



# 1,3-DINITROBENZENE (13C6, 99%)

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 05/01/2011

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Supersedes: 05/01/2011

Version: 2.0

CLM-1519

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

### 1.1. Product identifier

Product form : Substance  
Substance name : 1,3-DINITROBENZENE (13C6, 99%)  
EC Index-No. : 609-004-00-2 (Unlabeled)  
EC-No. : 202-776-8 (Unlabeled)  
CAS-No. : 201595-60-0  
Product code : CLM-1519  
Formula : \*C6H4(NO2)2

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

#### 1.2.1. Relevant identified uses

Main use category : Professional use  
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]

Acute Tox. 3 (Oral) H301  
Acute Tox. 1 (Dermal) H310  
Acute Tox. 2 (Inhalation:dust,mist) H330  
STOT RE 2 H373  
Aquatic Acute 1 H400  
Aquatic Chronic 1 H410

Full text of hazard classes and H-statements : see section 16

#### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

T+; R26/27/28  
N; R50/53  
R33

Full text of R-phrases: see section 16

#### GHS-US classification

Acute Tox. 3 (Oral) H301  
Acute Tox. 1 (Dermal) H310  
Acute Tox. 2 (Inhalation) H330  
STOT RE 2 H373  
Aquatic Acute 2 H401  
Aquatic Chronic 1 H410

Full text of H statements : see section 16

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### Adverse physicochemical, human health and environmental effects

Blood, Liver.

## 2.2. Label elements

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

Hazard pictograms (CLP) :



Signal word (CLP) :

Danger

Hazard statements (CLP) :

H301 - Toxic if swallowed  
H310+H330 - Fatal in contact with skin or if inhaled  
H373 - May cause damage to organs (Reproductive system) through prolonged or repeated exposure (in contact with skin, if inhaled, if swallowed)  
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (CLP) :

P260 - Do not breathe dust, fume, gas, mist, spray, vapors.  
P264 - Wash Both hands thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P271 - Use only outdoors or in a well-ventilated area.  
P273 - Avoid release to the environment.  
P280 - Wear protective clothing, protective gloves.  
P284 - [In case of inadequate ventilation] wear respiratory protection.  
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.

### GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H301 - Toxic if swallowed  
H310+H330 - Fatal in contact with skin or if inhaled  
H373 - May cause damage to organs (Reproductive system) through prolonged or repeated exposure (Dermal, Inhalation, oral)  
H401 - Toxic to aquatic life  
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (GHS-US) :

P260 - Do not breathe dust, fume, gas, mist, spray, vapors.  
P262 - Do not get in eyes, on skin, or on clothing.  
P264 - Wash Both hands thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P271 - Use only outdoors or in a well-ventilated area.  
P273 - Avoid release to the environment.  
P280 - Wear protective clothing, protective gloves.  
P284 - [In case of inadequate ventilation] wear respiratory protection.  
P301+P310 - If swallowed: Immediately call a poison center or doctor  
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing  
P310 - Immediately call a poison center or doctor  
P314 - Get medical advice/attention if you feel unwell.  
P320 - Specific treatment is urgent (see Hazard pictograms (CLP) on this label)  
P321 - Specific treatment (see Hazard pictograms (CLP) on this label)  
P330 - Rinse mouth.  
P361 - Take off immediately all contaminated clothing.  
P363 - Wash contaminated clothing before reuse.  
P391 - Collect spillage.  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.  
P405 - Store locked up.  
P501 - Dispose of contents/container to Comply with applicable regulations

## 2.3. Other hazards

No additional information available

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### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Name	Product identifier	%	Classification according to Directive 67/548/EEC
1,3-DINITROBENZENE (13C6, 99%)	(CAS-No.) 201595-60-0 (EC-No.) 202-776-8 (Unlabeled) (EC Index-No.) 609-004-00-2 (Unlabeled)	100	T+; R26/27/28 N; R50/53 R33

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
1,3-DINITROBENZENE (13C6, 99%)	(CAS-No.) 201595-60-0 (EC-No.) 202-776-8 (Unlabeled) (EC Index-No.) 609-004-00-2 (Unlabeled)	100	Acute Tox. 3 (Oral), H301 Acute Tox. 1 (Dermal), H310 Acute Tox. 2 (Inhalation:dust,mist), H330 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

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

Name	Product identifier	%	GHS-US classification
1,3-DINITROBENZENE (13C6, 99%) (Main constituent)	(CAS-No.) 201595-60-0	100	Acute Tox. 3 (Oral), H301 Acute Tox. 1 (Dermal), H310 Acute Tox. 2 (Inhalation), H330 STOT RE 2, H373 Aquatic Acute 2, H401 Aquatic Chronic 1, H410

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	: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
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 off with soap and plenty of water. Take victim immediately to hospital. 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/effects after inhalation	: May be fatal if inhaled. May cause respiratory tract irritation.
Symptoms/effects after skin contact	: May be harmful if absorbed through skin. May cause skin irritation. May be fatal if absorbed through skin.
Symptoms/effects after eye contact	: Contact may cause eye irritation.
Symptoms/effects after ingestion	: Toxic 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 : Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

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

No additional information available

#### 5.3. Advice for firefighters

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

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### 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 dust formation. Avoid breathing dust. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.

##### 6.1.2. For emergency responders

No additional information available

#### 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 : Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

#### 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 contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

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

1,3-DINITROBENZENE (13C6, 99%) (201595-60-0)		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	0.1500000 ppm Eye damage. Methemoglobinemia.
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> Skin designation.

#### 8.2. Exposure controls

Appropriate engineering controls : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

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



Materials for protective clothing : Wear suitable protective clothing and gloves.

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

Physical state	: Solid
Appearance	: Crystalline
Molecular mass	: 174.06 g/mol (Labeled)
Color	: Yellow
Odor	: No data available
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available

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Melting point	: 84 - 86 °C (183 - 187 °F) - lit
Freezing point	: No data available
Boiling point	: 297 °C (567 °F) - lit
Flash point	: 150 °C (302 °F) - closed cup
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Specific gravity / density	: 1.368 g/cm <sup>3</sup> at 25 °C (77 °F)
Solubility	: No data available
Log Pow	: No data available
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
Explosion limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 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

No additional information available

### 10.5. Incompatible materials

Oxidizing agents, Reducing agents, Strong bases.

### 10.6. Hazardous decomposition products

Formed under fire conditions - Carbon oxides, nitrogen oxides (NOx).

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Oral: Toxic if swallowed. Dermal: Fatal in contact with skin. Inhalation:dust,mist: Fatal if inhaled.

1,3-DINITROBENZENE (13C6, 99%) (201595-60-0)	
LD50 oral rat	59.5 mg/kg
ATE CLP (oral)	59.500 mg/kg body weight
ATE CLP (dermal)	5.000 mg/kg body weight
ATE CLP (dust, mist)	0.050 mg/l/4h

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not available
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: May cause damage to organs (Reproductive system) through prolonged or repeated exposure (in contact with skin, if inhaled, if swallowed).
Aspiration hazard	: Not classified

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Potential Adverse human health effects and symptoms	: Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer. Cough. Shortness of breath. Headache. Nausea. Vomiting.
Symptoms/effects after inhalation	: May be fatal if inhaled. May cause respiratory tract irritation.
Symptoms/effects after skin contact	: May be harmful if absorbed through skin. May cause skin irritation. May be fatal if absorbed through skin.
Symptoms/effects after eye contact	: Contact may cause eye irritation.
Symptoms/effects after ingestion	: Toxic if swallowed.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Very toxic to aquatic life with long lasting effects.

1,3-DINITROBENZENE (13C6, 99%) (201595-60-0)	
LC50 fish 1	>= 1.7 mg/l Oncorhynchus mykiss (rainbow trout) - 96 h
EC50 Daphnia 1	27.4 mg/l Daphnia magna (Water flea) - 48 h

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information 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. Very toxic to aquatic life with long lasting effects.

## 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.
Product/Packaging disposal recommendations	: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
Ecology - waste materials	: Dispose of as unused product.

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

### 14.1. UN number

UN-No.(DOT)	: UN3443
DOT NA no.	UN3443

### 14.2. UN proper shipping name

Proper Shipping Name (DOT)	: Dinitrobenzenes, solid
Class (DOT)	: 6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132
Hazard labels (DOT)	: 6.1 - Poison



Packing group (DOT)	: II - Medium Danger
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DOT Special Provisions (49 CFR 172.102)	: IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2). IP2 - When IBCs other than metal or rigid plastics IBCs are used, they must be offered for transportation in a closed freight container or a closed transport vehicle. IP4 - Flexible, fiberboard or wooden IBCs must be sift-proof and water-resistant or be fitted with a sift-proof and water-resistant liner. T3 - 2.65 178.274(d)(2) Normal..... 178.275(d)(2) TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 153
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 212
DOT Packaging Bulk (49 CFR 173.xxx)	: 242
DOT RQ	: 100 lbs
Marine pollutant	: No



### 14.3. Additional information

Other information : No supplementary information available.

#### Overland transport

Packing group (ADR)	: II
Class (ADR)	: 6.1 - Toxic substances
Hazard identification number (Kemler No.)	: 60
Classification code (ADR)	: T2
Hazard labels (ADR)	: 6.1 - Toxic substances



Orange plates : 

Tunnel restriction code (ADR)	: D/E
Limited quantities (ADR)	: 500g
EAC	: 2X
Excepted quantities (ADR)	: E4

#### Transport by sea

DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
MFAG-No	: 152

#### Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 25 kg
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DOT Quantity Limitations Cargo aircraft only (49 : 100 kg

CFR 175.75)

Civil Aeronautics Law : Toxic and infectious substances/Toxic substances

### 14.4. Environmental hazards

Dangerous for the environment :



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

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

1,3-DINITROBENZENE (13C6, 99%) (201595-60-0)	
SARA Section 302 Threshold Planning Quantity (TPQ)	Subject to reporting requirements of United States SARA Section 302
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
SARA Section 313 - Emission Reporting	Subject to reporting requirements of United States SARA Section 313

### 15.2. International regulations

#### CANADA

1,3-DINITROBENZENE (13C6, 99%) (201595-60-0)
Listed on the Canadian DSL (Domestic Substances List)

#### 15.2.1. National regulations

No additional information available

### 15.3. US State regulations

1,3-DINITROBENZENE (13C6, 99%)(201595-60-0)	
U.S. - California - Proposition 65 - Carcinogens List	No
U.S. - California - Proposition 65 - Developmental Toxicity	Yes
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	Yes
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Yes
State or local regulations	U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right To Know List

## 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. 1 (Dermal)	Acute toxicity (dermal) Category 1
Acute Tox. 2 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 2
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1



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STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
H301	Toxic if swallowed
H310	Fatal in contact with skin
H330	Fatal if inhaled
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
R26/27/28	Very toxic by inhalation, in contact with skin and if swallowed
R33	Danger of cumulative effects
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
N	Dangerous for the environment
T+	Very toxic

NFPA health hazard

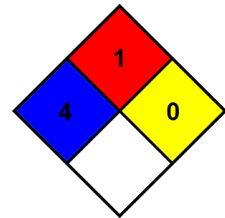
: 4 - Materials that, under emergency conditions, can be lethal.

NFPA fire hazard

: 1 - Materials that must be preheated before ignition can occur.

NFPA reactivity

: 0 - Material that in themselves are normally stable, even under fire conditions.



### Hazard Rating

Health

: 4 Severe Hazard - Life-threatening, major or permanent damage may result from single or repeated overexposures

Flammability

: 1 Slight Hazard

Physical

: 0 Minimal Hazard

CIL Substance SDS

*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*