

Safety Data Sheet

Material Name: STARFIRE Premium Plus 15W-40 CJ-4

*** Section 1 - Identification ***

Product Identifier

STARFIRE Premium Plus 15W-40 CJ-4 Motor Oil

Product Code

641

Synonyms

Petroleum oil; Lube oil; Petroleum hydrocarbon; Lubricant.

Recommended Use

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

Restrictions on Use

None known.

Manufacturer Information

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June 15, 1989

*** Section 2 - Hazard(s) Identification ***

Classification in Accordance with 29 CFR 1910.1200.

Not hazardous according to classification criteria.

GHS LABEL ELEMENTS

Symbol(s)

None needed according to classification criteria.

Signal Word

None needed according to classification criteria.

Hazard Statement(s)

None needed according to classification criteria.

Precautionary Statement(s)

Prevention

None needed according to classification criteria.

Response

None needed according to classification criteria.

Storage

None needed according to classification criteria.

Disposal

Dispose in accordance with all applicable regulations.

Hazard(s) Not Otherwise Classified

Repeated exposure may cause skin dryness or cracking.

Safety Data Sheet

Material Name: STARFIRE Premium Plus 15W-40 CJ-4

*** Section 3 - Composition / Information on Ingredients ***

CAS	Component	Percent
64742-58-1	Lubricating oils, petroleum, hydrotreated spent	35-85
72623-83-7	Lubricating oils (petroleum), C>25, hydrotreated bright stock	0.1-55
64742-62-7	Residual oils (petroleum), solvent dewaxed	0.1-55
64742-57-0	Residual Oils (petroleum), hydrotreated	0.1-55
64742-01-4	Residual oils (petroleum), solvent refined	0-46
Not Available	Mineral Oil*	0.1-37.5
Not Available	Proprietary additives*	10-30
64741-88-4	Petroleum distillates, solvent-refined heavy paraffinic	1-15
122-39-4	Diphenylamine	1-15
72623-86-0	Lubricating oils, petroleum, C15-30, hydrotreated neutral oil-based	0.1-11
---	Mixture**	0-5

Component Related Regulatory Information

*Supplier and/or Coolants Plus advises that this is a trade secret.

** Mixture of the following CAS #s: Poly olefin, 64742-65-0, Polyolefin amide alkene amine, 64742-52-5, 178603-65-1, 178603-64-0, 64742-46-7, 72623-84-8, 178603-63-9, 178603-66-2, 72623-87-1, 8042-47-5, 445411-73-4, Calcium sulfonate, Alkylated phenol, Alkylamine, 74499-35-7, 68411-46-1, 68649-42-3, Calcium phenate, 72723-85-9

*** Section 4 - First Aid Measures ***

Description of Necessary Measures

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention, if needed.

Skin

IF ON SKIN: Wash with plenty of soap and water. Get medical attention, if needed.

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if needed.

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

Most Important Symptoms/Effects

Acute

No information on significant adverse effects.

Delayed

No information on significant adverse effects.

Indication of Immediate Medical Attention and Special Treatment Needed, If Needed

Treat symptomatically and supportively. Call 1-800-428-1760 for additional information.

*** Section 5 - Fire-Fighting Measures ***

Suitable Extinguishing Media

Carbon dioxide, regular foam, dry chemical, water spray, or water fog.

Unsuitable Extinguishing Media

Do not use high pressure water streams.

Specific Hazards Arising from the Chemical

Negligible fire hazard. Avoid friction, static electricity, and sparks.

Hazardous Combustion Products

Decomposition and combustion materials may be toxic. Burning may produce smoke, carbon dioxide, carbon monoxide, unidentified organic compounds, metal oxides, nitrogen oxides, hydrogen sulfide, sulfur oxides, oxides of phosphorus, and oxides of zinc.

Safety Data Sheet

Material Name: STARFIRE Premium Plus 15W-40 CJ-4

Special Protective Equipment and Precautions for Firefighters

A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

Fire Fighting Measures

Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. Keep unnecessary people away, isolate hazard area and deny entry.

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

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

*** Section 6 - Accidental Release Measures ***

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8. Avoid release to the environment.

Methods and Materials for Containment and Clean Up

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. A vapor suppressing foam may be used to reduce vapors. 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, sparkproof tool into a sealable container for disposal.

Additionally, for large spills: Water spray may reduce vapor, but may not prevent ignition in closed spaces. Dike far ahead of liquid spill for collection and later disposal.

*** Section 7 - Handling and Storage ***

Precautions for Safe Handling

Keep away from sparks and 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 products, 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 the vapor or mist. Use in a well ventilated area. Avoid contact with eyes, skin, clothing, and shoes.

Conditions for Safe Storage, Including Any Incompatibilities

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 heat, flame, sparks, static electricity, or other sources of ignition. Empty product containers may retain product residue and can be dangerous.

Incompatibilities

Oxidizing materials, acids.

*** Section 8 - Exposure Controls / Personal Protection ***

Component Exposure Limits

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

Appropriate 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.

Individual Protective Measures, such as 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 regulatory requirements. The following PPE should be considered the minimum required: safety glasses, gloves, lab coat, or apron.

Eyes/Face Protection

Safety glasses with side shields should be worn at a minimum. Additional protection such as goggles, face shields, or respirators may be needed depending upon anticipated use and concentrations of mists or vapors. Provide an emergency eye wash fountain and quick drench shower in the immediate work area. Contact lens use is not recommended.

Safety Data Sheet

Material Name: STARFIRE Premium Plus 15W-40 CJ-4

Skin Protection

Where skin contact is likely, wear gloves impervious to product; use of natural rubber (latex) or equivalent gloves is not recommended. When product is heated and skin contact is likely, wear heat-resistant gloves, boots, and other protective clothing.

Respiratory Protection

No respirator is required under normal conditions of use. 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.

*** Section 9 - Physical & Chemical Properties ***

Appearance/Odor :	Amber liquid, petroleum odor	pH:	Not available
Odor Threshold:	Not available	Boiling Point:	475°F (246°C) (minimum)
Melting Point:	Not available	Solubility (H2O):	Insoluble.
Specific Gravity:	0.88 (water = 1) (approximately)	Density:	7.3 LB/US gal (880 g/l) (approximately)
Octanol/H2O Coeff.:	Not available.	Evaporation Rate:	0.1 (butyl acetate = 1) (based on Stoddard Solvent)
Molecular Weight:	Not available.	Auto Ignition Temperature:	Not available
LFL:	Not available	Flash Point:	421°F (216°C) (minimum)
UFL:	Not available	Viscosity:	Not available
Vapor Pressure:	Less than 0.1 mm Hg at 68°F (20°C)	Vapor Density:	Not available
		Viscosity:	>20.5 mm ² /s @ 104°F (40°C)

Other Property Information

No information is available.

*** Section 10 - Stability & Reactivity ***

Reactivity

No reactivity hazard is expected.

Chemical Stability

Stable under normal temperatures and pressures.

Possibility of Hazardous Reactions

Will not polymerize.

Conditions To Avoid

Avoid sparks, flames, and other sources of ignition.

Incompatible Materials

Avoid oxidizing agents and acids.

Hazardous Decomposition Products

None under normal temperatures and pressures.

*** Section 11 - Toxicological Information ***

Toxicity Data and Information

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

Residual oils (petroleum), solvent refined (64742-01-4)

Inhalation LC50 Rat 2.18 mg/L 4 h; Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >2000 mg/kg

Residual oils (petroleum), solvent dewaxed (64742-62-7)

Inhalation LC50 Rat 2.18 mg/L 4 h; Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >2000 mg/kg

Lubricating oils (petroleum), C>25, hydrotreated bright stock (72623-83-7)

Oral LD50 Rat >5000 mg/kg

Safety Data Sheet

Material Name: STARFIRE Premium Plus 15W-40 CJ-4

Lubricating oils, petroleum, C15-30, hydrotreated neutral oil-based (72623-86-0)

Inhalation LC50 Rat 2.18 mg/L 4 h; Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >2000 mg/kg

Petroleum distillates, solvent-refined heavy paraffinic (64741-88-4)

Inhalation LC50 Rat 2.18 mg/L 4 h; Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >2000 mg/kg

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)

Duration/Test/Species

96 Hr LC50 Pimephales promelas

96 Hr LC50 Pimephales promelas

Concentration/Conditions/Notes

1.0-5.0 mg/L [static]

10.0-35.0 mg/L [semi-static]

Information on Likely Routes of Exposure

Inhalation

No information on significant adverse effects.

Ingestion

May be harmful if swallowed.

Skin Contact

Prolonged or repeated skin contact may cause irritation.

Eye Contact

No information on significant adverse effects.

Immediate Effects

No information on significant adverse effects.

Delayed Effects

No information on significant adverse effects.

Irritation/Corrosivity

May cause slight skin and respiratory irritation.

Respiratory Sensitization

No information available for the product.

Skin Sensitization

No information available for the product.

Carcinogenicity

Component Carcinogenicity

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

Germ Cell Mutagenicity

No information available for the product.

Teratogenicity

No information available for the product.

Reproductive Effects

No epidemiological data is available for this product.

Specific Target Organ Effects - Single Exposure

No information on significant adverse effects.

Specific Target Organ Effects - Repeated Exposure

No information on significant adverse effects.

Aspiration Hazard

No data available.

Medical Conditions Aggravated by Exposure

Individuals with pre-existing respiratory tract (nose, throat, and lungs), central nervous system, kidney, eye, and/or skin disorders may have increased susceptibility to the effects of exposure.

***** Section 12 - Ecological Information *****

Ecotoxicity

Harmful to aquatic life. Avoid release to the environment.

Safety Data Sheet

Material Name: STARFIRE Premium Plus 15W-40 CJ-4

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]	

Residual oils (petroleum), solvent refined (64742-01-4)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Oncorhynchus mykiss	>5000 mg/L	
48 Hr EC50 Daphnia magna	>1000 mg/L	

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	1.0 - 5.0 mg/L [static]	
96 Hr LC50 Pimephales promelas	10.0 - 35.0 mg/L [semi-static]	
48 Hr EC50 Daphnia magna	1 - 1.5 mg/L	

Persistence and Degradability

No information available for the product.

Bioaccumulation Potential

No information available for the product.

Mobility in Soil

No information available for the product.

Other Adverse Effects

No additional information is available.

*** Section 13 - Disposal Considerations ***

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 Coolants Plus regarding proper recycling or disposal.

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 - Transport Information ***

Emergency Response Guide Number

Not applicable.

DOT Shipping Name: Not regulated as a hazardous material for transportation.

TDG Shipping Name: Not regulated as a dangerous good for transportation.

*** Section 15 - Regulatory Information ***

Volatile Organic Compounds (As Regulated)

Negligible; As per 40 CFR Part 51.100(s)

Federal Regulations

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 311/312 Hazardous Categories

Acute Health: No **Chronic Health:** No **Fire:** No **Pressure:** No **Reactive:** No

SARA Section 313

Component Analysis

This product contains a "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.

Zinc alkyl dithiophosphate (Not Available)	1.0 % de minimis concentration (related to Zinc compounds)
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Safety Data Sheet

Material Name: STARFIRE Premium Plus 15W-40 CJ-4

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)

1.0 % de minimis concentration (related to Zinc compounds)

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 Inventory

All the components of this product are listed on, or are automatically included as "naturally occurring chemical substances" 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
Residual oils (petroleum), solvent refined	64742-01-4	Yes
Residual oils (petroleum), solvent dewaxed	64742-62-7	Yes
Lubricating oils (petroleum), C>25, hydrotreated bright stock	72623-83-7	Yes
Lubricating oils, petroleum, C15-30, hydrotreated neutral oil-based	72623-86-0	Yes
Petroleum distillates, solvent-refined heavy paraffinic	64741-88-4	Yes
N-Phenylbenzenamine, reaction products with 2,4,4-trimethylpentene	68411-46-1	Yes
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3	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 component(s) are listed under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

Canadian Regulations

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

Component Analysis

Component	CAS #	CAN
Lubricating oils, petroleum, hydrotreated spent	64742-58-1	DSL
Residual oils (petroleum), solvent refined	64742-01-4	DSL
Gas oils, petroleum, vacuum, hydrocracked, hydroisomerized, hydrogenated, C20-40, branched and cyclic, high viscosity index	178603-65-1	DSL
Gas oils, petroleum, vacuum, hydrocracked, hydroisomerized, hydrogenated, C25-55, branched and cyclic, high viscosity index	178603-66-2	DSL
Gas oils, petroleum, vacuum, hydrocracked, hydroisomerized, hydrogenated, C15-30, branched and cyclic, high viscosity index	178603-64-0	DSL
Benzenesulfonic acid, mono-C16-24-alkyl derivatives, calcium salts, overbased	70024-71-4	DSL
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3	DSL

Canadian WHMIS Information

Not regulated.

Component Analysis – WHMIS IDL

Not regulated.

***** Section 16 - Other Information *****

Revision Information

Reformat to OSHA HazCom 29 CFR 1910.1200 adoption of GHS Revision 3.

Safety Data Sheet

Material Name: STARFIRE Premium Plus 15W-40 CJ-4

Key/Legend

ACGIH - American Conference of Governmental Industrial Hygienists; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CN - China; CPR - Controlled Products Regulations; DOT - Department of Transportation; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; RTECS - Registry of Toxic Effects of Chemical Substances®; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States

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