



# Material Safety Data Sheet

MSDS ID NO.: 0290MAR019  
Revision date: 12/07/2010

## 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

**Product name:** Marathon No. 2 Ultra Low Sulfur Diesel 15 ppm Sulfur Max  
**Synonym:** Ultra Low Sulfur Diesel No. 2 15 ppm Sulfur Max; Ultra Low Sulfur Diesel No. 2 15 ppm Sulfur Max with Polar Plus; No. 2 Diesel, Motor Vehicle Use, Undyed; No. 2 Diesel, Motor Vehicle Use, Undyed, with Polar Plus; ULSD No. 2 Diesel 15 ppm Sulfur Max; ULSD No. 2 Diesel 15 ppm Sulfur Max with Polar Plus; No. 2 MV 15 Diesel; No. 2 MV 15 Diesel with Polar Plus.  
**Chemical Family:** Petroleum Hydrocarbon  
**Formula:** Mixture

**Manufacturer:**  
Marathon Petroleum Company LP  
539 South Main Street Findlay OH 45840

**Other information:** 419-421-3070  
**Emergency telephone number:** 877-627-5463

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

No. 2 Ultra Low Sulfur Diesel is a complex mixture of paraffins, cycloparaffins, olefins and aromatic hydrocarbon chain lengths predominantly in the range of C9-C16. Can contain small amounts of dye and other additives (<0.15%) which are not considered hazardous at the concentrations used.

### Product information:

| Name                                   | CAS Number | Weight % | ACGIH Exposure Limits:  | OSHA - Vacated PELs - Time Weighted Ave | Other: |
|--|------------|----------|---|---|--------|
| Marathon No. 2 Ultra Low Sulfur Diesel | 68476-30-2 | 100      | Skin - potential significant contribution to overall exposure by the cutaneous route<br>100 mg/m <sup>3</sup> TWA |   |        |

### Component Information:

| Name                     | CAS Number | Weight % | ACGIH Exposure Limits:  | OSHA - Vacated PELs - Time Weighted Ave  | Other: |
|--------------------------|------------|----------|---|--|--------|
| Saturated Hydrocarbons   | Mixture    | 70-80    |   |  |        |
| Aromatic Hydrocarbons    | Mixture    | 17-25    |   |  |        |
| Unsaturated Hydrocarbons | Mixture    | 3-6      |   |  |        |
| Naphthalene              | 91-20-3    | 0.01-0.5 | Skin - potential significant contribution to overall exposure by the cutaneous route<br>10 ppm TWA<br>15 ppm STEL | = 10 ppm TWA<br>= 50 mg/m <sup>3</sup> TWA<br>= 15 ppm STEL<br>= 75 mg/m <sup>3</sup> STEL |        |

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

### 3. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

CAUTION!

VAPORS, FUMES, OR MISTS MAY CAUSE RESPIRATORY TRACT IRRITATION  
MAY BE HARMFUL OR FATAL IF SWALLOWED  
MAY CAUSE LUNG DAMAGE  
OVEREXPOSURE MAY CAUSE CNS DEPRESSION  
SEE TOXICOLOGICAL INFORMATION SECTION FOR MORE INFORMATION

COMBUSTIBLE LIQUID AND VAPOR  
VAPOR MAY CAUSE FLASH FIRE

STABLE

#### Inhalation:

Exposure to high vapor concentrations may produce headache, giddiness, vertigo, and anesthetic stupor.

#### Ingestion:

Ingestion may result in nausea, vomiting, diarrhea and restlessness. Aspiration (inadvertent suction) of liquid into the lungs must be avoided as even small quantities in the lungs can produce chemical pneumonitis, pulmonary edema/hemorrhage and even death.

#### Skin contact:

Prolonged and repeated liquid contact can cause defatting and drying of the skin and can lead to irritation and/or dermatitis.

#### Eye contact:

Produces little or no irritation on direct contact with the eye.

#### Carcinogenic Evaluation:

#### Product information:

| Name  | IARC<br>Carcinogens: | NTP<br>Carcinogens: | ACGIH -<br>Carcinogens: | OSHA - Select<br>Carcinogens: |
|---|----------------------|---------------------|-------------------------|-------------------------------|
| Marathon No. 2 Ultra Low Sulfur<br>Diesel<br>68476-30-2 | NE                   |                     |                         |                               |

#### Notes:

The International Agency for Research on Cancer (IARC) has determined that there is inadequate evidence for the carcinogenicity of diesel fuel/fuel oil in humans. IARC determined that there was limited evidence for the carcinogenicity of marine diesel fuel in animals. Distillate (light) diesel fuels were not classifiable as to their carcinogenicity to humans (Group 3A).

IARC has determined that there is sufficient evidence for the carcinogenicity in experimental animals of diesel engine exhaust and extracts of diesel engine exhaust particles. IARC determined that there is only limited evidence for the carcinogenicity in humans of diesel engine exhaust. However, IARC's overall evaluation has resulted in the IARC designation of diesel engine exhaust as probably carcinogenic to humans (Group 2A) because of the presence of certain engine exhaust components.

#### Component Information:

| Name | IARC<br>Carcinogens: | NTP<br>Carcinogens: | ACGIH -<br>Carcinogens: | OSHA - Select<br>Carcinogens: |
|------|----------------------|---------------------|-------------------------|-------------------------------|
|      |                      |                     |                         |                               |

| Name                   | IARC<br>Carcinogens: | NTP<br>Carcinogens:  | ACGIH -<br>Carcinogens:                        | OSHA - Select<br>Carcinogens: |
|------------------------|----------------------|--|--|-------------------------------|
| Naphthalene<br>91-20-3 | Monograph 82 [2002]  | Reasonably Anticipated To<br>Be A Human Carcinogen<br>male rat-clear evidence;<br>female rat-clear evidence;<br>male mice-no evidence;<br>female mice-some<br>evidence | A4 - Not Classifiable as a<br>Human Carcinogen | Present                       |

**Notes:**

The International Agency for Research on Cancer (IARC) and the Environmental Protection Agency (EPA) have determined that naphthalene is a possible human carcinogen.

## 4. FIRST AID MEASURES

**Eye Contact:**

Flush eyes with large amounts of tepid water for at least 15 minutes. If symptoms or irritation occur, call a physician.

**Skin Contact:**

Wash with soap and large amounts of water. Remove contaminated clothing. If symptoms or irritation occur, call a physician.

**Ingestion:**

If swallowed, do not induce vomiting and do not give liquids. Immediately call a physician.

**Inhalation:**

If affected, move person to fresh air. If breathing is difficult, administer oxygen. If not breathing or if no heartbeat, give artificial respiration or cardiopulmonary resuscitation (CPR). Immediately call a physician. If symptoms or irritation occur with any exposure, call a physician.

**NOTES TO PHYSICIAN:**

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

**Medical Conditions  
Aggravated  
By Exposure:**

Pre-existing skin conditions and respiratory disorders may be aggravated by exposures to components of this product.

## 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. Fire fighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.

**Specific hazards:**

This product has been determined to be a combustible liquid per the OSHA Hazard Communication Standard and should be handled accordingly. For additional fire related information, see NFPA 30 or the North American Emergency Response Guide 128.

## 5. FIRE FIGHTING MEASURES

### Special protective equipment 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. Keep surrounding area cool with water spray from a distance and prevent further ignition of combustible material. Keep run-off water out of sewers and water sources.

### Flash point:

120-190 F

### Autoignition temperature:

489 F

### Flammable limits in air - lower (%):

0.7

### Flammable limits in air - upper (%):

5.0

### NFPA rating:

Health: 1

Flammability: 2

Instability: 0

Other: -

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions:

Keep public away. Isolate and evacuate area. Shut off source if safe to do so. Eliminate all ignition sources. 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. Contain liquid with sand or soil. Recover and return free product to proper containers. Use suitable absorbent materials such as vermiculite, sand, or clay to clean up residual liquids.

## 7. HANDLING AND STORAGE

### Handling:

Comply with all applicable EPA, OSHA, NFPA and consistent state and local requirements. Use appropriate grounding and bonding practices. Store in properly closed containers that are appropriately labeled and in a cool well-ventilated area. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. Do not cut, drill, grind or weld on empty containers since they may contain explosive residues.

Avoid repeated and prolonged skin contact. Never siphon this product by mouth. Exercise good personal hygiene including removal of soiled clothing and prompt washing with soap and water.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### PERSONAL PROTECTIVE EQUIPMENT

#### Engineering measures:

Local or general exhaust required when using at elevated temperatures that generate vapors or mists.

#### Respiratory protection:

Use approved organic vapor chemical cartridge or supplied air respirators when material produces vapors that exceed permissible limits or excessive vapors are generated. Observe respirator assigned protection factors (APFs) criteria cited in federal OSHA 1910.134. Self-contained breathing apparatus should be used for fire fighting.

#### Skin and body protection:

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride and polyurethane gloves to prevent skin contact.

**Eye protection:** No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields.

**Hygiene measures:** No special protective clothing is normally required. Select protective clothing depending on industrial operations. Use mechanical ventilation equipment that is explosion-proof.

## 9. PHYSICAL AND CHEMICAL PROPERTIES:

|   |                    |
|---|--------------------|
| <b>Appearance:</b>                              | Colorless Liquid   |
| <b>Physical state (Solid/Liquid/Gas):</b>       | Liquid             |
| <b>Substance type (Pure/Mixture):</b>           | Mixture            |
| <b>Color:</b>                                   | Colorless          |
| <b>Odor:</b>                                    | Not applicable.    |
| <b>Molecular weight:</b>                        | 180                |
| <b>pH:</b>                                      | Neutral            |
| <b>Boiling point/range (5-95%):</b>             | 360-550 F          |
| <b>Melting point/range:</b>                     | Not determined.    |
| <b>Decomposition temperature:</b>               | Not applicable.    |
| <b>Specific gravity:</b>                        | C.A. 0.8           |
| <b>Density:</b>                                 | 6.76 lbs/gal       |
| <b>Bulk density:</b>                            | No data available. |
| <b>Vapor density:</b>                           | 4-5                |
| <b>Vapor pressure:</b>                          | 1-10 mm Hg @ 100 F |
| <b>Evaporation rate:</b>                        | No data available. |
| <b>Solubility:</b>                              | Negligible         |
| <b>Solubility in other solvents:</b>            | No data available. |
| <b>Partition coefficient (n-octanol/water):</b> | No data available. |
| <b>VOC content(%):</b>                          | 10%                |
| <b>Viscosity:</b>                               | 1.3-2.1 @ 50 C     |

## 10. STABILITY AND REACTIVITY

**Stability:** The material is stable at 70 F, 760 mm pressure.

**Polymerization:** Will not occur.

**Hazardous decomposition products:** Combustion produces carbon monoxide, aldehydes, aromatic and other hydrocarbons.

**Materials to avoid:** Strong oxidizers such as nitrates, perchlorates, chlorine, fluorine.

**Conditions to avoid:** Excessive heat, sources of ignition and open flames.

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity:**

**Product information:**

| Name                                   | CAS Number | Inhalation:       | Dermal:           | Oral:             |
|--|------------|-------------------|-------------------|-------------------|
| Marathon No. 2 Ultra Low Sulfur Diesel | 68476-30-2 | No data available | No data available | No data available |

**Toxicology Information:**

MIDDLE DISTILLATES, PETROLEUM: Long-term repeated (lifetime) skin exposure to similar materials has been reported to result in an increase in skin tumors in laboratory rodents. The relevance of these findings to humans is not clear at this time.

ISOPARAFFINS: Studies in laboratory animals have shown that long-term exposure to similar materials (isoparaffins) can cause kidney damage and kidney cancer in male laboratory rats. However, in-depth research indicates that these findings are unique to the male rat, and that these effects are not relevant to humans.

NAPHTHALENE: Severe jaundice, neurotoxicity (kernicterus) and fatalities have been reported in young children and infants as a result of hemolytic anemia from overexposure to naphthalene. Persons with Glucose 6-phosphate dehydrogenase (G6PD) deficiency are more prone to the hemolytic effects of naphthalene. Adverse effects on the kidney have been reported in persons overexposed to naphthalene but these effects are believed to be a consequence of hemolytic anemia, and not a direct effect. Hemolytic anemia has been observed in laboratory animals exposed to naphthalene. Laboratory rodents exposed to naphthalene vapor for 2 years (lifetime studies) developed non-neoplastic and neoplastic tumors and inflammatory lesions of the nasal and respiratory tract. Cataracts and other adverse effects on the eye have been observed in laboratory animals exposed to high levels of naphthalene. Findings from a large number of bacterial and mammalian cell mutation assays have been negative. A few studies have shown chromosomal effects (elevated levels of Sister Chromatid Exchange or chromosomal aberrations) in vitro. Naphthalene has been classified as Possibly Carcinogenic to Humans (2B) by IARC, based on findings from studies in laboratory animals.

DIESEL EXHAUST: Chronic inhalation studies of whole diesel engine exhaust in mice and rats produced a significant increase in lung tumors. Combustion of kerosine and/or diesel fuels produces gases and particulates which include carbon monoxide, carbon dioxide, oxides of nitrogen and/or sulfur and hydrocarbons. Significant exposure to carbon monoxide vapors decreases the oxygen carrying capacity of the blood and may cause tissue hypoxia via formation of carboxyhemoglobin.

Altered mental state, drowsiness, peripheral motor neuropathy, irreversible brain damage (so-called Petrol Sniffers Encephalopathy), delirium, seizures, and sudden death have been reported from repeated overexposure to some hydrocarbon solvents, naphthas, and gasoline.

**TARGET ORGANS:** central nervous system, skin, respiratory system, lungs, kidney, liver,

## 12. ECOTOXICOLOGICAL INFORMATION

**Mobility:**

May partition into air, soil and water.

**Ecotoxicity:**

Toxic to aquatic organisms.

**Bioaccumulation:**

Not expected to bioaccumulate in aquatic organisms.

**Persistence/Biodegradation:**

Readily biodegradable in the environment.

### 13. DISPOSAL CONSIDERATIONS

#### Cleanup Considerations:

This product as produced is not specifically listed as an EPA RCRA hazardous waste according to federal regulations (40 CFR 261). However, when discarded or disposed of, it may meet the criteria of an "characteristic" hazardous waste. This material could become a hazardous waste if mixed or contaminated with a hazardous waste or other substance(s). It is the responsibility of the user to determine if disposal material is hazardous according to federal, state and local regulations.

### 14. TRANSPORT INFORMATION

#### 49 CFR 172.101:

#### DOT:

**Transport Information:** This material when transported via US commerce would be regulated by DOT Regulations.

**Proper shipping name:** Fuel Oil, No. 2  
**UN/Identification No:** NA 1993  
**Hazard Class:** 3  
**Packing group:** III  
**DOT reportable quantity (lbs):** Not applicable.

**Proper shipping name:** Fuel Oil, No. 2  
**UN/Identification No:** NA 1993  
**Hazard Class:** 3  
**Packing group:** III

### 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.

OSHA Hazard Communication Standard: This product has been evaluated and determined to be hazardous as defined in OSHA's Hazard Communication Standard.

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

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

| Name                     | CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs |
|--------------------------|---|
| Saturated Hydrocarbons   | NA  |
| Aromatic Hydrocarbons    | NA  |
| Unsaturated Hydrocarbons | NA  |
| Naphthalene              | NA  |

**SARA Section 304:**

This product contains the following 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                     | CERCLA/SARA - Hazardous Substances and their Reportable Quantities |
|--------------------------|--|
| Saturated Hydrocarbons   | NA   |
| Aromatic Hydrocarbons    | NA   |
| Unsaturated Hydrocarbons | NA   |
| Naphthalene              | = 100 lb final RQ<br>= 45.4 kg final RQ                            |

**SARA Section 311/312**

The following EPA hazard categories apply to this product:

Acute Health Hazard  
Fire Hazard  
Chronic Health Hazard

**SARA Section 313:**

This product contains the following component(s) that may be subject to reporting on the Toxic Release Inventory (TRI) From R:

| Name                     | CERCLA/SARA 313 Emission reporting: |
|--------------------------|-------------------------------------|
| Saturated Hydrocarbons   | None                                |
| Aromatic Hydrocarbons    | None                                |
| Unsaturated Hydrocarbons | None                                |
| Naphthalene              | = 0.1 % de minimis concentration    |

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

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

**Saturated Hydrocarbons**

|   |             |
|---|-------------|
| 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  |

**Aromatic Hydrocarbons**

|                              |             |
|------------------------------|-------------|
| 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. |



#### Saturated Hydrocarbons

|   |             |
|---|-------------|
| 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  |

#### Unsaturated Hydrocarbons

|   |             |
|---|-------------|
| 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  |

#### Naphthalene

|   |                                  |
|---|----------------------------------|
| Louisiana Right-To-Know:                            | Not Listed                       |
| California Proposition 65:                          | carcinogen, initial date 4/19/02 |
| New Jersey Right-To-Know:                           | sn 1322                          |
| Pennsylvania Right-To-Know:                         | Environmental hazard             |
| Massachusetts Right-To Know:                        | Present                          |
| Florida substance List:                             | Not Listed.                      |
| Rhode Island Right-To-Know:                         | Toxic; Flammable                 |
| 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:          | carcinogen                       |

## Saturated Hydrocarbons

New Jersey - Environmental Hazardous  
Substances List:

Illinois - Toxic Air Contaminants

New York - Reporting of Releases Part 597 -  
List of Hazardous Substances:

SN 1322 TPQ 500 lb

Present

= 1 lb RQ land/water

= 100 lb RQ air

## Canadian Regulatory Information:

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

| Name        | Canada - WHMIS: Classifications of Substances: | Canada - WHMIS: Ingredient Disclosure: |
|-------------|--|--|
| Naphthalene | B4, D2A  | 1 %                                    |

**NOTE:** Not Applicable.

## 16. OTHER INFORMATION

**Additional Information:** No data available.

**Prepared by:** Mark S. Swanson, Manager, Toxicology and Product Safety

The information and recommendations contained herein are based upon tests believed to be reliable. However, Marathon Petroleum Company LP (MPC) does not guarantee their accuracy or completeness nor shall any of this information constitute a warranty, whether expressed or implied, as to the safety of the goods, the merchantability of the goods, or the fitness of the goods for a particular purpose. Adjustment to conform to actual conditions of usage maybe required. MPC assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.

**End of Safety Data Sheet**