



Product Name: Benzene  
Revision Date: 12 Nov 2019  
Page 1 of 13

# SAFETY DATA SHEET

## SECTION 1 IDENTIFICATION

### PRODUCT

**Product Name:** Benzene  
**Product Description:** Aromatic Hydrocarbon  
**SDS Number:** 216

**Intended Use:** Chemical feedstock

### COMPANY IDENTIFICATION

**Supplier:** IMPERIAL OIL CHEMICAL  
P.O. Box 2480, Station M  
CALGARY, ALBERTA T2P 3M9 Canada

**24 Hour Emergency Telephone** (800)424-9300 or (703)527-3887 CHEMTREC  
**Transportation Emergency Phone Number** (800)424-9300 or (703)527-3887 CHEMTREC  
**Product Technical Information** 1-800-663-4109

## SECTION 2 HAZARD IDENTIFICATION

This material is considered to be hazardous according to regulatory guidelines.

This product has been classified in accordance with hazard criteria of the Hazardous Products Regulations (HPR) SOR/2015-17 and the SDS contains all the information required by the HPR SOR/2015-17.

### CLASSIFICATION:

Flammable Liquids — Category 2  
Skin Irritation — Category 2  
Eye Irritation — Category 2A  
Germ Cell Mutagenicity — Category 1B  
Carcinogenicity — Category 1A  
Specific Target Organ Toxicity — Repeated Exposure — Category 1  
Aspiration Hazard — Category 1

### LABEL:

**Pictogram:**



**Signal Word:** Danger

**Hazard Statements:**

H225: Highly flammable liquid and vapour. H304: May be fatal if swallowed and enters airways. H315: Causes skin irritation. H319: Causes serious eye irritation. H340: May cause genetic defects. H350: May cause cancer. H372: Causes damage to organs through prolonged or repeated exposure. Blood

**Precautionary Statements:**

P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood. P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233: Keep container tightly closed. P240: Ground and bond container and receiving equipment. P241: Use explosion-proof electrical, ventilating and lighting equipment. P242: Use non-sparking tools. P243: Take action to prevent static discharges. P260: Do not breathe mist / vapours. P264: Wash skin thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P273: Avoid release to the environment. P280: Wear protective gloves/protective clothing/eye protection/face protection. P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P302 + P352: IF ON SKIN: Wash with plenty of soap and water. P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + P313: IF exposed or concerned: Get medical advice/attention. P312: Call a POISON CENTER or doctor/physician if you feel unwell. P331: Do NOT induce vomiting. P332 + P313: If skin irritation occurs: Get medical advice/attention. P337 + P313: If eye irritation persists: Get medical advice/attention. P362 + P364: Take off contaminated clothing and wash it before reuse. P370 + P378: In case of fire: Use water fog, foam, dry chemical or carbon dioxide (CO<sub>2</sub>) to extinguish. P403 + P235: Store in a well-ventilated place. Keep cool. P405: Store locked up. P501: Dispose of contents and container in accordance with local regulations.

**Contains:** Benzene

**Other hazard information:**

**Health Hazards Not Otherwise Classified:** None as defined under HPR SOR/2015-17.

**Physical Hazards Not Otherwise Classified:** None as defined under HPR SOR/2015-17.

**PHYSICAL / CHEMICAL HAZARDS**

Material can accumulate static charges which may cause an ignition. Material can release vapours that readily form flammable mixtures. Vapour accumulation could flash and/or explode if ignited.

**HEALTH HAZARDS**

May be irritating to nose, throat, and lungs. Exposure to benzene is associated with cancer (acute myeloid

leukaemia and myelodysplastic syndrome), damage to the blood-producing system, and serious blood disorders (see Section 11).

### ENVIRONMENTAL HAZARDS

Expected to be toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

**NFPA Hazard ID:** Health: 2 Flammability: 3 Reactivity: 0  
**HMIS Hazard ID:** Health: 2\* Flammability: 3 Reactivity: 0

**NOTE:** This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

This material is defined as a substance.

### Hazardous Substance(s) or Complex Substance(s) in Hazardous product

Name	CAS#	Concentration*	GHS Hazard Codes
Benzene	71-43-2	100 %	H225, H303, H304, H340(1B), H350(1A), H315, H319(2A), H372, H401, H412

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## SECTION 4 FIRST-AID MEASURES

### INHALATION

Immediately remove from further exposure. Get immediate medical assistance. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. Give supplemental oxygen, if available. If breathing has stopped, assist ventilation with a mechanical device.

### SKIN CONTACT

Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse.

### EYE CONTACT

Flush thoroughly with water for at least 15 minutes. Get medical assistance.

### INGESTION

Seek immediate medical attention. Do not induce vomiting.

### NOTE TO PHYSICIAN

If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately. This material, or a component, may be associated with cardiac sensitization following very high exposures (well above occupational exposure limits) or with concurrent exposure to high stress levels or heart-stimulating substances like epinephrine. Administration of such substances should be avoided.

## SECTION 5 FIRE-FIGHTING MEASURES

### EXTINGUISHING MEDIA

**Appropriate Extinguishing Media:** Use water fog, foam, dry chemical or carbon dioxide (CO<sub>2</sub>) to extinguish flames.

**Inappropriate Extinguishing Media:** Straight streams of water

### FIRE FIGHTING

**Fire Fighting Instructions:** Evacuate area. If a leak or spill has not ignited, use water spray to disperse the vapours and to protect personnel attempting to stop a leak. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

**Unusual Fire Hazards:** Highly flammable. Incomplete combustion may create large amounts of soot. Vapour is flammable and heavier than air. Vapour may travel across the ground and reach remote ignition sources, causing a flashback fire danger. Hazardous material. Firefighters should consider protective equipment indicated in Section 8.

**Hazardous Combustion Products:** Incomplete combustion products, Oxides of carbon, Smoke, Fume

### FLAMMABILITY PROPERTIES

**Flash Point [Method]:** -11°C (12°F) [ASTM D-56]

**Flammable Limits (Approximate volume % in air):** LEL: 1.2 UEL: 7.8

**Autoignition Temperature:** 498°C (928°F) [Technical literature]

## SECTION 6 ACCIDENTAL RELEASE MEASURES

### NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

### PROTECTIVE MEASURES

Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required, due to toxicity or flammability of the material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

### SPILL MANAGEMENT

**Land Spill:** Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so without risk. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Prevent entry into waterways, sewer, basements or confined areas. A

vapour-suppressing foam may be used to reduce vapour. Use clean non-sparking tools to collect absorbed material. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Large Spills: Water spray may reduce vapour, but may not prevent ignition in enclosed spaces.

**Water Spill:** Stop leak if you can do so without risk. Eliminate sources of ignition. Warn other shipping. If the Flash Point exceeds the Ambient Temperature by 10 deg C or more, use containment booms and remove from the surface by skimming or with suitable absorbents when conditions permit. If the Flash Point does not exceed the Ambient Air Temperature by at least 10C, use booms as a barrier to protect shorelines and allow material to evaporate. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

## ENVIRONMENTAL PRECAUTIONS

Large Spills: Dyke far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

## SECTION 7

## HANDLING AND STORAGE

### HANDLING

Avoid all personal contact. Prevent exposure to ignition sources, for example use non-sparking tools and explosion-proof equipment. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or ground procedures. However, bonding and grounds may not eliminate the hazard from static accumulation. Consult local applicable standards for guidance. Additional references include American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practice on Static Electricity) or CENELEC CLC/TR 50404 (Electrostatics - Code of practice for the avoidance of hazards due to static electricity).

**Loading/Unloading Temperature:** [Ambient]

**Transport Temperature:** [Ambient]

**Transport Pressure:** [Ambient]

**Static Accumulator:** This material is a static accumulator. A liquid is typically considered a nonconductive, static accumulator if its conductivity is below 100 pS/m (100x10E-12 Siemens per meter) and is considered a semiconductive, static accumulator if its conductivity is below 10,000 pS/m. Whether a liquid is nonconductive or semiconductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, anti-static additives and filtration can greatly influence the conductivity of a liquid.

### STORAGE

Ample fire water supply should be available. A fixed sprinkler/deluge system is recommended. The type of container used to store the material may affect static accumulation and dissipation. Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area. Outside or detached storage preferred. Storage containers should be earthed and bonded. Fixed storage containers, transfer containers and associated equipment should be grounded and bonded to prevent accumulation of static charge.

**Storage Temperature:** [Ambient]  
**Storage Pressure:** [Ambient]

**Suitable Containers/Packing:** Tankers; Tank Trucks; Barges; Tank Cars  
**Suitable Materials and Coatings (Chemical Compatibility):** Carbon Steel; Stainless Steel; Polypropylene; Epoxy Phenolic; Fluorinated Silicone Rubber  
**Unsuitable Materials and Coatings:** Rubber; Compatibility with epoxy/resin compositions will vary; Polyethylene; PVC

<b>SECTION 8</b>	<b>EXPOSURE CONTROLS / PERSONAL PROTECTION</b>
------------------	--

### EXPOSURE LIMIT VALUES

Substance Name	Form	Limit/Standard			Note	Source
Benzene		STEL	1 ppm			Supplier
Benzene		TWA	0.5 ppm			Supplier
Benzene		STEL	2.5 ppm		Skin	ACGIH
Benzene		TWA	0.5 ppm		Skin	ACGIH

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

### ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:  
 Local ventilation should be provided. Use explosion-proof ventilation equipment to stay below exposure limits.

### PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

**Respiratory Protection:** If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:  
 Half-face filter respirator

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapour warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

**Hand Protection:** Any specific glove information provided is based on published literature and glove

manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

Chemical resistant gloves are recommended. If contact with forearms is likely wear gauntlet style gloves.

**Eye Protection:** Chemical goggles are recommended.

**Skin and Body Protection:** Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:  
Chemical/oil resistant clothing is recommended.

**Specific Hygiene Measures:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practise good housekeeping.

## ENVIRONMENTAL CONTROLS

Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

**Note:** Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

### GENERAL INFORMATION

**Physical State:** Liquid  
**Form:** Clear  
**Colour:** Colourless  
**Odour:** Aromatic  
**Odour Threshold:** N/D

### IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

**Relative Density (at 20 °C):** 0.877 [In-house method]  
**Density (at 20 °C):** 877 kg/m<sup>3</sup> (7.32 lbs/gal, 0.88 kg/dm<sup>3</sup>) [In-house method]  
**Flammability (Solid, Gas):** N/A  
**Flash Point [Method]:** -11°C (12°F) [ASTM D-56]  
**Flammable Limits (Approximate volume % in air):** LEL: 1.2 UEL: 7.8  
**Autoignition Temperature:** 498°C (928°F) [Technical literature]  
**Boiling Point / Range:** 80°C (176°F) [Technical literature]  
**Decomposition Temperature:** N/D  
**Vapour Density (Air = 1):** 2.7 at 101 kPa [Technical literature]  
**Vapour Pressure:** 10 kPa (75 mm Hg) at 20°C | 100 kPa (750 mm Hg) at 79.9°C [Technical literature]  
**Evaporation Rate (n-butyl acetate = 1):** N/D  
**pH:** N/A  
**Log Pow (n-Octanol/Water Partition Coefficient):** 2.13 [Technical literature]

**Solubility in Water:** Slight  
**Viscosity:** <0.8 cSt (0.8 mm<sup>2</sup>/sec) at 40°C [In-house method]  
**Oxidizing Properties:** See Hazards Identification Section.

**OTHER INFORMATION**

**Freezing Point:** 5°C (41°F) [Technical literature]  
**Melting Point:** N/A  
**Pour Point:** 5°C (41°F) [Technical literature]  
**Molecular Weight:** 78  
**Hygroscopic:** No

**SECTION 10 STABILITY AND REACTIVITY**

**STABILITY:** Material is stable under normal conditions.

**CONDITIONS TO AVOID:** See Footnote

**MATERIALS TO AVOID:** See Footnote

**HAZARDOUS DECOMPOSITION PRODUCTS:** Material does not decompose at ambient temperatures.

**POSSIBILITY OF HAZARDOUS REACTIONS:** Hazardous polymerization will not occur.

[Footnote: This product is intended for industrial use. Exposure to heat, air, oxidizing agents and other chemicals not part of an industrial process should be avoided.]

**SECTION 11 TOXICOLOGICAL INFORMATION**

**INFORMATION ON TOXICOLOGICAL EFFECTS**

<b>Hazard Class</b>	<b>Conclusion / Remarks</b>
<b>Inhalation</b>	
Acute Toxicity: (Rat) 4 hour(s) LC50 43767 mg/m <sup>3</sup> (Vapour)	Minimally Toxic. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 403
Irritation: No end point data for material.	Elevated temperatures or mechanical action may form vapours, mist, or fumes which may be irritating to the eyes, nose, throat, or lungs.
<b>Ingestion</b>	
Acute Toxicity (Rat): LD50 > 2000 mg/kg	Minimally Toxic. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 401
<b>Skin</b>	
Acute Toxicity (Rabbit): LD50 > 5000 mg/kg	Minimally Toxic. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 402
Skin Corrosion/Irritation: Data available.	Irritating to the skin. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 404
<b>Eye</b>	
Serious Eye Damage/Irritation: Data available.	Irritating and will injure eye tissue. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 405
<b>Sensitisation</b>	
Respiratory Sensitization: No end point data	Not expected to be a respiratory sensitizer.



for material.	
Skin Sensitization: Data available.	Not expected to be a skin sensitizer. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 406
<b>Aspiration:</b> Data available.	May be fatal if swallowed and enters airways. Based on physico-chemical properties of the material.
<b>Germ Cell Mutagenicity:</b> Data available.	Caused genetic effects in laboratory animals, but the relevance to humans is uncertain. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 471 473 474
<b>Carcinogenicity:</b> Data available.	Caused cancer from prolonged, high exposure. Based on human epidemiology studies. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 453
<b>Reproductive Toxicity:</b> Data available.	Not expected to be a reproductive toxicant. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 414 415
<b>Lactation:</b> No end point data for material.	Not expected to cause harm to breast-fed children.
<b>Specific Target Organ Toxicity (STOT)</b>	
Single Exposure: No end point data for material.	Not expected to cause organ damage from a single exposure.
Repeated Exposure: Data available.	Causes organ damage from prolonged or repeated exposure. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 408 412 413

## OTHER INFORMATION

### For the product itself:

Target Organs Repeated Exposure: Blood

Vapour concentrations above recommended exposure levels are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anaesthetic and may have other central nervous system effects. If exposure is overwhelming, death due to respiratory collapse can occur almost immediately or may be delayed several hours to several days. Adverse effects to the blood producing system and serious blood disorders, including leukemia, were observed. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema. Exposure to this material, or one of its components, in situations where there is the potential for high levels, such as in confined spaces or with abuse, may result in abnormal heart rhythm (arrhythmia). High-level exposure to hydrocarbons (above occupational exposure limits) may initiate arrhythmia in a worker that is undergoing stress or is taking a heart-stimulating substance such as epinephrine, a nasal decongestant, or an asthma or cardiovascular drug.

**BENZENE:** Caused cancer (acute myeloid leukemia and myelodysplastic syndrome), damage to the blood-producing system, and serious blood disorders in human studies. Caused genetic effects and effects on the immune system in laboratory animal and some human studies. Caused toxicity to the fetus and cancer in laboratory animal studies.

### CMR Status:

Chemical Name	CAS Number	List Citations
Benzene	71-43-2	1, 4, 5

--REGULATORY LISTS SEARCHED--

1 = IARC 1  
 2 = IARC 2A

3 = IARC 2B  
 4 = ACGIH ALL

5 = ACGIH A1  
 6 = ACGIH A2

<b>SECTION 12</b>	<b>ECOLOGICAL INFORMATION</b>
-------------------	-------------------------------

The information given is based on data for the material, components of the material, or for similar materials, through the application of bridging principals.

**ECOTOXICITY**

Material -- Expected to be toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

**MOBILITY**

Material -- Highly volatile, will partition rapidly to air. Not expected to partition to sediment and wastewater solids.

**PERSISTENCE AND DEGRADABILITY**

**Biodegradation:**

Material -- Expected to be readily biodegradable.

**Hydrolysis:**

Material -- Transformation due to hydrolysis not expected to be significant.

**Photolysis:**

Material -- Transformation due to photolysis not expected to be significant.

**Atmospheric Oxidation:**

Material -- Expected to degrade at a moderate rate in air

**BIOACCUMULATION POTENTIAL**

Material -- Potential to bioaccumulate is low.

**ECOLOGICAL DATA**

**Ecotoxicity**

Test	Duration	Organism Type	Test Results
Aquatic - Acute Toxicity	48 hour(s)	Daphnia magna	EC50 10 mg/l: data for the material
Aquatic - Acute Toxicity	96 hour(s)	Oncorhynchus mykiss	LC50 5.3 mg/l: data for the material
Aquatic - Acute Toxicity	72 hour(s)	Pseudokirchneriella subcapitata	ErC50 29 mg/l: data for the material
Aquatic - Chronic Toxicity	7 day(s)	Ceriodaphnia dubia	NOEC 3 mg/l: data for the material
Aquatic - Chronic Toxicity	7 day(s)	Ceriodaphnia dubia	LOEC 9 mg/l: data for the material
Aquatic - Chronic Toxicity	28 day(s)	Morone saxatilis	LOEC 5.3 mg/l: data for the material
Aquatic - Chronic Toxicity	28 day(s)	Morone saxatilis	NOEC 3.1 mg/l: data for the material

**Persistence, Degradability and Bioaccumulation Potential**

Media	Test Type	Duration	Test Results
-------	-----------	----------	--------------

Water	Photolysis		Half-life (t1/2) 13.4 day(s)
Octanol-Water	Calculated		log Kow 2.13 : material
Water	Bioaccumulation		BCF <10 : material
Water	Ready Biodegradability	28 day(s)	Percent Degraded 96 : material

<b>SECTION 13</b>	<b>DISPOSAL CONSIDERATIONS</b>
-------------------	--------------------------------

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

**DISPOSAL RECOMMENDATIONS**

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

**REGULATORY DISPOSAL INFORMATION**

**Empty Container Warning** Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

<b>SECTION 14</b>	<b>TRANSPORT INFORMATION</b>
-------------------	------------------------------

**LAND (TDG)**

**Proper Shipping Name:** Benzene  
**Hazard Class & Division:** 3  
**UN Number:** 1114  
**Packing Group:** II

**LAND (DOT)**

**Proper Shipping Name:** Benzene  
**Hazard Class & Division:** 3  
**ID Number:** 1114  
**Packing Group:** II  
**Product RQ:** 10 LBS - Benzene  
**ERG Number:** 130  
**Label(s):** 3  
**Transport Document Name:** UN1114, BENZENE, 3, PG II, RQ

**SEA (IMDG)**

**Proper Shipping Name:** Benzene  
**Hazard Class & Division:** 3  
**EMS Number:** F-E, S-D  
**UN Number:** 1114



Product Name: Benzene  
Revision Date: 12 Nov 2019  
Page 12 of 13

**Packing Group:** II  
**Marine Pollutant:** No  
**Label(s):** 3  
**Transport Document Name:** UN1114, BENZENE, 3, PG II, (-11°C c.c.)

**AIR (IATA)**

**Proper Shipping Name:** Benzene  
**Hazard Class & Division:** 3  
**UN Number:** 1114  
**Packing Group:** II  
**Label(s) / Mark(s):** 3  
**Transport Document Name:** UN1114, BENZENE, 3, PG II

<b>SECTION 15</b>	<b>REGULATORY INFORMATION</b>
-------------------	-------------------------------

**CEPA:** All components of this product are either on the Domestic Substance List (DSL) or are exempt.

**Listed or exempt from listing/notification on the following chemical inventories (May contain substance(s) subject to notification to the EPA Active TSCA inventory prior to import to USA):** AICS, DSL, ENCS, IECSC, ISHL, KECI, PICCS, TCSI, TSCA

The Following Ingredients are Cited on the Lists Below:

Chemical Name	CAS Number	List Citations
Benzene	71-43-2	6

--REGULATORY LISTS SEARCHED--

1 = TSCA 4                      3 = TSCA 5e                      5 = TSCA 12b  
2 = TSCA 5a2                    4 = TSCA 6                        6 = NPRI

<b>SECTION 16</b>	<b>OTHER INFORMATION</b>
-------------------	--------------------------

N/D = Not determined, N/A = Not applicable

**KEY TO THE H-CODES CONTAINED IN SECTION 3 OF THIS DOCUMENT (for information only):**

H225: Highly flammable liquid and vapor; Flammable Liquid, Cat 2  
H303: May be harmful if swallowed; Acute Tox Oral, Cat 5  
H304: May be fatal if swallowed and enters airways; Aspiration, Cat 1  
H315: Causes skin irritation; Skin Corr/Irritation, Cat 2

---

H319(2A): Causes serious eye irritation; Serious Eye Damage/Irr, Cat 2A  
H340(1B): May cause genetic defects; Germ Cell Mutagenicity, Cat 1B  
H350(1A): May cause cancer; Carcinogenicity, Cat 1A  
H372: Causes damage to organs through prolonged or repeated exposure; Target Organ, Repeated, Cat 1  
H401: Toxic to aquatic life; Acute Env Tox, Cat 2  
H412: Harmful to aquatic life with long lasting effects; Chronic Env Tox, Cat 3

**THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:**

Updates made in accordance with implementation of GHS requirements.

---

The information and recommendations contained herein are, to the best of Imperial Oil's knowledge and belief, accurate and reliable as of the date issued. Imperial Oil assumes no responsibility for accuracy of information unless the document is the most current available from an official Imperial Oil distribution system. The information and recommendations are offered for the user's consideration and examination, and it is the user's responsibility to satisfy itself that they are suitable and complete for its particular use. If buyer repackages this product, legal counsel should be consulted to insure proper health, safety and other necessary information is included on the container. Appropriate warnings and safe-handling procedures should be provided to handlers and users. Alteration of this document is strictly prohibited. Except to the extent required by law, republication or retransmission of this document, in whole or in part, is not permitted.

---

DGN: 5000236 (1004485)

---

Copyright 2002 Imperial Oil Limited, All rights reserved