



# BIS(2-ETHYLHEXYL)PHTHALATE (RING-D4, 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: 24/11/2014

Revision date: 20/11/2014

Version: 3

**DLM-1368**

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

### 1.1. Product identifier

Product form : Substance  
Substance name : BIS(2-ETHYLHEXYL)PHTHALATE (RING-D4, 98%)  
EC index no : 607-317-00-9  
EC no : 204-211-0  
CAS No : 93951-87-2  
Product code : DLM-1368  
Formula : C6D4(COOCH2CH(CH2CH3)(CH2)3CH3)2

### 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]

Eye Irrit. 2 H319

Repr. 1B H360

Aquatic Acute 1 H400

Aquatic Chronic 1 H410

Full text of H-phrases: see section 16

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

N; R50

R33

Full text of R-phrases: see section 16

#### Classification (GHS-US)

Eye Irrit. 2A H319

Repr. 1B H360

Aquatic Acute 1 H400

Aquatic Chronic 1 H410

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

Liver, Gastrointestinal tract, Kidney.

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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) :

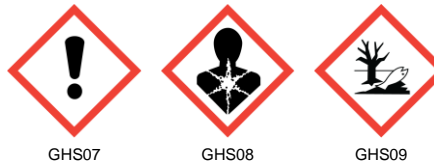
H319 - Causes serious eye irritation  
H360 - May damage fertility. May damage the unborn child  
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (CLP) :

P264 - Wash Both hands thoroughly after handling  
P273 - Avoid release to the environment  
P280 - Wear protective gloves, protective clothing  
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  
P337+P313 - If eye irritation persists: Get medical advice/attention  
P391 - Collect spillage  
P405 - Store locked up

#### GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H319 - Causes serious eye irritation  
H360 - May damage fertility or the unborn child (oral, Inhalation, Dermal)  
H400 - Very toxic to aquatic life  
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (GHS-US) :

P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood  
P264 - Wash Both hands thoroughly after handling  
P273 - Avoid release to the environment  
P280 - Wear protective gloves, protective clothing  
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  
P337+P313 - If eye irritation persists: Get medical advice/attention  
P391 - Collect spillage  
P405 - Store locked up  
P501 - Dispose of contents/container to Comply with applicable regulations.

### 2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH, annex XIII.

This substance/mixture does not meet the vPvB criteria of REACH, annex XIII.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Name	Product identifier	%	Classification according to Directive 67/548/EEC
BIS(2-ETHYLHEXYL)PHTHALATE (RING-D4, 98%) (Main constituent) substance listed as REACH Candidate (Bis (2-ethyl(hexyl)phthalate) (DEHP)) substance listed in REACH Annex XIV (Bis(2-ethylhexyl) phthalate (DEHP))	(CAS No) 93951-87-2 (EC no) 204-211-0 (EC index no) 607-317-00-9	100	N; R50 R33

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BIS(2-ETHYLHEXYL)PHTHALATE (RING-D4, 98%) (Main constituent) substance listed as REACH Candidate (Bis (2-ethyl(hexyl)phthalate) (DEHP)) substance listed in REACH Annex XIV (Bis(2-ethylhexyl) phthalate (DEHP))	(CAS No) 93951-87-2 (EC no) 204-211-0 (EC index no) 607-317-00-9	100	Eye Irrit. 2, H319 Repr. 1B, H360 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

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

Name	Product identifier	%	Classification (GHS-US)
BIS(2-ETHYLHEXYL)PHTHALATE (RING-D4, 98%) (Main constituent)	(CAS No) 93951-87-2	100	Eye Irrit. 2A, H319 Repr. 1B, H360 Aquatic Acute 1, H400 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	: 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	: 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 : 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.

## 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. Evacuate personnel to safe area.

#### 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. Discharge into the environment must be avoided.

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

For containment : Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

### 6.4. Reference to other sections

No additional information available

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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Additional hazards when processed : Avoid inhalation of vapour or mist. 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

##### BIS(2-ETHYLHEXYL)PHTHALATE (RING-D4, 98%) (93951-87-2)

Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	5.000000000 mg/m <sup>3</sup> Lower Respiratory Tract irritation. Confirmed animal carcinogen.
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#### 8.2. Exposure controls

Personal protective equipment : Gloves. Protective goggles. Protective clothing. 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 : Wear appropriate NIOSH/MSHA approved respirator.

### SECTION 9: Physical and chemical properties

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

Physical state : Liquid  
Appearance : Liquid.  
Molecular mass : 394.58  
Color : Colorless to Pale Yellow.  
Odor : No data available  
Odor threshold : No data available  
pH : No data available  
Relative evaporation rate (butyl acetate=1) : No data available  
Melting point : -50 °C (- 58 °F)  
Freezing point : No data available  
Boiling point : 386 °C (727 °F) - lit  
Flash point : 207.0 °C (404.6 °F) - closed cup  
Self ignition temperature : 390 °C (734 °F)  
Decomposition temperature : No data available  
Flammability (solid, gas) : No data available  
Vapor pressure : 1.6 hPa (1.2 mmHg) at 93.0 °C (199.4 °F)  
Relative vapor density at 20 °C : No data available  
Relative density : No data available  
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  
Explosive limits : ≥ 0.3 % (V)

#### 9.2. Other information

No additional information available

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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No additional information available

#### 10.2. Chemical stability

Five years after receipt if stored as stated in "Storage" section. Re-QC after 5 years.

#### 10.3. Possibility of hazardous reactions

No additional information available

#### 10.4. Conditions to avoid

Not available.

#### 10.5. Incompatible materials

Strong oxidizing agents.

#### 10.6. Hazardous decomposition products

formed under fire conditions: Carbon oxides. Nature of decomposition products not known.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

BIS(2-ETHYLHEXYL)PHTHALATE (RING-D4, 98%) (93951-87-2)	
LD50 oral rat	30000 mg/kg
LD50 dermal rabbit	25000 mg/kg
ATE (oral)	30000.000 mg/kg body weight
ATE (dermal)	25000.000 mg/kg body weight

Skin corrosion/irritation	: Not classified Skin - rabbit - Mild skin irritation - 24 h
Serious eye damage/irritation	: Causes serious eye irritation. Eyes - rabbit - Mild eye irritation - 24 h
Respiratory or skin sensitization	: Not available Not 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.
Reproductive toxicity	: May cause congenital malformation in the fetus. May cause reproductive disorders.
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
IARC group	: 3
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

BIS(2-ETHYLHEXYL)PHTHALATE (RING-D4, 98%) (93951-87-2)	
LC50 fish 1	0.67 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	0.16 mg/l Daphnia magna (Water flea) - 48 h

#### 12.2. Persistence and degradability

BIS(2-ETHYLHEXYL)PHTHALATE (RING-D4, 98%) (93951-87-2)	
Persistence and degradability	Not available.

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### 12.3. Bioaccumulative potential

#### BIS(2-ETHYLHEXYL)PHTHALATE (RING-D4, 98%) (93951-87-2)

Bioaccumulative potential                      Oncorhynchus mykiss (rainbow trout) - 100 d.      Bioconcentration factor (BCF): 113.

### 12.4. Mobility in soil

#### BIS(2-ETHYLHEXYL)PHTHALATE (RING-D4, 98%) (93951-87-2)

Ecology - soil                                      Not available.

### 12.5. Results of PBT and vPvB assessment

#### BIS(2-ETHYLHEXYL)PHTHALATE (RING-D4, 98%) (93951-87-2)

This substance/mixture does not meet the PBT criteria of REACH, annex XIII.

This substance/mixture does not meet the vPvB criteria of REACH, annex XIII.

### 12.6. Other adverse effects

Other adverse effects                              : Not available.

## 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)                                      : 3082

DOT NA no.                                         UN3082

### 14.2. UN proper shipping name

DOT Proper Shipping Name                      : Environmentally hazardous substances, liquid, n.o.s.

Department of Transportation (DOT) Hazard Classes                                      : 9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140

Hazard labels (DOT)                                : 9 - Class 9 (Miscellaneous dangerous materials)



DOT Symbols                                        : G - Identifies PSN requiring a technical name

Packing group (DOT)                              : III - Minor Danger

DOT Special Provisions (49 CFR 172.102)     : 8 - A hazardous substance that is not a hazardous waste may be shipped under the shipping description "Other regulated substances, liquid or solid, n.o.s.", as appropriate. In addition, for solid materials, special provision B54 applies.

146 - This description may be used for a material that poses a hazard to the environment but does not meet the definition for a hazardous waste or a hazardous substance, as defined in 171.8 of this subchapter, or any hazard class as defined in Part 173 of this subchapter, if it is designated as environmentally hazardous by the Competent Authority of the country of origin, transit or destination.

173 - An appropriate generic entry may be used for this material.

335 - Mixtures of solids that are not subject to this subchapter and environmentally hazardous liquids or solids may be classified as "Environmentally hazardous substances, solid, n.o.s."

UN3077 and may be transported under this entry, provided there is no free liquid visible at the time the material is loaded or at the time the packaging or transport unit is closed. Each transport unit must be leak-proof when used as bulk packaging.

IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). 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, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).

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.

TP29 - A portable tank having a minimum test pressure of 1.5 bar (150.0 kPa) may be used provided the calculated test pressure is 1.5 bar or less based on the MAWP of the hazardous materials, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx)    : 155

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DOT Packaging Non Bulk (49 CFR 173.xxx) : 203  
DOT Packaging Bulk (49 CFR 173.xxx) : 241  
DOT RQ : 100 lbs  
Marine pollutant : No



### 14.3. Additional information

Other information : No supplementary information available.  
Special transport precautions : IMDG/IATA - Not dangerous goods.

#### Overland transport

Packing group (ADR) : III  
Class (ADR) : 9 - Miscellaneous dangerous substances and articles  
Hazard identification number (Kemler No.) : 90  
Classification code (ADR) : M6  
Danger labels (ADR) : 9 - Miscellaneous dangerous compounds



Orange plates :



Tunnel restriction code : E  
Limited quantities (ADR) : 5L  
EAC : •3Z  
Excepted quantities (ADR) : E1

#### 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 : 171

#### Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : No limit  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : No limit  
Civil Aeronautics Law : Miscellaneous dangerous substances & articles

### 14.4. Environmental hazards

Dangerous for the environment :



Other information : No supplementary information available.

### 14.5. Special precautions for user

Special transport precautions : IMDG/IATA - Not dangerous goods.

### 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

##### BIS(2-ETHYLHEXYL)PHTHALATE (RING-D4, 98%) (93951-87-2)

Listed on SARA Section 313 (Specific toxic chemical listings)

SARA Section 311/312 Hazard Classes      Delayed (chronic) health hazard

#### 15.2. International regulations

##### CANADA

##### BIS(2-ETHYLHEXYL)PHTHALATE (RING-D4, 98%) (93951-87-2)

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

##### 15.2.1. National regulations

No additional information available

#### 15.3. US State regulations

##### BIS(2-ETHYLHEXYL)PHTHALATE (RING-D4, 98%)(93951-87-2)

State or local regulations

U.S. - Massachusetts - Right To Know List  
U.S. - Pennsylvania - RTK (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 birth defects or other reproductive harm.

### 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.

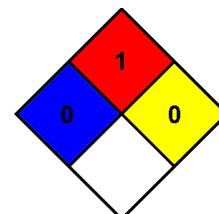
Full text of R-, H- and EUH-phrases::

Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Repr. 1B	Reproductive toxicity Category 1B
H319	Causes serious eye irritation
H360	May damage fertility or the unborn child
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
R33	Danger of cumulative effects
R50	Very toxic to aquatic organisms
N	Dangerous for the environment

NFPA health hazard : 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.

NFPA fire hazard : 1 - Must be preheated before ignition can occur.

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



#### HMIS III 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



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CIL Multi-Solvent Mixture 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*