



# SAFETY DATA SHEET

SDS ID NO.: 0191MAR019  
Revision Date 05/27/2015

## 1. IDENTIFICATION

**Product Name:** Marathon Petroleum Marafluid 4 Transmission & Drive Train Fluid  
**Synonym:** Marafluid 4; SAE 30 Marafluid 4; SAE 50 Marafluid 4; 10W Marafluid 4  
**Product Code:** 0191MAR019  
**Chemical Family:** Hydrocarbon Mixture  
**Recommended Use:** Transmission fluid.  
**Restrictions on Use:** All others.

**Manufacturer, Importer, or Responsible Party Name and Address:**  
**MARATHON PETROLEUM COMPANY LP**  
**539 South Main Street**  
**Findlay, OH 45840**

**SDS information:** 1-419-421-3070  
**Emergency Telephone:** 1-877-627-5463

## 2. HAZARD IDENTIFICATION

### Classification

#### **OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation	Category 2A
Reproductive toxicity	Category 2
Acute aquatic toxicity	Category 3
Chronic aquatic toxicity	Category 3

#### **Hazards Not Otherwise Classified (HNOC)**

Not applicable.

### Label elements

#### **EMERGENCY OVERVIEW**

#### **Warning**

Causes serious eye irritation  
Suspected of damaging fertility or the unborn child  
Harmful to aquatic life with long lasting effects



**Appearance** Brown Liquid

**Physical State** Liquid

**Odor** Petroleum

**Precautionary Statements - Prevention**

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Wear protective gloves/protective clothing/eye protection/face protection  
Wash hands and any possibly exposed skin thoroughly after handling  
Avoid release to the environment

**Precautionary Statements - Response**

IF exposed or concerned: Get medical attention  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
If eye irritation persists: Get medical attention

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Not applicable.

**Additional Information**

Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Lube oil is a complex mixture of highly refined lubricating base stocks and additives.

**Composition Information:**

Name	CAS Number	% Concentration
Zinc Alkyl Dithiophosphate	68649-42-3	1-5
p-Dodecylphenol	104-43-8	0.1-1

All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

### 4. FIRST AID MEASURES

**First Aid Measures**

**General Advice:** In case of accident or if you feel unwell, seek medical advice immediately (show directions for use or safety data sheet if possible).

**Inhalation:** Remove to fresh air. If not breathing, institute rescue breathing. If breathing is difficult, ensure airway is clear, give oxygen and continue to monitor. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). If symptoms occur get medical attention.

**Skin Contact:** Wash skin with plenty of soap and water. If irritation or other symptoms occur get medical attention. Wash contaminated clothing and clean shoes before reuse. Any injection injury from high pressure equipment should be evaluated immediately by a physician as potentially serious (See NOTES TO PHYSICIAN).

**Eye Contact:** Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Gently remove contacts while flushing. Get medical attention.

**Ingestion:** Rinse mouth out with water. If spontaneous vomiting occurs, keep head below hips, or if patient is lying down, turn body and head to side to prevent aspiration and monitor for breathing difficulty. Never give anything by mouth to an unconscious person. Keep affected person warm and at rest. If symptoms develop, seek medical attention.

**Most important signs and symptoms, both short-term and delayed with overexposure**

**Adverse Effects:** Causes eye irritation. Symptoms may include redness, itching, and inflammation. May cause skin irritation and/or dermatitis. Preexisting skin conditions and/or respiratory disorders may be aggravated by exposure to this product.

**Indication of any immediate medical attention and special treatment needed**

**Notes To Physician:** SKIN: Leaks or accidents involving high-pressure equipment may inject a stream of material through the skin and initially produce an injury that may not appear serious. Only a small puncture wound may appear on the skin surface but, without proper treatment and depending on the nature, original pressure, volume, and location of the injected material, can compromise blood supply to an affected body part. Prompt surgical debridement of the wound may be necessary to prevent irreversible loss of function and/or the affected body part. High pressure injection injuries may be SERIOUS SURGICAL EMERGENCIES.

## 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media**

For small fires, Class B fire extinguishing media such as CO<sub>2</sub>, dry chemical, foam (AFFF/ATC) or water spray can be used. For large fires, water spray, fog or foam (AFFF/ATC) can be used. Firefighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.

**Unsuitable extinguishing media**

Do not use a solid water stream as it may scatter and spread fire.

**Specific hazards arising from the chemical**

The product is not combustible per the OSHA Hazard Communication Standard, but will ignite and burn at temperatures exceeding the flash point.

**Hazardous combustion products**

Smoke, carbon monoxide, and other products of incomplete combustion.

**Explosion data**

**Sensitivity to Mechanical Impact** No.

**Sensitivity to Static Discharge** No.

**Special protective equipment and precautions for firefighters**

Avoid using straight water streams. Water spray and foam (AFFF/ATC) must be applied carefully to avoid frothing and from as far a distance as possible. Avoid excessive water spray application. Use water spray to cool exposed surfaces from as far a distance as possible. Keep run-off water out of sewers and water sources.

**Additional firefighting tactics**

Not applicable.

**NFPA**

Health 1

Flammability 1

Instability 0

Special Hazard -

## 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions:** Keep public away. Isolate and evacuate area. Shut off source if safe to do so.
- Protective equipment:** Use personal protection measures as recommended in Section 8.
- Emergency procedures:** Advise authorities and National Response Center (800-424-8802) if the product has entered a water course or sewer. Notify local health and pollution control agencies, if appropriate.
- Environmental precautions:** Avoid release to the environment. Avoid subsoil penetration.
- Methods and materials for containment:** Prevent further leakage or spillage if safe to do so.
- Methods and materials for cleaning up:** Use suitable absorbent materials such as vermiculite, sand, or clay to clean up residual liquids. Recover and return free product to proper containers.

## 7. HANDLING AND STORAGE

**Safe Handling Precautions:** Avoid contact with skin, eyes and clothing. Do not swallow. Avoid breathing vapors or mists. Use good personal hygiene practices. Wash thoroughly after handling. Use personal protection measures as recommended in Section 8. Do not cut, drill, grind or weld on empty containers since explosive residues may remain. Refer to applicable EPA, OSHA, NFPA and consistent state and local requirements.

High-pressure injection of any material through the skin is a serious medical emergency even though the small entrance wound at the injection site may not initially appear serious. These injection injuries can occur from high-pressure equipment such as paint spray or grease or guns, fuel injectors, or pinhole leaks in hoses or hydraulic lines and should all be considered serious. High pressure injection injuries may be **SERIOUS SURGICAL EMERGENCIES** (See First Aid Section 4).

**Storage Conditions:** Store in properly closed containers that are appropriately labeled and in a cool, well-ventilated area. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store away from incompatible materials.

**Incompatible Materials** Strong oxidizing agents.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	ACGIH TLV	OSHA PELs:	OSHA - Vacated PELs	NIOSH IDLH
Zinc Alkyl Dithiophosphate 68649-42-3	-	-	-	-
p-Dodecylphenol 104-43-8	-	-	-	-

**Notes:** The manufacturer has voluntarily elected to provide exposure limits contained in OSHA's 1989 air contaminants standard in its SDSs, even though certain of those exposure limits were vacated in 1992.

**Engineering measures:** Local or general exhaust required when using at elevated temperatures that generate vapors or mists.

### Personal protective equipment

**Eye protection:** Use goggles or face-shield if the potential for splashing exists.

**Skin and body protection:** Wear neoprene, nitrile or PVA gloves to prevent skin contact. Glove suitability is based on workplace conditions and usage. Contact the glove manufacturer for specific advice on glove selection and breakthrough times. Wear appropriate protective clothing.

<b>Respiratory protection:</b>	Use a NIOSH approved organic vapor chemical cartridge or supplied air respirators when there is the potential for airborne exposures to exceed permissible exposure limits or if excessive vapors are generated. Observe respirator assigned protection factors (APFs) criteria cited in federal OSHA 29 CFR 1910.134. Self-contained breathing apparatus should be used for fire fighting.
<b>Hygiene measures:</b>	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical State</b>	Liquid
<b>Appearance</b>	Brown Liquid
<b>Color</b>	Brown
<b>Odor</b>	Petroleum
<b>Odor Threshold</b>	No data available.

<u>Property</u>	<u>Values (Method)</u>
<b>Melting Point / Freezing Point</b>	No data available.
<b>Initial Boiling Point / Boiling Range</b>	No data available.
<b>Flash Point</b>	> 200 °C / > 392 °F (Cleveland Open-Cup)
<b>Evaporation Rate</b>	No data available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Flammability Limit in Air (%):</b>	
<b>Upper Flammability Limit:</b>	No data available.
<b>Lower Flammability Limit:</b>	No data available.
<b>Explosion limits:</b>	No data available.
<b>Vapor Pressure</b>	No data available.
<b>Vapor Density</b>	No data available.
<b>Specific Gravity / Relative Density</b>	0.89
<b>Water Solubility</b>	No data available.
<b>Solubility in other solvents</b>	No data available.
<b>Partition Coefficient</b>	No data available.
<b>Decomposition temperature</b>	No data available.
<b>pH:</b>	No available data.
<b>Autoignition Temperature</b>	No data available.
<b>Kinematic Viscosity</b>	42-170 mm <sup>2</sup> /s @ 40°C / 104°F (ASTM D445)
<b>Dynamic Viscosity</b>	No data available.
<b>Explosive Properties</b>	No data available.
<b>VOC Content (%)</b>	1.3 (w/w)
<b>Density</b>	No data available.
<b>Bulk Density</b>	Not applicable.

## 10. STABILITY AND REACTIVITY

<b><u>Reactivity</u></b>	The product is non-reactive under normal conditions.
<b><u>Chemical stability</u></b>	Stable under recommended storage conditions.
<b><u>Possibility of hazardous reactions</u></b>	None under normal processing.
<b><u>Hazardous polymerization</u></b>	Will not occur.
<b><u>Conditions to avoid</u></b>	Sources of heat or ignition.
<b><u>Incompatible Materials</u></b>	Strong oxidizing agents.

**Hazardous decomposition products**

None known under normal conditions of use.

**11. TOXICOLOGICAL INFORMATION**

**Potential short-term adverse effects from overexposures**

<b>Inhalation</b>	Overheating may produce vapors which may cause respiratory irritation, dizziness and nausea.
<b>Eye contact</b>	Irritating to eyes. May cause reddening and tearing.
<b>Skin contact</b>	May cause skin irritation. Prolonged or repeated exposure may cause dermatitis, folliculitis or oil acne.
<b>Ingestion</b>	May cause irritation of the mouth, throat and gastrointestinal tract.

**Acute toxicological data**

Name	Oral LD50	Dermal LD50	Inhalation LC50
Zinc Alkyl Dithiophosphate 68649-42-3	-	-	-
p-Dodecylphenol 104-43-8	-	-	-

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

This product is considered to have a low order of acute and chronic oral and dermal toxicity.

**Adverse effects related to the physical, chemical and toxicological characteristics**

**Signs and Symptoms** Causes eye irritation. Symptoms may include redness, itching, and inflammation. Contact may cause skin dermatitis and/or irritation. Repeated or prolonged skin contact may cause drying, reddening, itching and cracking.

**Sensitization** Not expected to be a skin or respiratory sensitizer.

**Mutagenic effects** None known.

**Carcinogenicity** Cancer designations are listed in the table below

Name	ACGIH (Class)	IARC (Class)	NTP	OSHA
Zinc Alkyl Dithiophosphate 68649-42-3	Not Listed	Not Listed	Not Listed	Not Listed
p-Dodecylphenol 104-43-8	Not Listed	Not Listed	Not Listed	Not Listed

**Reproductive toxicity** Suspected of damaging fertility or the unborn child.

**Specific Target Organ Toxicity (STOT) - single exposure** Not classified.

**Specific Target Organ Toxicity (STOT) - repeated exposure** Not classified.

**Aspiration hazard** Not classified.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity** Harmful to aquatic life with long lasting effects.

Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Zinc Alkyl Dithiophosphate 68649-42-3	-	96-hr LC50 = 1-5 mg/L Fathead minnow (static)	-	48-hr EC50 = 1.0-1.5 mg/L Daphnia magna
p-Dodecylphenol 104-43-8	-	96-hr LC50 = 0.14 mg/L Cutthroat trout	-	-

**Persistence and degradability** No information available.

**Bioaccumulation** Contains component(s) with the potential to bioaccumulate.

**Mobility in soil** No information available.

**Other adverse effects** No information available.

### 13. DISPOSAL CONSIDERATIONS

**Description of Waste Residues**  
No information available.

**Safe Handling of Wastes**  
Handle in accordance with applicable local, state, and federal regulations. Use personal protection measures as required.

**Disposal of Wastes / Methods of Disposal**  
The user is responsible for determining if any discarded material is a hazardous waste (40 CFR 262.11). Dispose of in accordance with federal, state and local regulations.

**Methods of Contaminated Packaging Disposal**  
Empty containers should be completely drained and then discarded or recycled, if possible. Do not cut, drill, grind or weld on empty containers since explosive residues may be present. Dispose of in accordance with federal, state and local regulations.

### 14. TRANSPORT INFORMATION

**DOT (49 CFR 172.101):**  
**UN Proper Shipping Name:** Not Regulated  
**UN/Identification No:** Not applicable  
**Class:** Not applicable.  
**Packing Group:** Not applicable.

**TDG (Canada):**  
**UN Proper Shipping Name:** Not Regulated  
**UN/Identification No:** Not applicable.  
**Transport Hazard Class(es):** Not applicable.  
**Packing Group:** Not applicable.

### 15. REGULATORY INFORMATION

**US Federal Regulatory Information:**

US TSCA Chemical Inventory Section 8(b): This product and/or its components are listed on the TSCA Chemical Inventory.

**EPA Superfund Amendment & Reauthorization Act (SARA):**

**SARA Section 302:** This product may contain component(s) that have been listed on EPA's Extremely Hazardous Substance (EHS) List:

Name	CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs

Zinc Alkyl Dithiophosphate	NA
p-Dodecylphenol	NA

**SARA Section 304:** This product may contain component(s) identified either as an EHS or a CERCLA Hazardous substance which in case of a spill or release may be subject to SARA reporting requirements:

Name	Hazardous Substances RQs
Zinc Alkyl Dithiophosphate	NA
p-Dodecylphenol	NA

**SARA Section 311/312:** The following EPA hazard categories apply to this product:

Acute Health Hazard

**SARA Section 313:** This product may contain component(s), which if in exceedance of the de minimus threshold, may be subject to the reporting requirements of SARA Title III Section 313 Toxic Release Reporting (Form R).

Name	CERCLA/SARA 313 Emission reporting:
Zinc Alkyl Dithiophosphate	1.0 % de minimis concentration
p-Dodecylphenol	None

**State and Community Right-To-Know Regulations:**

The following component(s) of this material are identified on the regulatory lists below:

Zinc Alkyl Dithiophosphate

- Louisiana Right-To-Know: Not Listed
- California Proposition 65: Not Listed
- New Jersey Right-To-Know: SN 3012
- Pennsylvania Right-To-Know: Environmental hazard
- Massachusetts Right-To Know: Not Listed
- Florida Substance List: Not Listed
- Rhode Island Right-To-Know: Not Listed
- Michigan Critical Materials Register List: 100 lb Annual usage threshold
- Massachusetts Extraordinarily Hazardous Substances: Not Listed
- California - Regulated Carcinogens: Not Listed
- Pennsylvania RTK - Special Hazardous Substances: Not Listed
- New Jersey - Special Hazardous Substances: Not Listed
- New Jersey - Environmental Hazardous Substances List: SN 3012 TPQ: 500 lb (Category Code N982. Includes any unique chemical substance that contains the named metal as part of that chemical structure)
- Illinois - Toxic Air Contaminants: Not Listed
- New York - Reporting of Releases Part 597 - List of Hazardous Substances: Not Listed

p-Dodecylphenol

- Louisiana Right-To-Know: Not Listed
- California Proposition 65: Not Listed
- New Jersey Right-To-Know: Not Listed
- Pennsylvania Right-To-Know: Not Listed
- Massachusetts Right-To Know: Not Listed
- Florida Substance List: Not Listed
- Rhode Island Right-To-Know: Not Listed
- Michigan Critical Materials Register List: Not Listed
- Massachusetts Extraordinarily Hazardous Substances: Not Listed
- California - Regulated Carcinogens: Not Listed
- Pennsylvania RTK - Special Hazardous Substances: Not Listed
- New Jersey - Special Hazardous Substances: Not Listed
- New Jersey - Environmental Hazardous Substances List: Not Listed



Substances List:

Illinois - Toxic Air Contaminants: Not Listed  
New York - Reporting of Releases Part 597 - Not Listed  
List of Hazardous Substances:

**Canada DSL/NDSL Inventory:** This product and/or its components are listed either on the Domestic Substances List (DSL) or are exempt.

**Canadian Regulatory Information:** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by those regulations.

Name	Canada - WHMIS: Classifications of Substances:	Canada - WHMIS: Ingredient Disclosure:
Zinc Alkyl Dithiophosphate	D2B	1%



**Note:** Not applicable.

## 16. OTHER INFORMATION

**Prepared By** Toxicology and Product Safety

**Revision Notes**

**Revision Date** 05/27/2015

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is intended as guidance for safe handling, use, processing, storage, transportation, accidental release, clean-up and disposal and is not considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.