



SAFETY DATA SHEET

SDS ID NO.: 0257MAR019
Revision Date: 05/27/2015

1. IDENTIFICATION

Product Name: Marathon Petroleum Dilute Naphthalene Oil
Synonym: Dilute Naphthalene Oil; DNO
Chemical Family: Hydrocarbon Mixture
Recommended Use: No available data.
Use Restrictions: No available data.

Supplier 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 according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids	Category 3
Acute toxicity - Oral	Category 4
Carcinogenicity	Category 2
Specific target organ toxicity (single exposure)	Category 1
Aspiration toxicity	Category 1
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1

Hazards Not Otherwise Classified (HNOC)

Static accumulating flammable liquid

Label elements

EMERGENCY OVERVIEW

Danger

FLAMMABLE LIQUID AND VAPOR
May accumulate electrostatic charge and ignite or explode

Harmful if swallowed.
 May be fatal if swallowed and enters airways
 Suspected of causing cancer
 Causes damage to organs (blood)
 Very toxic to aquatic life with long lasting effects
 25% of the mixture consists of ingredient(s) of unknown toxicity



Appearance Brown Liquid

Physical State Liquid

Odor Moth Ball odor

Precautionary Statements - Prevention

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Keep away from heat/sparks/open flames/hot surfaces. — No smoking
 Keep container tightly closed
 Ground/bond container and receiving equipment
 Use explosion-proof electrical/ventilating/lighting/equipment
 Use only non-sparking tools
 Take precautionary measures against static discharge
 Wash hands and any possibly exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Do not breathe dust/fume/gas/mist/vapors/spray
 Wear protective gloves/protective clothing/eye protection/face protection
 Avoid release to the environment

Precautionary Statements - Response

IF exposed: Call a POISON CENTER or doctor/physician
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
 IF SWALLOWED: Immediately call a POISON CENTER or doctor
 Rinse mouth
 Do NOT induce vomiting
 In case of fire: Use CO2, dry chemical, or foam for extinction
 Collect spillage

Precautionary Statements - Storage

Store in a well-ventilated place. Keep cool
 Store locked up

Precautionary Statements - Disposal

Dispose of contents/container at an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Dilute Naphthalene Oil is a mixture of naphthalene and indene derived from the fractionation of coal tar light oil.

Composition Information:

Name	CAS Number	Weight %
Naphthalene	91-20-3	62-82
Indene	95-13-6	2-25
2-methylnaphthalene	91-57-6	1.5-3

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). Keep affected person warm and at rest. GET IMMEDIATE MEDICAL ATTENTION.
- Skin Contact:** Immediately wash exposed skin with plenty of soap and water while removing contaminated clothing and shoes. May be absorbed through the skin in harmful amounts. Get medical attention if irritation persists. Place contaminated clothing in closed container until cleaned or discarded. If clothing is to be laundered, inform the person performing the operation of contaminant's hazardous properties. Destroy contaminated, non-chemical resistant footwear.
- When burned from contact with hot material, immerse or flush skin immediately with large amounts of cold water. Cover with clean cotton sheeting or gauze and GET IMMEDIATE MEDICAL ATTENTION.
- 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.
- If hot material comes in contact with eyes, hold the eyelids apart and flush the eye with a large amount of cool water for at least 15 minutes. GET IMMEDIATE MEDICAL ATTENTION.
- 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 skin irritation and/or dermatitis. Contact with hot product may cause burns. Causes adverse effects in blood.

Indication of any immediate medical attention and special treatment needed

- NOTES TO PHYSICIAN:** 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 straight water streams to avoid spreading fire.

Specific hazards arising from the chemical

This product has been determined to be a flammable liquid per the OSHA Hazard Communication Standard and should be handled accordingly. May accumulate electrostatic charge and ignite or explode. Vapors may travel along the ground or be moved by ventilation and ignited by many sources such as pilot lights, sparks, electric motors, static discharge, or other ignition sources at locations distant from material handling. Flashback can occur along vapor trail. For additional fire related information, see NFPA 30 or the North American Emergency Response Guide 128.

Hazardous combustion products

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

Explosion data

Sensitivity to Mechanical Impact No.
Sensitivity to Static Discharge Yes.

Special protective equipment and precautions for firefighters

Firefighters should wear full protective clothing and positive-pressure self-contained breathing apparatus (SCBA) with a full face-piece, as appropriate. 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.

NFPA: Health 2 Flammability 2 Instability 0 Special Hazards -

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. All contaminated surfaces will be slippery.
- 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:** Contain liquid with sand or soil.
- 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. When recovering free liquids ensure all equipment is grounded and bonded. Use only non-sparking tools. Material may phase separate and leave soft solid layer that can be shoveled.

7. HANDLING AND STORAGE

- Safe Handling Precautions:** Use appropriate grounding and bonding practices. Static accumulating flammable liquid. Bonding and grounding may be insufficient to eliminate the hazard from static electricity. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. No smoking. Avoid repeated and prolonged skin contact. Use personal protection measures as recommended in Section 8. Use only non-sparking tools. 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.
- Storage Conditions:** Store in properly closed containers that are appropriately labeled and in a cool, well-ventilated area.
- Incompatible materials** Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	ACGIH TLV	OSHA PELs:	OSHA - Vacated PELs	NIOSH IDLH
Naphthalene 91-20-3	10 ppm TWA Skin - potential significant contribution to overall exposure by the cutaneous route	TWA: 10 ppm TWA: 50 mg/m ³	10 ppm TWA 50 mg/m ³ TWA 15 ppm STEL 75 mg/m ³ STEL	250 ppm
Indene 95-13-6	5 ppm TWA	-	10 ppm TWA 45 mg/m ³ TWA	-
2-methylnaphthalene 91-57-6	0.5 ppm TWA 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 in an enclosed area or when there is inadequate ventilation. Use mechanical ventilation equipment that is explosion-proof.

Personal protective equipment

Eye protection: Use goggles or face-shield if the potential for splashing exists. Wear goggles and faceshield when handling hot material.

Skin and body protection: Polyvinyl alcohol (PVA) or viton 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.

Respiratory protection: Use an approved organic vapor chemical cartridge or supplied air respirators when material produces vapors that exceed permissible exposure limits or 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State Liquid
Appearance Brown Liquid
Color Dark brown
Odor Moth Ball odor
Odor Threshold No available data.

<u>Property</u>	<u>Values (Method)</u>
Melting Point / Freezing Point	No available data.
Initial Boiling Point / Boiling Range	No available data.
Flash Point	60-82 °C / 140-180 °F
Evaporation Rate	No available data.
Flammability (solid, gas)	Not applicable.
Flammability Limit in Air (%)	
Upper Flammability Limit:	5.9
Lower Flammability Limit:	0.9
Vapor Pressure	No available data.
Vapor Density	No available data.
Specific Gravity / Relative Density	0.96-1.0
Water Solubility	No available data.

Solubility in other solvents	No available data.
Partition Coefficient	No available data.
Decomposition temperature:	No available data.
pH:	Not applicable.
Autoignition Temperature	No available data.
Kinematic Viscosity	No available data.
Dynamic Viscosity	No available data.
Explosive Properties	No available data.
Softening Point	No available data.
VOC Content (%)	No available data.
Density	7.9-8.5 lbs/gal
Bulk Density	Not applicable.

10. STABILITY AND REACTIVITY

<u>Reactivity</u>	The product is non-reactive under normal conditions.
<u>Chemical stability</u>	The material is stable at 70°F, 760 mmHg pressure.
<u>Possibility of hazardous reactions</u>	None under normal processing.
<u>Hazardous polymerization</u>	Will not occur.
<u>Conditions to avoid</u>	Excessive heat, sources of ignition, open flame.
<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	Inhalation of high vapor concentrations may cause irritation of the respiratory system.
Eye contact	May cause eye irritation. Contact with hot material may cause thermal burns.
Skin contact	May cause skin irritation and/or dermatitis. May be absorbed through the skin in harmful amounts. Effects may become more serious with repeated or prolonged contact. Contact with hot material may cause thermal burns.
Ingestion	Harmful if swallowed. 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
Naphthalene 91-20-3	490 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 340 mg/m ³ (Rat) 1 h
Indene 95-13-6	-	-	-
2-methylnaphthalene 91-57-6	1630 mg/kg (Rat)	> 2500 mg/kg (Rat)	-

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

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.

Adverse effects related to the physical, chemical and toxicological characteristics

Signs & Symptoms Repeated or prolonged skin contact may cause drying, reddening, itching and cracking. Contact with hot product may cause burns. Causes damage to organs (blood).

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
Naphthalene 91-20-3	Confirmed animal carcinogen (A3)	Possible human carcinogen (2B)	Reasonably anticipated to be a human carcinogen	Not Listed
Indene 95-13-6	Not Listed	Not Listed	Not Listed	Not Listed
2-methylnaphthalene 91-57-6	Not Classifiable (A4)	Not Listed	Not Listed	Not Listed

Reproductive toxicity None known.

Specific Target Organ Toxicity (STOT) - single exposure Blood.

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

Aspiration hazard May be fatal if swallowed or vomited and enters airways.

Unknown Acute Toxicity 25% of the mixture consists of ingredient(s) of unknown toxicity

12. ECOLOGICAL INFORMATION

Ecotoxicity This product should be considered very toxic to aquatic organisms, with the potential to cause long lasting adverse effects in the aquatic environment.

Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Naphthalene 91-20-3	-	96-hr LC50 = 0.91-2.82 mg/l Rainbow trout (static) 96-hr LC50 = 1.99 mg/l Fathead minnow (static)	-	48-hr LC50 = 1.6 mg/l Daphnia magna
Indene 95-13-6	-	-	-	-
2-methylnaphthalene 91-57-6	-	96-hr LC50 = 1.07-1.84 mg/l Rainbow trout (static)	-	-

Persistence and degradability Readily biodegradable in the environment.

Bioaccumulation Not expected to bioaccumulate in aquatic organisms.

Mobility in soil May partition into air, soil and water.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Description of Waste Residues
 This material may be a flammable liquid waste.

Safe Handling of Wastes
 Handle in accordance with applicable local, state, and federal regulations. Use personal protection measures as required. Use appropriate grounding and bonding practices. Use only non-sparking tools. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. No smoking.

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:	Flammable Liquids, N.O.S. (Contains Naphthalene)
UN/Identification No:	UN 1993
Transport Hazard Class(es):	3
Packing group:	III
DOT reportable quantity (lbs):	100 pounds.

TDG (Canada):

UN Proper shipping name:	Flammable Liquids, N.O.S. (Contains Naphthalene)
UN/Identification No:	UN 1993
Transport Hazard Class(es):	3
Packing group:	III
Regulated substances:	100 pounds.

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 does not contain any component(s) included on EPA's Extremely Hazardous Substance (EHS) List.

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

2-methylnaphthalene	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	CERCLA/SARA - Hazardous Substances and their Reportable Quantities
Naphthalene	100 lb final RQ 45.4 kg final RQ
Indene	NA
2-methylnaphthalene	NA

SARA: The following EPA hazard categories apply to this product:

- Acute Health Hazard
- Fire Hazard
- Chronic Health Hazard

SARA Section 313: This product may contain component(s), which if in exceedance of the de minimis 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:
Naphthalene	0.1 % de minimis concentration
Indene	None
2-methylnaphthalene	None

State and Community Right-To-Know Regulations:

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

Naphthalene

- Louisiana Right-To-Know: Not Listed.
- California Proposition 65: Carcinogen, initial date 4/19/02
- New Jersey Right-To-Know: SN 1322 SN 3758
- Pennsylvania Right-To-Know: Environmental hazard Present (particulate)
- 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
- New Jersey - Environmental Hazardous Substances List: SN 1322 TPQ: 500 lb (Reportable at the de minimis quantity of >0.1%)
- Illinois - Toxic Air Contaminants: Present
- New York - Reporting of Releases Part 597 - List of Hazardous Substances: 100 lb RQ (air); 1 lb RQ (land/water)

Indene

- Louisiana Right-To-Know: Not Listed.
- California Proposition 65: Not Listed.
- New Jersey Right-To-Know: SN 1023 SN 3758
- Pennsylvania Right-To-Know: Present Present (particulate) Environmental hazard
- Massachusetts Right-To Know: Present
- Florida Substance List: Not Listed.
- Rhode Island Right-To-Know: Toxic
- 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 (total)
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed.
2-methylnaphthalene	
Louisiana Right-To-Know:	Not Listed.
California Proposition 65:	Not Listed.
New Jersey Right-To-Know:	SN 4200
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/NDL 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 (M)SDS contains all the information required by the Controlled Products Regulations."

Name	Canada - WHMIS: Classifications of Substances:	Canada - WHMIS: Ingredient Disclosure:
Naphthalene	B4,D2A	0.1%
Indene	B3	1%
2-methylnaphthalene	Uncontrolled product according to WHMIS classification criteria	1



NOTE: Not Applicable.

16. OTHER INFORMATION

Prepared By: Toxicology and Product Safety
Revision Date: 05/27/2015

Revision Note:

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.