



# SAFETY DATA SHEET

SDS ID NO.: 0243MAR019  
Revision Date 05/14/2015

## 1. IDENTIFICATION

**Product Name:** Marathon Petroleum Cumene  
**Synonym:** Cumene; Isopropylbenzene  
**Product Code:** 0243MAR019  
**Chemical Family:** Aromatic Hydrocarbon  
**Recommended Use:** Solvent. Chemical intermediate. Gasoline blending.  
**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)

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

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

Static accumulating flammable liquid  
May form explosive peroxides

### Label elements

#### **EMERGENCY OVERVIEW**

#### **Danger**

FLAMMABLE LIQUID AND VAPOR  
May accumulate electrostatic charge and ignite or explode  
May form explosive peroxides  
May be fatal if swallowed and enters airways  
May cause respiratory irritation

May cause drowsiness or dizziness  
 Suspected of causing cancer by inhalation  
 Toxic to aquatic life  
 Harmful to aquatic life with long lasting effects



**Appearance** Colorless Liquid

**Physical State** Liquid

**Odor** Aromatic

#### 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  
 Wear protective gloves/protective clothing/eye protection/face protection  
 Avoid breathing mist/vapors/spray  
 Use only outdoors or in a well-ventilated area  
 Avoid release to the environment

#### Precautionary Statements - Response

IF exposed or concerned: Get medical attention  
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
 Call a POISON CENTER or doctor if you feel unwell  
 IF SWALLOWED: Immediately call a POISON CENTER or doctor  
 Do NOT induce vomiting  
 In case of fire: Use water spray, fog or regular foam for extinction

#### Precautionary Statements - Storage

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

#### Precautionary Statements - Disposal

Dispose of contents/container at an approved waste disposal plant

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Cumene is a nine carbon aromatic petroleum hydrocarbon. Contains trace amounts of toluene and benzene (<50 ppm).

#### Composition Information:

Name	CAS Number	% Concentration
Cumene	98-82-8	99-100

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). Keep affected person warm and at rest. If symptoms occur get 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.
- 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:** Exposure to this product may cause respiratory irritation. May cause nausea, vomiting, diarrhea, and signs of nervous system depression: headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue. Aspiration hazard. May cause coughing, chest pains, shortness of breath, pulmonary edema and/or chemical pneumonitis. Repeated or prolonged skin contact may cause drying, reddening, itching and cracking.

**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 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. Do not use straight water streams to avoid spreading fire. 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 Emergency Response Guidebook 130.

**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. Water may be ineffective in extinguishing low flash point fires, but can be used to cool exposed surfaces. Avoid using straight water streams. Avoid excessive water spray application. Water spray and foam (AFFF/ATC) must be applied carefully to avoid frothing and from as far a distance as possible. Keep run-off water out of sewers and water sources.

#### Additional firefighting tactics

**FIRES INVOLVING TANKS OR CAR/TRAILER LOADS:** Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after the fire is out. Do not direct water at source of leak or safety devices; icing may occur. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

**EVACUATION:** Consider initial downwind evacuation for at least 1000 feet. If tank, rail car or tank truck is involved in a fire, ISOLATE for 5280 feet (1 mile) in all directions; also, consider initial evacuation of 5280 feet (1 mile) in all directions.

**NFPA** Health 2 Flammability 3 Instability 1 Special Hazard -

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions:</b>	Keep public away. Isolate and evacuate area. Shut off source if safe to do so. Eliminate all ignition sources.
<b>Protective equipment:</b>	Use personal protective equipment (See section 8).
<b>Emergency procedures:</b>	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.
<b>Environmental precautions:</b>	Avoid release to the environment. Avoid subsoil penetration.
<b>Methods and materials for containment:</b>	Contain liquid with sand or soil. Prevent spilled material from entering storm drains, sewers, and open waterways.
<b>Methods and materials for cleaning up:</b>	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.

## 7. HANDLING AND STORAGE

**Safe Handling Precautions:** NEVER SIPHON THIS PRODUCT BY MOUTH. 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. Vapors may travel along the ground or be moved by ventilation. Flashback may occur along vapor trails. No smoking. Use only non-sparking tools. Avoid breathing vapors or mists. Use only with adequate ventilation. Avoid repeated and prolonged skin contact. Use personal protection measures as recommended in Section 8. Exercise good personal hygiene including removal of soiled clothing and prompt washing with soap and water. Do not cut, drill, grind or weld on empty containers since explosive residues may remain. Comply with all applicable EPA, OSHA, NFPA and consistent state and local requirements.

Hydrocarbons are basically non-conductors of electricity and can become electrostatically charged during mixing, filtering, pumping at high flow rates or loading and transfer operations. If this charge reaches a sufficiently high level, sparks can form that may ignite the vapors of flammable liquids. Sudden release of hot organic chemical vapors or mists from process equipment operating under elevated temperature and pressure, or sudden

ingress of air into vacuum equipment may result in ignition of vapors or mists without the presence of obvious ignition sources. Nozzle spouts must be kept in contact with the containers or tank during the entire filling operation.

**Storage Conditions:** Store in properly closed containers that are appropriately labeled and in a cool, well-ventilated area. Extended storage increases the risk of generating explosive peroxides and therefore preventative analytical testing is recommended. Do not store near an open flame, heat or other sources of ignition.

**Incompatible Materials** Strong oxidizing agents. Air.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	ACGIH TLV	OSHA PELs:	OSHA - Vacated PELs	NIOSH IDLH
Cumene 98-82-8	50 ppm TWA	TWA: 50 ppm TWA: 245 mg/m <sup>3</sup> Skin	50 ppm TWA 245 mg/m <sup>3</sup> TWA Limit applies to skin	900 ppm

**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.

**Skin and body protection:** Viton gloves should be used to prevent skin contact. Contact the glove manufacturer for specific advice on glove selection and breakthrough times. Depending upon the conditions of use and specific work situations, additional protective equipment and/or clothing may be required to control exposures.

**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.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical State</b>	Liquid
<b>Appearance</b>	Colorless Liquid
<b>Color</b>	Colorless
<b>Odor</b>	Aromatic
<b>Odor Threshold</b>	No data available.

<u>Property</u>	<u>Values (Method)</u>
<b>Melting Point / Freezing Point</b>	-96 °C / -141 °F
<b>Initial Boiling Point / Boiling Range</b>	152 °C / 306 °F
<b>Flash Point</b>	44 °C / 111 °F
<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>	6.5
<b>Lower Flammability Limit:</b>	0.88
<b>Explosion limits:</b>	No data available.

Vapor Pressure	0.18 psi @ 100 °F
Vapor Density	No data available.
Specific Gravity / Relative Density	0.868
Water Solubility	No data available.
Solubility in other solvents	No data available.
Partition Coefficient	No data available.
Decomposition temperature	No data available.
pH:	Not applicable.
Autoignition Temperature	424 °C / 795 °F
Kinematic Viscosity	0.747 cSt @ 100°F
Dynamic Viscosity	No data available.
Explosive Properties	No data available.
VOC Content (%)	No data available.
Density	54.15 lb/ft <sup>3</sup>
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 (21°C ), 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>	Sources of heat or ignition. Prolonged exposure to air.
<u>Incompatible Materials</u>	Strong oxidizing agents. Air.
<u>Hazardous decomposition products</u>	Peroxide formation upon long-term storage.

## 11. TOXICOLOGICAL INFORMATION

### Potential short-term adverse effects from overexposures

<b>Inhalation</b>	May cause irritation of respiratory tract. May cause drowsiness or dizziness.
<b>Eye contact</b>	Exposure to vapor or contact with liquid may cause mild eye irritation, including tearing, stinging, and redness.
<b>Skin contact</b>	Prolonged or repeated contact may dry skin and cause irritation. May be absorbed through the skin in harmful amounts.
<b>Ingestion</b>	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
Cumene 98-82-8	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 20 mg/L (Rat) 6 h

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

CUMENE: Overexposure to cumene may cause upper respiratory tract irritation and CNS depression. Studies in laboratory animals indicate evidence of respiratory tract hyperplasia, and adverse effects on the liver, kidney and adrenal glands following high level exposure. The relevance of these findings to humans is not clear at this time. Findings from lifetime laboratory rodent inhalation studies were as follows: In F344/N rats: an increased incidence of renal carcinomas and adenomas, respiratory epithelial adenomas, and

interstitial cell adenomas of the testes. In B6C3F1 mice: an increased incidence of carcinomas and adenomas of the bronchi and lung, liver neoplasms, hemangiosarcomas of the spleen, and adenomas of the thyroid.

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

<b>Signs and Symptoms</b>	Exposure to this product may cause respiratory irritation. May cause nausea, vomiting, diarrhea, and signs of nervous system depression: headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue. Aspiration hazard. May cause coughing, chest pains, shortness of breath, pulmonary edema and/or chemical pneumonitis. Repeated or prolonged skin contact may cause drying, reddening, itching and cracking.
<b>Sensitization</b>	Not expected to be a skin or respiratory sensitizer.
<b>Mutagenic effects</b>	None known.
<b>Carcinogenicity</b>	Suspected of causing cancer.

Cancer designations are listed in the table below

Name	ACGIH (Class)	IARC (Class)	NTP	OSHA
Cumene 98-82-8	Not listed	Possible human carcinogen (2B)	Reasonably anticipated to be a human carcinogen	Not listed

<b>Reproductive toxicity</b>	None known.
<b>Specific Target Organ Toxicity (STOT) - single exposure</b>	Respiratory system. Central nervous system.
<b>Specific Target Organ Toxicity (STOT) - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	May be fatal if swallowed or vomited and enters airways.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity** This product should be considered 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
Cumene 98-82-8	72-hr EC50 = 2.6 mg/l Algae	96-hr LC50 = 6.04-6.61 mg/l Fathead minnow (Flow-through) 96-hr LC50 = 2.7 mg/l Rainbow trout (semi-static)	-	48-hr EC50 = 7.9-14.1 mg/l Daphnia magna (static)

<b><u>Persistence and degradability</u></b>	Readily biodegradable in the environment.
<b><u>Bioaccumulation</u></b>	Not expected to bioaccumulate in aquatic organisms.
<b><u>Mobility in soil</u></b>	May partition into air, soil and water.
<b><u>Other adverse effects</u></b>	No data 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):**

<b>UN Proper Shipping Name:</b>	Isopropylbenzene
<b>UN/Identification No:</b>	UN 1918
<b>Class:</b>	3
<b>Packing Group:</b>	III

**TDG (Canada):**

<b>UN Proper Shipping Name:</b>	Isopropylbenzene
<b>UN/Identification No:</b>	UN 1918
<b>Transport Hazard Class(es):</b>	3
<b>Packing Group:</b>	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.
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**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
Cumene	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
Cumene	5000

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

Acute Health Hazard  
Chronic Health Hazard  
Fire 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:
Cumene	1.0 % de minimis concentration

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

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



## Cumene

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Carcinogen, initial date 4/6/10
New Jersey Right-To-Know:	SN 0542
Pennsylvania Right-To-Know:	Environmental hazard
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic (skin); Flammable (skin)
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:	Flammable - third degree
New Jersey - Environmental Hazardous Substances List:	SN 0542 TPQ: 500 lb
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	5000 lb RQ (air); 1 lb RQ (land/water)

**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:
Cumene	B2,D2A	0.1%



**Note:** Not applicable.

## 16. OTHER INFORMATION

**Prepared By** Toxicology and Product Safety

### Revision Notes

**Revision Date** 05/14/2015  
**Previous Publish Date** 05/14/2015  
**Revised Sections** The following sections (§) have been updated:  
 4. FIRST AID MEASURES  
 6. ACCIDENTAL RELEASE MEASURES  
 7. HANDLING AND STORAGE  
 8. EXPOSURE CONTROLS/PERSONAL PROTECTION  
 11. TOXICOLOGICAL INFORMATION

### 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.