

# Safety Data Sheet

According to OSHA HCS 2012 (29 CFR 1910.1200), Health Canada HPR (SOR/2015-17), and Mexico NOM-018-STPS-2015



## SECTION 1: Identification

**Product Identifier:** **Multiplex® FS 460**  
**Other means of identification:** Phillips 66® Multiplex® FS 460 #1.5  
**Code:** **831610**  
**Issue date:** 14-Nov-2024  
**Relevant identified uses:** Lubricating Grease  
**Uses advised against:** All others  
**24 Hour Emergency Phone Number:** CHEMTREC Global +1 703 527 3887  
CHEMTREC United States 1-800-424-9300  
CHEMTREC Mexico 01-800-681-9531  
**Manufacturer/Supplier:** Phillips 66 Lubricants  
A Division of Phillips 66 Company  
P.O. Box 421959  
Houston, Texas 77242-1959  
**SDS Information:** URL: [www.phillips66.com/SDS](http://www.phillips66.com/SDS)  
Phone: 800-762-0942  
Email: [SDS@P66.com](mailto:SDS@P66.com)  
**Customer Service:** U.S.: 800-368-7128 or International: 1-832-765-2500  
**Technical Information:** 1-877-445-9198

## SECTION 2: Hazard identification

### Classified Hazards

H361f -- Reproductive toxicity -- Category 2  
H413 -- Hazardous to the aquatic environment, chronic toxicity -- Category 4

### Label Elements



### WARNING

H361f - Suspected of damaging fertility  
H413 - May cause long lasting harmful effects to aquatic life

### Precautionary Statements

P201 - Obtain special instructions before use; P202 - Do not handle until all safety precautions have been read and understood; P273 - Avoid release to the environment; P280 - Wear protective gloves/protective clothing and eye/face protection; P308 + P313 - IF exposed or concerned: Get medical advice/attention; P405 - Store locked up; P501 - Dispose of contents/ container to an approved waste disposal plant

### Hazards Not Otherwise Classified (HNOC)

PHNOC: None known

HHNOC: None known

### SECTION 3: Composition/information on ingredients

| Substance                                                             | CASRN       | Concentration <sup>1</sup> |
|-----------------------------------------------------------------------|-------------|----------------------------|
| 1-Dodecene, polymer with 1-octene, hydrogenated                       | 163149-29-9 | <35                        |
| 1-Propene, 2-methyl-, sulfurized                                      | 68511-50-2  | <7.49                      |
| Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts         | 68649-42-3  | <2.49                      |
| Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene | 68411-46-1  | <1.0                       |

<sup>1</sup> All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

### SECTION 4: First aid measures

**Eye Contact:** If irritation or redness develops from exposure, flush eyes with clean water. If symptoms persist, seek medical attention.

**Skin Contact:** Remove contaminated shoes and clothing and cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops and persists, seek medical attention. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician. (see Note to Physician)

**Inhalation:** First aid is not normally required. If breathing difficulties develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. Seek immediate medical attention.

**Ingestion:** First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

**Most important symptoms and effects, both acute and delayed:** Inhalation of oil mists or vapors generated at elevated temperatures may cause respiratory irritation. Accidental ingestion can result in minor irritation of the digestive tract, nausea and diarrhea. Prolonged or repeated contact may dry skin and cause irritation.

**Notes to Physician:** When using high-pressure equipment, injection of product under the skin can occur. In this case, the casualty should be sent immediately to the hospital. Do not wait for symptoms to develop. High-pressure hydrocarbon injection injuries may produce substantial necrosis of underlying tissue despite an innocuous appearing external wound. These injuries often require extensive emergency surgical debridement and all injuries should be evaluated by a specialist in order to assess the extent of injury. Early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

### SECTION 5: Firefighting measures

#### NFPA 704: National Fire Protection Association

Health: 0      Flammability: 1      Instability: 0



0 = minimal hazard  
1 = slight hazard  
2 = moderate hazard  
3 = severe hazard  
4 = extreme hazard

**Extinguishing Media:** Dry chemical, carbon dioxide, foam, or water spray is recommended. Water or foam may cause frothing of materials heated above 212°F / 100°C. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

**Specific hazards arising from the chemical**

**Unusual Fire & Explosion Hazards:** This material may burn, but will not ignite readily. If container is not properly cooled, it can rupture in the heat of a fire.

**Hazardous Combustion Products:** Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of sulfur, nitrogen or phosphorus may also be formed.

**Special protective actions for fire-fighters:** For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8). Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely. Avoid spreading burning liquid with water used for cooling purposes.

See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits

## SECTION 6: Accidental release measures

**Personal precautions, protective equipment and emergency procedures:** This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release. Stay upwind and away from spill/release. Avoid direct contact with material. For large spillages, notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

**Environmental Precautions:** Stop and contain spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Use water sparingly to minimize environmental contamination and reduce disposal requirements. If spill occurs on water notify appropriate authorities and advise shipping of any hazard. Spills into or upon navigable waters, the contiguous zone, or adjoining shorelines that cause a sheen or discoloration on the surface of the water, may require notification of the National Response Center (phone number 800-424-8802).

**Methods and material for containment and cleaning up:** Notify relevant authorities in accordance with all applicable regulations. Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite, and place in suitable container for disposal. If spilled on water remove with appropriate methods (e.g. skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.

Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and regulations may influence or limit the choice of appropriate actions to be taken. See Section 13 for information on appropriate disposal.

## SECTION 7: Handling and storage

**Precautions for safe handling:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from flames and hot surfaces. Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment (see section 8).

Spills will produce very slippery surfaces. High pressure injection of hydrocarbon fuels, hydraulic oils or greases under the skin may have serious consequences even though no symptoms or injury may be apparent. This can happen accidentally when using high pressure equipment such as high pressure grease guns, fuel injection apparatus or from pinhole leaks in tubing of high pressure hydraulic oil equipment.

Do not wear contaminated clothing or shoes. Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146.

**Conditions for safe storage:** Keep container(s) tightly closed and properly labeled. Use and store this material in cool, dry, well-ventilated area away from heat and all sources of ignition. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such

containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

## SECTION 8: Exposure controls/personal protection

### Occupational exposure limits

None.

### Biological occupational exposure limits

None.

**Engineering controls:** General ventilation should be adequate for normal conditions of intended use. Additional engineering controls may be necessary if working with the product in enclosed areas and/or at elevated temperatures.

**Eye/Face Protection:** The use of eye protection that meets or exceeds ANSI Z.87.1 is recommended to protect against potential eye contact, irritation, or injury. Depending on conditions of use, a face shield may be necessary.

**Skin/Hand Protection:** The use of gloves impervious to the specific material handled is advised to prevent skin contact. Users should check with manufacturers to confirm the breakthrough performance of their products. Suggested protective materials: Nitrile rubber.

**Respiratory Protection:** Respiratory protection is not normally required under intended conditions of use. Emergencies or conditions that could result in significant airborne exposures may require the use of NIOSH approved respiratory protection. An industrial hygienist or other appropriate health and safety professional should be consulted for specific guidance under these situations.

A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use.

**Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.**

## SECTION 9: Physical and chemical properties

**Note:** Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm). Data represent typical values and are not intended to be specifications.

|                                                 |                                    |
|-------------------------------------------------|------------------------------------|
| <b>Color:</b>                                   | Purple                             |
| <b>Physical State:</b>                          | Semi-Solid                         |
| <b>Odor:</b>                                    | Petroleum                          |
| <b>Odor threshold:</b>                          | No data                            |
| <b>pH:</b>                                      | Not applicable                     |
| <b>Melting / freezing point:</b>                | No data                            |
| <b>Initial boiling point and boiling range:</b> | No data                            |
| <b>Flash point:</b>                             | > 302 °F / > 150 °C                |
| <b>Method:</b>                                  | Cleveland Open Cup (COC), ASTM D92 |
| <b>Evaporation Rate (nBuAc=1):</b>              | No data                            |
| <b>Flammability (solid, gas):</b>               | Not applicable                     |
| <b>Upper Explosive Limits (vol % in air):</b>   | No data                            |
| <b>Lower Explosive Limits (vol % in air):</b>   | No data                            |
| <b>Vapor pressure:</b>                          | <1 mm Hg                           |

|                                                   |                                    |
|---------------------------------------------------|------------------------------------|
| Vapor density:                                    | > 10 (air = 1)                     |
| Relative density:                                 | 0.8957 @ 60°F (15.6°C) (water = 1) |
| Solubility:                                       | Insoluble                          |
| Partition coefficient n-octanol /water (log Kow): | No data                            |
| Autoignition temperature:                         | No data                            |
| Decomposition temperature:                        | No data                            |
| Viscosity:                                        | No data                            |
| Molecular weight:                                 | No data                            |

**Other information**

|                          |              |
|--------------------------|--------------|
| Particle characteristics | No data      |
| Pour point:              | No data      |
| Bulk density:            | 7.37 lbs/gal |

## SECTION 10: Stability and reactivity

**Reactivity:** Not chemically reactive.

**Chemical stability:** Stable under normal ambient and anticipated conditions of use.

**Possibility of Hazardous Reactions:** Hazardous reactions not anticipated.

**Conditions to Avoid:** Extended exposure to high temperatures can cause decomposition. Avoid all possible sources of ignition.

**Incompatible Materials:** Avoid contact with strong oxidizing agents and strong reducing agents.

**Hazardous Decomposition Products:** Not anticipated under normal conditions of use.

## SECTION 11: Toxicological information

### Information on Toxicological Effects

#### Substance / Mixture

| Acute Toxicity | Hazard                 | Additional Information | LC50/LD50 Data            |
|----------------|------------------------|------------------------|---------------------------|
| Inhalation     | Unlikely to be harmful |                        | >5 mg/L (mist, estimated) |
| Dermal         | Unlikely to be harmful |                        | > 2 g/kg (estimated)      |
| Oral           | Unlikely to be harmful |                        | > 5 g/kg (estimated)      |

**Likely Routes of Exposure:** Inhalation, eye contact, skin contact

**Aspiration Hazard:** Not expected to be an aspiration hazard.

**Skin Corrosion/Irritation:** Causes mild skin irritation. Repeated exposure may cause skin dryness or cracking.

**Serious Eye Damage/Irritation:** Causes mild eye irritation.

**Skin Sensitization:** No information available on the mixture, however none of the components have been classified for skin sensitization (or are below the concentration threshold for classification).

**Respiratory Sensitization:** No information available.

**Specific target organ toxicity - Single exposure:** No information available on the mixture, however none of the components have been classified for target organ toxicity (or are below the concentration threshold for classification).

**Specific target organ toxicity - Repeated exposure:** No information available on the mixture, however none of the components have been classified for target organ toxicity (or are below the concentration threshold for classification).

**Carcinogenicity:** No information available on the mixture, however none of the components have been classified for carcinogenicity (or are below the concentration threshold for classification).

**Germ Cell Mutagenicity:** No information available on the mixture, however none of the components have been classified for germ cell mutagenicity (or are below the concentration threshold for classification).

**Reproductive Toxicity:** Suspected of damaging fertility. Based on component information.

## SECTION 12: Ecological information

### GHS Classification:

**H413 -- Hazardous to the aquatic environment, chronic toxicity -- Category 4**

May cause long lasting harmful effects to aquatic life.

**Toxicity:** May cause long lasting harmful effects to aquatic life

**Persistence and Degradability:** Polyalphaolefins (synthesized hydrocarbons) & polyalkylene glycol synthetic base oils are not considered to be readily biodegradable but may be inherently biodegradable. They are expected to completely biodegrade over extended periods of time. Most synthetic polyol esters are considered readily biodegradable and are expected to completely biodegrade over extended periods of time.

**Bioaccumulative Potential:** PAO synthetic base oils are not expected to bioaccumulate.

**Mobility in Soil:** Volatilization to air is not expected to be a significant fate process due to the low vapor pressure of this material. In water, this material does not impart any sheen and will float and spread over the surface at a rate dependent upon viscosity. The main fate process is expected to be slow biodegradation of individual components in soil and sediment.

**Other adverse effects:** None anticipated.

## SECTION 13: Disposal considerations

The generator of a waste is always responsible for making proper hazardous waste determinations and needs to consider state and local requirements in addition to federal regulations. This material, if discarded as produced, would not be a federally regulated RCRA "listed" hazardous waste and is not believed to exhibit characteristics of hazardous waste. See Sections 7 and 8 for information on handling, storage and personal protection and Section 9 for physical/chemical properties. It is possible that the material as produced contains constituents which are not required to be listed in the SDS but could affect the hazardous waste determination. Additionally, use which results in chemical or physical change of this material could subject it to regulation as a hazardous waste. This material under most intended uses would become "Used Oil" due to contamination by physical or chemical impurities. Whenever possible, Recycle used oil in accordance with applicable federal and state or local regulations. Container contents should be completely used and containers should be emptied prior to discard.

## SECTION 14: Transport information

**UN Number:** Not regulated

**UN proper shipping name:** None

**Transport hazard class(es):** None

**Packing Group:** None

**Environmental Hazard(s):** This product does not meet the DOT/UN/IMDG/IMO criteria of a marine pollutant

**Special precautions for user:** If shipped by land in a packaging having a capacity of 3,500 gallons or more, the provisions of 49 CFR, Part 130 apply. (Contains oil)

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:** Not applicable

## SECTION 15: Regulatory information

**CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs (in pounds)**

This material does not contain any chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372.

**CERCLA/SARA - Section 311/312 (Title III Hazard Categories)**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CERCLA/SARA - Section 313 and 40 CFR 372**

This material contains the following chemicals subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR 372:

| Substance        | Concentration <sup>1</sup> | de minimis |
|------------------|----------------------------|------------|
| Zinc Compound(s) | <2.49                      | 1.0%       |
| Lead             | <0.00001                   | --         |

<sup>1</sup> All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

**EPA (CERCLA) Reportable Quantity (in pounds)**

This material does not contain any chemicals with CERCLA Reportable Quantities.

**California Proposition 65**



**WARNING:** This product can expose you to chemicals including Lithium carbonate (CASRN 554-13-2), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**International Inventories**

TSCA (United States): All ingredients are on the inventory or exempt from listing.  
All components are either on the DSL, or are exempt from DSL listing requirements.

**SECTION 16: Other information**

| Issue date  | Previous Issue Date: | SDS Number | Status: |
|-------------|----------------------|------------|---------|
| 14-Nov-2024 | 02-Apr-2024          | 831610     | FINAL   |

**Reason for Revision:**

Composition/information on ingredients  
NFPA Rating

**Mexican NOM-018-STPS-2015:**

The information within is considered correct but is not exhaustive and will be used for guidance only, which is based on the current knowledge of the substance or mixture and is applicable to the appropriate safety precautions for the product.

**Precautionary Statements**

P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood  
P273 - Avoid release to the environment  
P280 - Wear protective gloves/protective clothing and eye/face protection  
P308 + P313 - IF exposed or concerned: Get medical advice/attention  
P405 - Store locked up  
P501 - Dispose of contents/ container to an approved waste disposal plant

**Guide to Abbreviations:**

ACGIH = American Conference of Governmental Industrial Hygienists; CASRN = Chemical Abstracts Service Registry Number; CEILING = Ceiling Limit (15 minutes); CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act; EPA = Environmental Protection Agency; GHS = Globally Harmonized System; HPR = Hazardous Products Regulations; IARC = International Agency for Research on Cancer;

INSHT = National Institute for Health and Safety at Work; IOPC = International Oil Pollution Compensation; LEL = Lower Explosive Limit; NE = Not Established; NFPA = National Fire Protection Association; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit (OSHA); SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit (15 minutes); TLV = Threshold Limit Value (ACGIH); TWA = Time Weighted Average (8 hours); UEL = Upper Explosive Limit; WHMIS = Worker Hazardous Materials Information System (Canada); A1 - Known Human Carcinogen; A2 - Suspected Human Carcinogen; A3 - Animal Carcinogen; A4 - Not Classifiable as a Human Carcinogen

**Disclaimer of Expressed and implied Warranties:**

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