



SAFETY DATA SHEET

SDS ID NO.: 0175MAR019
Revision Date 05/27/2015

1. IDENTIFICATION

Product Name: Marathon Petroleum HF Oil
Synonym: Marathon HF Oil; Hydraulic & Flushing Oil; HF 5W Oil; 287 HF Oil
Product Code: 0175MAR019
Chemical Family: Hydrocarbon Mixture
Recommended Use: Base Oil, Pump Oil, Smoke Oil, Form Oil.
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)

Aspiration toxicity	Category 1
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Hazards Not Otherwise Classified (HNOC)
Not applicable.

Label elements

EMERGENCY OVERVIEW

Danger

May be fatal if swallowed and enters airways



Appearance Clear Liquid**Physical State** Liquid**Odor** Petroleum**Precautionary Statements - Prevention**

Not applicable.

Precautionary Statements - Response

IF SWALLOWED: Immediately call a POISON CENTER or doctor

Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container at an approved waste disposal plant

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

Form Oil is a complex mixture of highly refined lubricating base stocks and additives.

Composition Information:

Name	CAS Number	% Concentration
Lubricating Oils (Petroleum), Hydrotreated C15-C30, Neutral Oil-based	72623-86-0	> 10
Hydrotreated Heavy Paraffinic Petroleum Distillates	64742-54-7	> 10
Distillates (petroleum), hydrotreated light	64742-47-8	> 10

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 if irritation persists.

Ingestion:

Do not induce vomiting because of danger of aspirating liquid into lungs, causing serious damage and chemical pneumonitis. 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. GET IMMEDIATE MEDICAL ATTENTION.

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

Adverse Effects: May cause nausea and vomiting. Preexisting skin conditions and respiratory disorders may be aggravated by exposure to components of 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.

INGESTION: This material represents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

For small fires, Class B fire extinguishing media such as CO₂, 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 Prevent further leakage or spillage if safe to do so.

containment:

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
Lubricating Oils (Petroelum), Hydrotreated C15-C30, Neutral Oil-based 72623-86-0	Mineral oil, highly/severely refined, inhalable fraction 5 mg/m ³ TWA	-	-	-
Hydrotreated Heavy Paraffinic Petroleum Distillates 64742-54-7	Mineral oil, highly/severely refined, inhalable fraction 5 mg/m ³ TWA	-	-	-
Distillates (petroleum), hydrotreated light 64742-47-8	200 mg/m ³ TWA (total hydrocarbon vapor) Skin - potential significant contribution to overall exposure by the cutaneous route	-	-	-

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.

Respiratory protection:

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.

Hygiene measures:

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

Physical State	Liquid
Appearance	Clear Liquid
Color	Clear
Odor	Petroleum
Odor Threshold	No data available.

Property	Values (Method)
Melting Point / Freezing Point	No data available.
Initial Boiling Point / Boiling Range	No data available.
Flash Point	> 200 °C / > 392 °F (Cleveland Open-Cup)
Evaporation Rate	No data available.
Flammability (solid, gas)	Not applicable.
Flammability Limit in Air (%):	
Upper Flammability Limit:	No data available.
Lower Flammability Limit:	No data available.
Explosion limits:	No data available.
Vapor Pressure	No data available.
Vapor Density	No data available.
Specific Gravity / Relative Density	0.83-0.85
Water Solubility	No data available.
Solubility in other solvents	No data available.
Partition Coefficient	No data available.
Decomposition temperature	No data available.
pH:	No available data.
Autoignition Temperature	No data available.
Kinematic Viscosity	5.2 mm ² /s @ 40°C / 104°F
Dynamic Viscosity	No data available.
Explosive Properties	No data available.
VOC Content (%)	33.3 (w/w)
Density	No data available.
Bulk Density	Not applicable.

10. STABILITY AND REACTIVITY

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

11. TOXICOLOGICAL INFORMATION

Potential short-term adverse effects from overexposures

Inhalation	Overheating may produce vapors which may cause respiratory irritation, dizziness and nausea.
Eye contact	Exposure to vapor or contact with liquid may cause mild eye irritation, including tearing, stinging, and redness.
Skin contact	Prolonged or repeated exposure may cause dermatitis, folliculitis or oil acne.
Ingestion	May be fatal if swallowed or vomited and enters airways. May cause irritation of the mouth, throat and gastrointestinal tract.

Acute toxicological data

Name	Oral LD50	Dermal LD50	Inhalation LC50
Lubricating Oils (Petroelum), Hydrotreated C15-C30, Neutral Oil-based 72623-86-0	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.5 mg/l (Rat) 4 h
Hydrotreated Heavy Paraffinic Petroleum Distillates 64742-54-7	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.5 mg/l (Rat) 4 h
Distillates (petroleum), hydrotreated light 64742-47-8	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.2 mg/L (Rat) 4 h

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	Nausea Vomiting 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
Lubricating Oils (Petroelum), Hydrotreated C15-C30, Neutral Oil-based 72623-86-0	Not Listed	Not Listed	Not Listed	Not Listed
Hydrotreated Heavy Paraffinic Petroleum Distillates 64742-54-7	Not Listed	Not Listed	Not Listed	Not Listed
Distillates (petroleum), hydrotreated light 64742-47-8	Not Listed	Not Listed	Not Listed	Not Listed

Reproductive toxicity	None known.
Specific Target Organ Toxicity (STOT) - single exposure	Not classified.
Specific Target Organ Toxicity (STOT) - repeated exposure	Not classified.
Aspiration hazard	May be fatal if swallowed or vomited and enters airways.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Lubricating Oils (Petroelum), Hydrotreated C15-C30, Neutral Oil-based 72623-86-0	-	96-hr LC50 = 5000 mg/L Rainbow trout	-	48-hr EC50 = 1000 mg/L Daphnia magna
Hydrotreated Heavy Paraffinic Petroleum Distillates 64742-54-7	-	96-hr LC50 = 5000 mg/L Rainbow trout	-	48-hr EC50 = 1000 mg/L Daphnia magna
Distillates (petroleum), hydrotreated light 64742-47-8	-	96-hr LC50 = 2.2 mg/l Bluegill	-	-

Persistence and degradability No information available.

Bioaccumulation No information available.

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 applicable.
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
Lubricating Oils (Petroelum), Hydrotreated C15-C30, Neutral Oil-based	NA
Hydrotreated Heavy Paraffinic Petroleum Distillates	NA
Distillates (petroleum), hydrotreated light	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
Lubricating Oils (Petroelum), Hydrotreated C15-C30, Neutral Oil-based	NA
Hydrotreated Heavy Paraffinic Petroleum Distillates	NA
Distillates (petroleum), hydrotreated light	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:
Lubricating Oils (Petroelum), Hydrotreated C15-C30, Neutral Oil-based	None
Hydrotreated Heavy Paraffinic Petroleum Distillates	None
Distillates (petroleum), hydrotreated light	None

State and Community Right-To-Know Regulations:

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

Lubricating Oils (Petroelum), Hydrotreated C15-C30, Neutral Oil-based	
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
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed
Hydrotreated Heavy Paraffinic Petroleum Distillates	
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
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed
Distillates (petroleum), hydrotreated light	
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
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

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:
Lubricating Oils (Petroelum), Hydrotreated C15-C30, Neutral Oil-based	Uncontrolled product according to WHMIS classification criteria	

Note: Uncontrolled product according to WHMIS classification criteria.

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.