skin corrosion/irritation Category 2
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H318	Causes serious eye damage
H391	Collect Spillage
H401	Toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects
H413	May cause long lasting harmful effects to aquatic life

PARTY RESPONSIBLE FOR THE PREPARATION OF THIS DOCUMENT

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

North America GHS US 2012 & WHMIS 2