



0.0485 M TRIPHENYL PHOSPHATE IN CHLOROFORM-D (545PPT-8) THIN WALL

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: 29/12/2017

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Version: 1.0

DLM-77-TW

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

1.1. Product identifier

Product form : Mixtures
Product name : 0.0485 M TRIPHENYL PHOSPHATE IN CHLOROFORM-D (545PPT-8) THIN WALL
Product code : DLM-77-TW

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]

Acute Tox. 4 (Oral) H302
Skin Irrit. 2 H315
Eye Irrit. 2 H319
Carc. 2 H351
STOT RE 2 H373

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.3; R40
Xn; R22
R52/53

Full text of R-phrases: see section 16

GHS-US classification

Acute Tox. 4 (Oral) H302
Skin Irrit. 2 H315
Eye Irrit. 2A H319
Carc. 2 H351
STOT RE 2 H373

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

Central nervous system, Blood, Liver, Cardiovascular system, Kidney.

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2.2. Label elements

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

Hazard pictograms (CLP) :



GHS08

GHS06

GHS07

Signal word (CLP) :

Warning

Hazardous ingredients :

CHLOROFORM-D (D, 99.8%)

Hazard statements (CLP) :

H302 - Harmful if swallowed
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H351 - Suspected of causing cancer (in contact with skin, if inhaled, if swallowed)
H373 - May cause damage to organs (central nervous system, blood, liver, cardiovascular system, kidneys) through prolonged or repeated exposure (in contact with skin, if inhaled, if swallowed)

Precautionary statements (CLP) :

P260 - Do not breathe dust, fume, gas, mist, spray, vapors
P264 - Wash hands, forearms and face thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P273 - Avoid release to the environment
P280 - Wear protective clothing, protective gloves
P301+P312 - IF SWALLOWED: Call a doctor, a POISON CENTER if you feel unwell
P302+P352 - IF ON SKIN: Wash with plenty of soap and water
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS08

GHS06

GHS07

Signal word (GHS-US) :

Warning

Hazard statements (GHS-US) :

H302 - Harmful if swallowed
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H351 - Suspected of causing cancer (Inhalation, Dermal, oral)
H373 - May cause damage to organs (central nervous system, blood, liver, cardiovascular system, kidneys) through prolonged or repeated exposure (Dermal, Inhalation, oral)

Precautionary statements (GHS-US) :

P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P260 - Do not breathe dust, fume, gas, mist, spray, vapors
P264 - Wash hands, forearms and face thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P280 - Wear protective clothing, protective gloves
P301+P312 - If swallowed: Call a doctor, a POISON CENTER if you feel unwell
P302+P352 - If on skin: Wash with plenty of water
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
P314 - Get medical advice/attention if you feel unwell
P321 - Specific treatment (see Hazardous component(s) for labeling on this label)
P330 - Rinse mouth
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 it before reuse
P405 - Store locked up
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards

No additional information available

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SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Directive 67/548/EEC
CHLOROFORM-D (D, 99.8%)	(CAS No) 865-49-6 (EC No) 212-742-4 (EC Index No) 602-006-00-4 (Unlabeled)	98.96	Carc.Cat.3; R40 T; R23 Xi; R36/38 Xn; R22 Repr.Cat.3; R62 Repr.Cat.3; R63 T; R48/23 R67
TRIPHENYL PHOSPHATE UNLABELED	(CAS No) 115-86-6 (EC No) 204-112-2	1.04	N; R51/53

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
CHLOROFORM-D (D, 99.8%)	(CAS No) 865-49-6 (EC No) 212-742-4 (EC Index No) 602-006-00-4 (Unlabeled)	98.96	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation), H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 2, H351 Repr. 2, H361 STOT SE 3, H336 STOT RE 1, H372
TRIPHENYL PHOSPHATE UNLABELED	(CAS No) 115-86-6 (EC No) 204-112-2	1.04	Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Name	Product identifier	%	GHS-US classification
CHLOROFORM-D (D, 99.8%)	(CAS No) 865-49-6	98.96	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation), H331 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Carc. 2, H351 Repr. 2, H361 STOT SE 3, H336 STOT RE 1, H372

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	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). May cause cancer.
First-aid measures after inhalation	: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Allow victim to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact	: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Wash with plenty of soap and water. Get medical advice/attention. Specific treatment (see Hazard pictograms (CLP) on this label).
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Rinse cautiously with water for several minutes. Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a POISON CENTER or doctor/physician if you feel unwell.

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

Symptoms/injuries	: Causes damage to organs (central nervous system, liver) (oral, dermal, Inhalation).
Symptoms/injuries after inhalation	: May be harmful if inhaled. May cause respiratory irritation.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Symptoms/injuries after ingestion	: Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

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

No additional information available

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SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Water spray, dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂).
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

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.

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 areas. Evacuate unnecessary personnel.

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

Prevent entry to sewers and public waters. Do not allow to enter drains or water courses. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- For containment : Dike and contain spill. Clean up any spills as soon as possible, using an absorbent material to collect it. 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 : Avoid all eye and skin contact and do not breathe vapor and mist. Keep away from sources of ignition - No smoking.
Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust, mist or spray.
Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash Both hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Store in a well-ventilated place. Keep container tightly closed.
Storage conditions : Store at room temperature away from light and moisture.
Incompatible products : Strong bases. Strong acids.
Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

0.0485 M TRIPHENYL PHOSPHATE IN CHLOROFORM-D (545PPT-8) THIN WALL		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	10.00000000 ppm Confirmed animal carcinogen with unknown relevance to humans.
USA OSHA	OSHA PEL (TWA) (ppm)	2 ppm

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CHLOROFORM-D (D, 99.8%) (865-49-6)		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	10.00000000 ppm Basis: USA. ACGIH Threshold Limit Values (TLV)
Italy - Portugal - USA ACGIH	Remark (ACGIH)	Central Nervous system impairment. Liver damage. Embryo/fetal damage. Confirmed animal carcinogen with unknown relevance to humans.
USA NIOSH	NIOSH REL (STEL) (mg/m ³)	9.78 mg/m ³ Basis: USA. NIOSH Recommended Exposure Limits
USA NIOSH	NIOSH REL (STEL) (ppm)	2 ppm Basis: USA. NIOSH Recommended Exposure Limits
USA NIOSH	Remark (NIOSH)	Potential Occupational Carcinogen. See Appendix A.
USA OSHA	OSHA PEL (TWA) (mg/m ³)	9.78 mg/m ³ Basis: USA. Occupational Exposure Limits (OSHA) Table Z-1 Limits for Air Contaminants - 1910.1000
USA OSHA	OSHA PEL (TWA) (ppm)	2 ppm Basis: USA. Occupational Exposure Limits (OSHA) Table Z-1 Limits for Air Contaminants - 1910.1000
USA OSHA	OSHA PEL (Ceiling) (mg/m ³)	240 mg/m ³ Basis: USA. Occupational Exposure Limits (OSHA) Table Z-1 Limits for Air Contaminants.
USA OSHA	OSHA PEL (Ceiling) (ppm)	50 ppm Basis: USA. Occupational Exposure Limits (OSHA) Table Z-1 Limits for Air Contaminants.
USA OSHA	Remark (OSHA)	The value in mg/m ³ is approximate. Ceiling limit is to be determined from breathing-zone air samples. Value: PEL Control Parameters: 2 ppm / 9.78 mg/m ³ Basis: California permissible exposure limits for chemical contaminants (Title 8, Article 107)
TRIPHENYL PHOSPHATE UNLABELED (115-86-6)		
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m ³)	3 mg/m ³ Remark: Not classifiable as a human carcinogen. Cholinesterase inhibition.
USA OSHA	OSHA PEL (TWA) (mg/m ³)	3 mg/m ³ Remark: Not classifiable as a human carcinogen. Cholinesterase inhibition.

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, gloves and eye/face protection.

Respiratory protection : In case of inadequate ventilation wear respiratory protection. Approved supplied air respirator.

Environmental exposure controls : Avoid release to the environment.

Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Molecular mass	: 120.38 g/mol (Labeled)
Color	: Colorless.
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	: -63 °C (-81 °F)
Freezing point	: No data available
Boiling point	: 60.5 - 61.5 °C (140.9 - 142.7 °F)
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapor pressure	: 213.3 hPa (160 mmHg) at 20 °C (68 °F)
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Specific gravity / density	: 1.5 g/mL at 25 °C (77 °F) (Labeled)
Solubility	: No data available
Log Pow	: 1.97
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

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong oxidizing agents, Strong bases, Magnesium, Sodium/Sodium oxides, Lithium. Strong acids.

10.6. Hazardous decomposition products

Carbon oxides (CO, CO₂). fume. Hydrogen chloride gas.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

0.0485 M TRIPHENYL PHOSPHATE IN CHLOROFORM-D (545PPT-8) THIN WALL	
LD50 oral rat	695 mg/kg
LD50 dermal rabbit	> 20000 mg/kg
LC50 inhalation rat (mg/l)	47702 mg/m ³ 4 h
ATE CLP (oral)	695.000 mg/kg body weight
ATE CLP (vapors)	47.702 mg/l/4h
ATE CLP (dust, mist)	47.702 mg/l/4h
CHLOROFORM-D (D, 99.8%) (865-49-6)	
LD50 oral rat	908 mg/kg Remarks: Behavioral: Change in motor activity (specific assay). Behavioral: Ataxia. Lungs, Thorax, or Respiration: Respiratory stimulation.
LD50 dermal rabbit	> 20000 mg/kg
ATE CLP (oral)	908.000 mg/kg body weight
ATE CLP (gases)	700.000 ppmV/4h
ATE CLP (vapors)	3.000 mg/l/4h
ATE CLP (dust, mist)	0.500 mg/l/4h

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TRIPHENYL PHOSPHATE UNLABELED (115-86-6)	
LD50 oral rat	> 20000 mg/kg
LD50 dermal rabbit	> 7900 mg/kg

Skin corrosion/irritation	: Causes skin irritation. No data available
Serious eye damage/irritation	: Causes serious eye irritation. No data available
Respiratory or skin sensitization	: Not available. No data available Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not available. Based on available data, the classification criteria are not met
Carcinogenicity	: Suspected of causing cancer (in contact with skin, if inhaled, if swallowed).

CHLOROFORM-D (D, 99.8%) (865-49-6)	
Carcinogenicity, oral, rat	Tumorigenic: Carcinogenic by RTECS criteria. Leukemia.

Reproductive toxicity	: Not available. Based on available data, the classification criteria are not met
Specific target organ toxicity – single exposure	: Not classified No data available Based on available data, the classification criteria are not met
Specific target organ toxicity – repeated exposure	: May cause damage to organs (central nervous system, blood, liver, cardiovascular system, kidneys) through prolonged or repeated exposure (in contact with skin, if inhaled, if swallowed). No data available
Aspiration hazard	: Not classified Based on available data, the classification criteria are not met
Potential Adverse human health effects and symptoms	: 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.
IARC group	: 2B
Symptoms/injuries after inhalation	: May be harmful if inhaled. May cause respiratory irritation.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Symptoms/injuries after ingestion	: Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

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	: Harmful to aquatic life with long lasting effects.

0.0485 M TRIPHENYL PHOSPHATE IN CHLOROFORM-D (545PPT-8) THIN WALL	
LC50 fish 1	162 mg/l <i>Leuciscus idus</i> (Golden orfe) - 48 h
EC50 Daphnia 1	79 mg/l <i>Daphnia magna</i> (Water flea) - 48 h
ErC50 (algae)	500 mg/l 24 h

CHLOROFORM-D (D, 99.8%) (865-49-6)	
LC50 fish 1	162 mg/l <i>Leuciscus idus</i> (Golden orfe) - 48 h
LC50 other aquatic organisms 1	97 mg/l Other fish - 96 h
EC50 Daphnia 1	79 mg/l <i>Daphnia magna</i> (Water flea) - 24 h
EC50 other aquatic organisms 1	51.6 mg/l Immobilization EC50 - <i>Daphnia magna</i> (Water flea) - 48 h
LC50 fish 2	121 mg/l <i>Danio rerio</i> (Zebra fish) - 96 h
ErC50 (algae)	500 mg/l 24 h
LOEC (acute)	Inhalation - Rat - male - 500 ppm - 6 h
NOEC (chronic)	122 mg/l <i>Oryzias latipes</i> (Japanese rice fish) - 10 d
NOEC chronic fish	24 mg/l <i>Oncorhynchus mykiss</i> (Rainbow trout) - 96 h
NOEC chronic algae	120 mg/l <i>Daphnia magna</i> (Water flea) - 11 d

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TRIPHENYL PHOSPHATE UNLABELED (115-86-6)	
LC50 fish 1	0.87 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	1 mg/l Daphnia magna (Water flea) - 48 h
ErC50 (algae)	1 mg/l Desmodesmus subspicatus (green algae) - 72 h

12.2. Persistence and degradability

0.0485 M TRIPHENYL PHOSPHATE IN CHLOROFORM-D (545PPT-8) THIN WALL	
Persistence and degradability	May cause long-term adverse effects in the environment.

CHLOROFORM-D (D, 99.8%) (865-49-6)	
Persistence and degradability	Not available.

TRIPHENYL PHOSPHATE UNLABELED (115-86-6)	
Persistence and degradability	No data available.

12.3. Bioaccumulative potential

0.0485 M TRIPHENYL PHOSPHATE IN CHLOROFORM-D (545PPT-8) THIN WALL	
Log Pow	1.97

CHLOROFORM-D (D, 99.8%) (865-49-6)	
BCF fish 1	-0.11 mg/l Lepomis macrochirus (Bluegill) - 14 d
Bioconcentration factor (BCF REACH)	6
Log Pow	1.97
Bioaccumulative potential	Not available.

TRIPHENYL PHOSPHATE UNLABELED (115-86-6)	
Log Pow	4.6

12.4. Mobility in soil

CHLOROFORM-D (D, 99.8%) (865-49-6)	
Ecology - soil	Not available.

TRIPHENYL PHOSPHATE UNLABELED (115-86-6)	
Ecology - soil	No data available.

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Other information : Avoid release to the environment.

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) : 1888
DOT NA no. UN1888

14.2. UN proper shipping name

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



Packing group (DOT) : III - Minor Danger

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DOT Special Provisions (49 CFR 172.102)	: 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). N36 - Aluminum or aluminum alloy construction materials are permitted only for halogenated hydrocarbons that will not react with aluminum. T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3) TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 153
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203
DOT Packaging Bulk (49 CFR 173.xxx)	: 241
DOT RQ	: 10 lbs
Marine pollutant	: No

14.3. Additional information

Other information : No supplementary information available.

Overland transport

Packing group (ADR)	: III
Class (ADR)	: 6.1 - Toxic substances
Hazard identification number (Kemler No.)	: 60
Classification code (ADR)	: T1
Hazard labels (ADR)	: 6.1 - Toxic substances



Orange plates	:
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Tunnel restriction code (ADR)	: E
Limited quantities (ADR)	: 5I
EAC	: 2Z
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.
DOT Vessel Stowage Other	: 40 - Stow "clear of living quarters"
MFAG-No	: 151

Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 220 L
Civil Aeronautics Law	: Toxic and infectious substances/Toxic substances

0.0485 M TRIPHENYL PHOSPHATE IN CHLOROFORM-D (545PPT-8) THIN WALL

DLM-77-TW

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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

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

SECTION 15: Regulatory information

15.1. US Federal regulations

0.0485 M TRIPHENYL PHOSPHATE IN CHLOROFORM-D (545PPT-8) THIN WALL

Listed on the United States SARA Section 302
Subject to reporting requirements of United States SARA Section 313

SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
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CHLOROFORM-D (D, 99.8%) (865-49-6)

Listed on the United States SARA Section 302
Subject to reporting requirements of United States SARA Section 313

SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
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TRIPHENYL PHOSPHATE UNLABELED (115-86-6)

SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of United States SARA Section 302
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SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
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SARA Section 313 Emission Reporting	Not subject to reporting requirements of United States SARA Section 313
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15.2. International regulations

CANADA

0.0485 M TRIPHENYL PHOSPHATE IN CHLOROFORM-D (545PPT-8) THIN WALL

Listed on the Canadian DSL (Domestic Substances List)

CHLOROFORM-D (D, 99.8%) (865-49-6)

Listed on the Canadian DSL (Domestic Substances List)

15.2.1. National regulations

No additional information available

15.3. US State regulations

0.0485 M TRIPHENYL PHOSPHATE IN CHLOROFORM-D (545PPT-8) THIN WALL

U.S. - California - Proposition 65 - Carcinogens List	Yes
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	Yes
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Yes
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

CHLOROFORM-D (D, 99.8%) (865-49-6)

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	Yes	Yes	

TRIPHENYL PHOSPHATE UNLABELED (115-86-6)

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)
No	No	No	No	

0.0485 M TRIPHENYL PHOSPHATE IN CHLOROFORM-D (545PPT-8) THIN WALL

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CHLOROFORM-D (D, 99.8%) (865-49-6)

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

TRIPHENYL PHOSPHATE UNLABELED (115-86-6)

State or local regulations

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

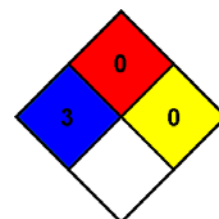
Full text of R-, H- and EUH-phrases:

Acute Tox. 3 (Inhalation)	Acute toxicity (inhalation) Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Carc. 2	Carcinogenicity Category 2
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Repr. 2	Reproductive toxicity Category 2
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation
H331	Toxic if inhaled
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
H361	Suspected of damaging fertility or the unborn child
H372	Causes damage to organs through prolonged or repeated exposure
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
R22	Harmful if swallowed
R23	Toxic by inhalation
R36/38	Irritating to eyes and skin
R40	Limited evidence of a carcinogenic effect
R48/23	Toxic: danger of serious damage to health by prolonged exposure through inhalation
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R62	Possible risk of impaired fertility
R63	Possible risk of harm to the unborn child
R67	Vapors may cause drowsiness and dizziness
N	Dangerous for the environment
T	Toxic
Xi	Irritant
Xn	Harmful

NFPA health hazard : 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard : 0 - Materials that will not burn under typical dire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

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



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HMIS III Rating

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

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