



# ETHYLBENZENE (D10, 98%)

## Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 21/03/2011

Revision date: 30/09/2015

Supersedes: 01/12/2014

Version: 1.3

**DLM-199**

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Substance  
Substance name : ETHYLBENZENE (D10, 98%)  
EC no : 247-292-8  
CAS No : 25837-05-2  
Product code : DLM-199  
Formula : C6D5CD2CD3

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### 1.2.1. Relevant identified uses

Industrial/Professional use spec : For professional use only.

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.  
50 Frontage Road  
Andover, MA 01810  
USA

USA: 1-800-322-1174 Int: 1-978-749-8000  
[cilsales@isotope.com](mailto:cilsales@isotope.com) [www.isotope.com](http://www.isotope.com)

#### Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)  
International: 1-703-741-5970 (24 hours)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2 H225  
Acute Tox. 4 (Inhalation:dust,mist) H332  
Carc. 2 H351

Full text of H-phrases: see section 16

##### Classification according to Directive 67/548/EEC or 1999/45/EC

F; R11  
Xn; R20

Full text of R-phrases: see section 16

##### Classification (GHS-US)

Flam. Liq. 2 H225  
Acute Tox. 4 (Inhalation) H332  
Carc. 2 H351  
Aquatic Acute 2 H401

##### Adverse physicochemical, human health and environmental effects

Central nervous system, Blood.

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### 2.2. Label elements

#### Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



Signal word (CLP) :

Danger

Hazard statements (CLP) :

H225 - Highly flammable liquid and vapor  
H332 - Harmful if inhaled  
H351 - Suspected of causing cancer

Precautionary statements (CLP) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P233 - Keep container tightly closed  
P240 - Ground/bond container and receiving equipment  
P241 - Use explosion-proof electrical, lighting, ventilating equipment  
P261 - Avoid breathing fume, mist, spray, vapors  
P271 - Use only outdoors or in a well-ventilated area  
P280 - Wear eye protection, face protection, protective clothing, protective gloves  
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

#### GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H225 - Highly flammable liquid and vapor  
H332 - Harmful if inhaled  
H351 - Suspected of causing cancer (Dermal, Inhalation, oral)  
H401 - Toxic to aquatic life

Precautionary statements (GHS-US) :

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, open flames, sparks. - No smoking  
P233 - Keep container tightly closed  
P240 - Ground/bond container and receiving equipment  
P241 - Use explosion-proof electrical, lighting, ventilating equipment  
P242 - Use only non-sparking tools  
P243 - Take precautionary measures against static discharge  
P261 - Avoid breathing fume, mist, spray, vapors  
P271 - Use only outdoors or in a well-ventilated area  
P273 - Avoid release to the environment  
P280 - Wear eye protection, face protection, protective clothing, protective gloves  
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
P308+P313 - IF exposed or concerned: Get medical advice/attention  
P312 - Call a POISON CENTER/doctor/physician if you feel unwell  
P370+P378 - In case of fire: Use Alcohol resistant foam., Carbon dioxide., Dry chemical., Water spray for extinction  
P403+P235 - Store in a well-ventilated place. Keep cool  
P405 - Store locked up  
P501 - Dispose of contents/container to Comply with applicable regulations.

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

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Name	Product identifier	%	Classification according to Directive 67/548/EEC
ETHYLBENZENE (D10, 98%) (Main constituent)	(CAS No) 25837-05-2 (EC no) 247-292-8	100	F; R11 Xn; R20

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ETHYLBENZENE (D10, 98%) (Main constituent)	(CAS No) 25837-05-2 (EC no) 247-292-8	100	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation:dust,mist), H332 Carc. 2, H351

Full text of R-, H- and EUH-phrases: see section 16

Name	Product identifier	%	Classification (GHS-US)
ETHYLBENZENE (D10, 98%) (Main constituent)	(CAS No) 25837-05-2	100	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Carc. 2, H351 Aquatic Acute 2, H401

Full text of H-phrases: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Move out of dangerous area. Consult a physician and show this safety data sheet.
- First-aid measures after inhalation : If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.
- First-aid measures after skin contact : Wash with soap and plenty of water. Consult a physician.
- First-aid measures after eye contact : Flush eye with water for 15 minutes. Get medical attention.
- First-aid measures after ingestion : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after inhalation : May be harmful if inhaled. Causes respiratory tract irritation.
- Symptoms/injuries after skin contact : May be harmful if absorbed through the skin. Causes skin irritation.
- Symptoms/injuries after eye contact : Causes eye irritation.
- Symptoms/injuries after ingestion : May be harmful if swallowed.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- suitable extinguishing media : For small fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

### 5.2. Special hazards arising from the substance or mixture

- Reactivity : Vapors may form explosive mixture with air.

### 5.3. Advice for firefighters

- Firefighting instructions : Use water spray to cool unopened containers.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

- Emergency procedures : Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

#### 6.1.2. For emergency responders

No additional information available

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### 6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### 6.3. Methods and material for containment and cleaning up

For containment : Contain spillage, then collect with non-combustible absorbent material. Disposal should be in accordance with applicable Federal, State and local regulations.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed : Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store at room temperature away from light and moisture.

### 7.3. Specific end use(s)

No additional information available

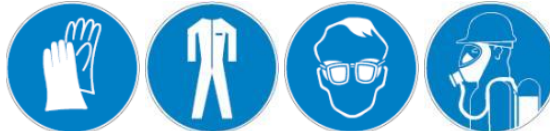
## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

ETHYLBENZENE (D10, 98%) (25837-05-2)		
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	435 mg/m <sup>3</sup>
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	20 ppm Confirmed animal carcinogen with unknown relevance to humans
Italy - Portugal - USA ACGIH	ACGIH STEL (mg/m <sup>3</sup> )	545 mg/m <sup>3</sup>
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	125.0000000000 ppm Central Nervous System impairment. Upper Respiratory Tract irritation
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	435.0000000000 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (STEL) (mg/m <sup>3</sup> )	545.0000000000 mg/m <sup>3</sup>

### 8.2. Exposure controls

Personal protective equipment : Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.



Hand protection : Wear suitable protective clothing and gloves.

Eye protection : Wear safety glasses with side shields (or goggles) and a face shield.

Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection : When appropriate, use NIOSH/CEN approved respirator.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

*The properties listed below are for the solvent, the main component of this mixture.*

Physical state	: Liquid
Appearance	: Liquid.
Molecular mass	: 116.23
Color	: Colourless.
Odor	: No data available
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: -95 °C (-139 °F) - lit
Freezing point	: No data available
Boiling point	: 136 °C (277 °F) - lit
Flash point	: 15.0 °C (59.0 °F) - closed cup
Self ignition temperature	: 432 °C (810 °F)

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Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: 25.3 hPa (19.0 mmHg) at 37.7 °C (99.9 °F)
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: 2.92
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: 1 - 6.7 % (V)

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Vapors may form explosive mixture with air.

### 10.2. Chemical stability

Stable if stored under recommended conditions.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Avoid Heat, Flames and Sparks.

### 10.5. Incompatible materials

Strong oxidizing agents.

### 10.6. Hazardous decomposition products

formed under fire conditions: Carbon oxides.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Harmful if inhaled.

ETHYLBENZENE (D10, 98%) (25837-05-2)	
LD50 oral rat	3500 mg/kg
LD50 dermal rabbit	15433 mg/kg
ATE (oral)	3500.000 mg/kg body weight
ATE (dermal)	15433.000 mg/kg body weight
ATE (dust, mist)	1.500 mg/l/4h

Skin corrosion/irritation	: Not classified No data available
Serious eye damage/irritation	: Not classified Eyes - rabbit - Risk of serious damage to eyes.
Respiratory or skin sensitization	: Not available No data available
Germ cell mutagenicity	: Not available
Carcinogenicity	: This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification. Limited evidence of carcinogenicity in animal studies.
Reproductive toxicity	: Not available
Specific target organ toxicity (single exposure)	: Not classified No data available
Specific target organ toxicity (repeated exposure)	: Not classified No data available
Aspiration hazard	: Not classified

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Potential Adverse human health effects and symptoms	: Central nervous system depression. Nausea. Vomiting. Tremors. Headache. Ataxia.
IARC group	: 2B
Symptoms/injuries after inhalation	: May be harmful if inhaled. Causes respiratory tract irritation.
Symptoms/injuries after skin contact	: May be harmful if absorbed through the skin. Causes skin irritation.
Symptoms/injuries after eye contact	: Causes eye irritation.
Symptoms/injuries after ingestion	: May be harmful if swallowed.

### SECTION 12: Ecological information

#### 12.1. Toxicity

ETHYLBENZENE (D10, 98%) (25837-05-2)	
LC50 fish 1	88.00 mg/l Cyprinodon variegatus (sheepshead minnow) - 96 h
EC50 Daphnia 1	2.90 mg/l Daphnia magna (Water flea) - 48 h

#### 12.2. Persistence and degradability

ETHYLBENZENE (D10, 98%) (25837-05-2)	
Persistence and degradability	Not available.

#### 12.3. Bioaccumulative potential

ETHYLBENZENE (D10, 98%) (25837-05-2)	
Log Pow	2.92
Bioaccumulative potential	Not available.

#### 12.4. Mobility in soil

ETHYLBENZENE (D10, 98%) (25837-05-2)	
Ecology - soil	Not available.

#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

Other adverse effects : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Regional legislation (waste) : Waste materials should be disposed of under conditions which meet Federal, State, and Local environmental control regulations.

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

### SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

#### 14.1. UN number

UN-No.(DOT) : 1175  
DOT NA no. UN1175

#### 14.2. UN proper shipping name

DOT Proper Shipping Name : Ethylbenzene  
Department of Transportation (DOT) Hazard Classes : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120  
Hazard labels (DOT) : 3 - Flammable liquid



Packing group (DOT) : II - Medium Danger

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DOT Special Provisions (49 CFR 172.102)	: IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 150
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 202
DOT Packaging Bulk (49 CFR 173.xxx)	: 242
DOT RQ	: 1000 lbs
Marine pollutant	: No

### 14.3. Additional information

Other information : No supplementary information available.

### Overland transport

Packing group (ADR)	: II
Class (ADR)	: 3 - Flammable liquid
Hazard identification number (Kemler No.)	: 33
Classification code (ADR)	: F1
Danger labels (ADR)	: 3 - Flammable liquids



Orange plates : An orange rectangular label with a black border, divided into two horizontal sections. The top section contains the number '33' and the bottom section contains the number '1175'.

Tunnel restriction code	: D/E
Limited quantities (ADR)	: 1L
EAC	: 3YE
Excepted quantities (ADR)	: E2

### Transport by sea

DOT Vessel Stowage Location	: B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
MFAG-No	: 130

### Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 60 L
Civil Aeronautics Law	: Flammable liquids

### 14.4. Environmental hazards

Other information : No supplementary information available.

### 14.5. Special precautions for user

### 14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

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### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

##### ETHYLBENZENE (D10, 98%) (25837-05-2)

Listed on SARA Section 313 (Specific toxic chemical listings)

SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard
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#### 15.2. International regulations

##### CANADA

##### ETHYLBENZENE (D10, 98%) (25837-05-2)

Listed on the Canadian DSL (Domestic Substances List) inventory.

##### 15.2.1. National regulations

No additional information available

#### 15.3. US State regulations

##### ETHYLBENZENE (D10, 98%)(25837-05-2)

State or local regulations	U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List WARNING! This product contains a chemical known by the state of California to cause cancer.
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### SECTION 16: Other information

Other information : This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

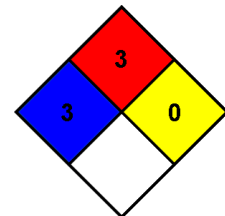
Full text of R-, H- and EUH-phrases::

Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Carc. 2	Carcinogenicity Category 2
Flam. Liq. 2	Flammable liquids Category 2
H225	Highly flammable liquid and vapor
H332	Harmful if inhaled
H351	Suspected of causing cancer
R11	Highly flammable
R20	Harmful by inhalation
F	Highly flammable
Xn	Harmful

NFPA health hazard : 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.

NFPA fire hazard : 3 - Liquids and solids that can be ignited under almost all ambient conditions.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



#### HMIS III Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 3 Serious Hazard

Physical : 0 Minimal Hazard

CIL Mixture SDS



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*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*