



40% P-DIOXANE IN BENZENE-D6

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

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DLM-72

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

1.1. Product identifier

Product form : Mixtures
Product name : 40% P-DIOXANE IN BENZENE-D6
Product code : DLM-72

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 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
Skin Irrit. 2 H315
Eye Irrit. 2 H319
Muta. 1B H340
Carc. 1A H350
STOT SE 3 H335
Asp. Tox. 1 H304

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

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

Carc.Cat.1; R45
Carc.Cat.1; R49
Carc.Cat.3; R40
Muta.Cat.1; R46
F; R11
Xn; R65
Xi; R36/37/38
N; R51/53

Full text of R-phrases: see section 16

GHS-US classification

Flam. Liq. 2 H225
Skin Irrit. 2 H315
Eye Irrit. 2A H319
Muta. 1B H340
Carc. 1A H350
STOT SE 3 H335
Asp. Tox. 1 H304
Aquatic Acute 2 H401

40% P-DIOXANE IN BENZENE-D6 DLM-72

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

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

Blood, Eyes, Female reproductive system, Bone marrow.

2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Hazardous ingredients

: BENZENE-D6 (D, 99.5%); 1,4-DIOXANE (P-DIOXANE) UNLABELED

Hazard statements (CLP)

: H225 - Highly flammable liquid and vapor
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation
H340 - May cause genetic defects (in contact with skin, if inhaled, if swallowed)
H350 - May cause cancer (in contact with skin, if inhaled, if swallowed)

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.
P264 - Wash both hands thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear eye protection, face protection, protective clothing, protective gloves.

GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H225 - Highly flammable liquid and vapor
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation
H340 - May cause genetic defects (Dermal, Inhalation, oral)
H350 - May cause 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.
P264 - Wash Both hands thoroughly after handling.
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.
P301+P310 - If swallowed: Immediately call a poison center or doctor
P302+P352 - If on skin: Wash with plenty of water
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact

40% P-DIOXANE IN BENZENE-D6 DLM-72

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

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 if you feel unwell
P321 - Specific treatment (see Hazard pictograms (CLP) on this label)
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 - Take off contaminated clothing and wash before reuse.
P370+P378 - In case of fire: Use Alcohol resistant foam, Carbon dioxide, Dry chemical, Water spray to extinguish.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
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

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Directive 67/548/EEC
BENZENE-D6 (D, 99.5%)	(CAS-No.) 1076-43-3 (EC-No.) 214-061-8 (EC Index-No.) 601-020-00-8 (Unlabeled)	57.97	F; R11 Carc.Cat.1; R45 Muta.Cat.1; R46 Carc.Cat.2; R49 Xn; R65 Xi; R38
1,4-DIOXANE (P-DIOXANE) UNLABELED	(CAS-No.) 123-91-1 (EC-No.) 204-661-8 (EC Index-No.) 603-024-00-5 (REACH-no) 01-2119462837-26	42.03	F; R11 Xi; R36/37 Carc.Cat.3; R40

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
BENZENE-D6 (D, 99.5%)	(CAS-No.) 1076-43-3 (EC-No.) 214-061-8 (EC Index-No.) 601-020-00-8 (Unlabeled)	57.97	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Muta. 1B, H340 Carc. 1A, H350 Asp. Tox. 1, H304
1,4-DIOXANE (P-DIOXANE) UNLABELED	(CAS-No.) 123-91-1 (EC-No.) 204-661-8 (EC Index-No.) 603-024-00-5 (REACH-no) 01-2119462837-26	42.03	Flam. Liq. 2, H225 Eye Irrit. 2, H319 Carc. 2, H351 STOT SE 3, H335

Name	Product identifier	%	GHS-US classification
BENZENE-D6 (D, 99.5%)	(CAS-No.) 1076-43-3	57.97	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Muta. 1B, H340 Carc. 1A, H350 Asp. Tox. 1, H304
1,4-DIOXANE (P-DIOXANE) UNLABELED	(CAS-No.) 123-91-1	42.03	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 Carc. 2, H351 STOT SE 3, H335

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

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: If you feel unwell, seek medical advice (show the label where possible). Evacuate danger area.
First-aid measures after inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
First-aid measures after skin contact	: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. Wash contaminated clothing before reuse.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes.
First-aid measures after ingestion	: Rinse mouth. Immediately call a poison center or doctor/physician.

40% P-DIOXANE IN BENZENE-D6 DLM-72

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

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

Symptoms/effects	: May cause genetic defects (in contact with skin, if inhaled, if swallowed).
Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Causes skin irritation.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects after ingestion	: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard. May be fatal if swallowed and enters airways.

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 : Water spray. Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂).

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Highly flammable liquid and vapor.
Explosion hazard	: May form flammable/explosive vapor-air mixture.
Reactivity	: Highly flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

5.3. Advice for firefighters

Firefighting instructions	: Fight fire with normal precautions from a reasonable distance. Wear a self contained breathing apparatus. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection. Wear recommended personal protective equipment.
Other information	: Use water spray to cool exposed surfaces.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

6.1.1. For non-emergency personnel

Emergency procedures : Use personal protective equipment as required. Avoid breathing dust, fume, gas, mist, spray, vapors. Ensure adequate air ventilation. Eliminate all ignition sources if safe to do so. Evacuate unnecessary personnel. Special attention should be given to low areas/pits where flammable vapors can accumulate.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment	: Collect spillage. Clean up any spills as soon as possible, using an absorbent material to collect it. Vacuum with an equipment that avoids ignition risk. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. For large spills, confine the spill in a dike and charge it with wet sand or earth for subsequent safe disposal.
Methods for cleaning up	: This material and its container must be disposed of in a safe way, and as per local legislation.
Other information	: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed	: Handle empty containers with care because residual vapors are flammable.
Precautions for safe handling	: No open flames. No smoking. Use only non-sparking tools. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Eliminate all ignition sources if safe to do so. Use only outdoors or in a well-ventilated area.
Hygiene measures	: Handle in accordance with good industrial hygiene and safety practice. Wash hands, forearms and face thoroughly after handling.

40% P-DIOXANE IN BENZENE-D6 DLM-72

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

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment.
Storage conditions	: Store at room temperature away from light and moisture.
Incompatible materials	: Heat sources.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

40% P-DIOXANE IN BENZENE-D6		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	0.50000000 ppm Leukemia Substances for which there is a Biological Exposure Index or Indices.
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	2.5 ppm Leukemia Substances for which there is a Biological Exposure Index or Indices.
BENZENE-D6 (D, 99.5%) (1076-43-3)		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	0.50000000 ppm Leukemia Substances for which there is a Biological Exposure Index or Indices.
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	2.5 ppm Leukemia Substances for which there is a Biological Exposure Index or Indices.
USA OSHA	OSHA PEL (TWA) (ppm)	10 ppm
1,4-DIOXANE (P-DIOXANE) UNLABELED (123-91-1)		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	20.00000000 ppm Liver damage. Confirmed animal carcinogen with unknown relevance to humans. Danger of cutaneous absorption.
USA NIOSH	NIOSH REL (ceiling) (mg/m ³)	3.6 mg/m ³ Potential Occupational Carcinogen. 30 minute ceiling value.
USA NIOSH	NIOSH REL (ceiling) (ppm)	1 ppm Potential Occupational Carcinogen. 30 minute ceiling value.
USA OSHA	OSHA PEL (TWA) (mg/m ³)	90 mg/m ³ Skin notation.
USA OSHA	OSHA PEL (TWA) (ppm)	25 ppm Skin notation.
USA OSHA	Remark (OSHA)	TWA 100 ppm; 360 mg/m ³ Skin Designation. The value in mg/m ³ is approximate.

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 eye protection. Chemical goggles or face shield with safety glasses.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: Wear respiratory protection.
Environmental exposure controls	: Avoid release to the environment.

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
Color	: Colourless
Odor	: No data available
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available

40% P-DIOXANE IN BENZENE-D6 DLM-72

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

Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
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
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

Highly flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

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

Open flame. Direct sunlight.

10.5. Incompatible materials

Acids. Bases. Halogens. Metallic salts. Strong oxidizing agents.

10.6. Hazardous decomposition products

May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

40% P-DIOXANE IN BENZENE-D6	
LD50 oral rat	2990 mg/kg
LD50 dermal rabbit	8263 mg/kg
LC50 inhalation rat (mg/l)	44700 mg/m ³ female - 4 h
ATE CLP (oral)	2990.000 mg/kg body weight
ATE CLP (dermal)	8263.000 mg/kg body weight
ATE CLP (vapors)	44.700 mg/l/4h
ATE CLP (dust, mist)	44.700 mg/l/4h
BENZENE-D6 (D, 99.5%) (1076-43-3)	
LD50 oral rat	2990 mg/kg
LD50 dermal rabbit	8263 mg/kg
LC50 inhalation rat (mg/l)	44700 mg/m ³ female - 4 h
ATE CLP (oral)	2990.000 mg/kg body weight
ATE CLP (dermal)	8263.000 mg/kg body weight
ATE CLP (vapors)	44.700 mg/l/4h
ATE CLP (dust, mist)	44.700 mg/l/4h
1,4-DIOXANE (P-DIOXANE) UNLABELED (123-91-1)	
LD50 oral rat	4200 mg/kg

40% P-DIOXANE IN BENZENE-D6 DLM-72

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

1,4-DIOXANE (P-DIOXANE) UNLABELED (123-91-1)	
LD50 dermal rabbit	7858 mg/kg
LC50 inhalation rat (mg/l)	46000 mg/m ³ 2 h - Sense Organs and Special Senses (Nose, Eye, Ear and Taste): Eye: Other.
ATE CLP (oral)	4200.000 mg/kg body weight
ATE CLP (dermal)	7858.000 mg/kg body weight
ATE CLP (vapors)	46.000 mg/l/4h
ATE CLP (dust, mist)	46.000 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation. Skin - rabbit - Skin irritation
Serious eye damage/irritation	: Causes serious eye irritation. Eyes - rabbit - Eye irritation
Respiratory or skin sensitization	: Not available No data available
Germ cell mutagenicity	: May cause genetic defects (in contact with skin, if inhaled, if swallowed).
Carcinogenicity	: May cause cancer (in contact with skin, if inhaled, if swallowed).
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: May cause respiratory irritation. No data available
Specific target organ toxicity – repeated exposure	: Not classified No data available
Aspiration hazard	: May be fatal if swallowed and enters airways.
Potential Adverse human health effects and symptoms	: Toxic if swallowed.
IARC group	: 1
Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Causes skin irritation.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects after ingestion	: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard. May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
Ecology - water	: May cause long lasting harmful effects to aquatic life.

40% P-DIOXANE IN BENZENE-D6	
LC50 fish 1	5.9 mg/l Oncorhynchus mykiss (Rainbow trout) - 96 h
LC50 other aquatic organisms 1	230 mg/l Lepomis macrochirus (Bluegill) - 96 h
EC50 Daphnia 1	22 mg/l Daphnia magna (Water flea) - 48 h
LC50 fish 2	15 - 32 mg/l Pimephales promelas (Fathead minnow) - 96 h
LC50 other aquatic organisms 2	9.2 mg/l Daphnia magna (Water flea) - 48 h
ErC50 (algae)	29 mg/l Pseudokirchneriella subcapitata (Green algae) - 72 h
LOEC (acute)	17.2 mg/l Pimephales promelas (Fathead minnow) - 7 d
NOEC (chronic)	10.2 mg/l Pimephales promelas (Fathead minnow) - 7 d

BENZENE-D6 (D, 99.5%) (1076-43-3)	
LC50 fish 1	5.9 mg/l Oncorhynchus mykiss (Rainbow trout) - 96 h
LC50 other aquatic organisms 1	230 mg/l Lepomis macrochirus (Bluegill) - 96 h
EC50 Daphnia 1	22 mg/l Daphnia magna (Water flea) - 48 h
LC50 fish 2	15 - 32 mg/l Pimephales promelas (Fathead minnow) - 96 h
LC50 other aquatic organisms 2	9.2 mg/l Daphnia magna (Water flea) - 48 h
ErC50 (algae)	29 mg/l Pseudokirchneriella subcapitata (Green algae) - 72 h
LOEC (acute)	17.2 mg/l Pimephales promelas (Fathead minnow) - 7 d
NOEC (chronic)	10.2 mg/l Pimephales promelas (Fathead minnow) - 7 d

1,4-DIOXANE (P-DIOXANE) UNLABELED (123-91-1)	
LC50 fish 1	985 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	8450 mg/l Daphnia magna (Water flea) - 24 h

40% P-DIOXANE IN BENZENE-D6 DLM-72

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

1,4-DIOXANE (P-DIOXANE) UNLABELED (123-91-1)

ErC50 (algae)	> 500 mg/l <i>Desmodesmus subspicatus</i> (green algae) - 72 h
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12.2. Persistence and degradability

40% P-DIOXANE IN BENZENE-D6

Persistence and degradability	May cause long-term adverse effects in the environment.
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BENZENE-D6 (D, 99.5%) (1076-43-3)

Persistence and degradability	Readily biodegradable.
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1,4-DIOXANE (P-DIOXANE) UNLABELED (123-91-1)

Persistence and degradability	Biodegradability: Result: < 5 % - Not readily biodegradable.
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12.3. Bioaccumulative potential

1,4-DIOXANE (P-DIOXANE) UNLABELED (123-91-1)

Log Pow	-0.27
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Bioaccumulative potential	Does not bioaccumulate.
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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. 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.

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

Additional information : Handle empty containers with care because residual vapors are flammable.

Ecology - waste materials : Hazardous waste due to toxicity.

SECTION 14: Transport information

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

14.1. UN number

UN-No.(DOT) : 1993

DOT NA no. UN1993

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Flammable liquids, n.o.s.

Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Hazard labels (DOT) : 3 - Flammable liquid



DOT Symbols : G - Identifies PSN requiring a technical name

Packing group (DOT) : II - Medium Danger

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.

T7 - 4 178.274(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.

TP8 - A portable tank having a minimum test pressure of 1.5 bar (150 kPa) may be used when the flash point of the hazardous material transported is greater than 0 C (32 F).

TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, 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) : 150

40% P-DIOXANE IN BENZENE-D6 DLM-72

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

DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
DOT Packaging Bulk (49 CFR 173.xxx) : 242

14.3. Additional information

Other information : No supplementary information available.

Overland transport

EAC : 3WE
APP : A(fl)

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.

Air transport

DOT Quantity Limitations Passenger aircraft/rail : 5 L
(49 CFR 173.27)
DOT Quantity Limitations Cargo aircraft only (49 : 60 L
CFR 175.75)

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

40% P-DIOXANE IN BENZENE-D6

Listed on the United States TSCA (Toxic Substances Control Act) inventory

SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
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SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard
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SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.
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BENZENE-D6 (D, 99.5%) (1076-43-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
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SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard
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SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.
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1,4-DIOXANE (P-DIOXANE) UNLABELED (123-91-1)

SARA Section 302 Threshold Planning Quantity (TPQ)	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302
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SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard
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SARA Section 313 - Emission Reporting	Subject to reporting requirements of United States SARA Section 313
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40% P-DIOXANE IN BENZENE-D6 DLM-72

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

15.2. International regulations

CANADA

No additional information available

15.2.1. National regulations

40% P-DIOXANE IN BENZENE-D6

Listed on the Canadian NDSL (Non-Domestic Substances List)

BENZENE-D6 (D, 99.5%) (1076-43-3)

Listed on the Canadian NDSL (Non-Domestic Substances List)

15.3. US State regulations

40% P-DIOXANE IN BENZENE-D6()

U.S. - California - Proposition 65 - Carcinogens List	Yes
U.S. - California - Proposition 65 - Developmental Toxicity	Yes
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Yes
State or local regulations	RTK - U.S. - Massachusetts - Right To Know List RTK - U.S. - New Jersey - Right to Know Hazardous Substance List RTK - U.S. - Pennsylvania - RTK (Right to Know) List

BENZENE-D6 (D, 99.5%) (1076-43-3)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
Yes	Yes	No	Yes	

1,4-DIOXANE (P-DIOXANE) UNLABELED (123-91-1)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
Yes	No	No	No	

BENZENE-D6 (D, 99.5%) (1076-43-3)

State or local regulations

RTK - U.S. - Pennsylvania - RTK (Right to Know) List
RTK - U.S. - New Jersey - Right to Know Hazardous Substance List

1,4-DIOXANE (P-DIOXANE) UNLABELED (123-91-1)

State or local regulations

RTK - U.S. - Massachusetts - Right To Know List
RTK - U.S. - New Jersey - Right to Know Hazardous Substance List
RTK - U.S. - Pennsylvania - RTK (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:

Asp. Tox. 1	Aspiration hazard Category 1
Carc. 1A	Carcinogenicity Category 1A
Carc. 2	Carcinogenicity Category 2
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Liq. 2	Flammable liquids Category 2
Muta. 1B	Germ cell mutagenicity Category 1B

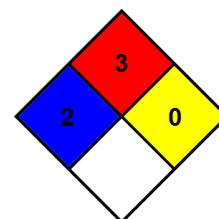
40% P-DIOXANE IN BENZENE-D6 DLM-72

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

Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapor
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H340	May cause genetic defects
H350	May cause cancer
H351	Suspected of causing cancer
R11	Highly flammable
R36/37	Irritating to eyes and respiratory system
R36/37/38	Irritating to eyes, respiratory system and skin
R38	Irritating to skin
R40	Limited evidence of a carcinogenic effect
R45	May cause cancer
R46	May cause heritable genetic damage
R49	May cause cancer by inhalation
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R65	Harmful: may cause lung damage if swallowed
F	Highly flammable
N	Dangerous for the environment
Xi	Irritant
Xn	Harmful

NFPA health hazard	: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.
NFPA fire hazard	: 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.
NFPA reactivity	: 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health	: 2 Moderate Hazard - Temporary or minor injury may occur
Flammability	: 3 Serious Hazard
Physical	: 0 Minimal Hazard

CIL 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