



TRI-N-BUTYL PHOSPHATE (D27, 98-99%) 1MG/ML IN ACETONITRILE

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: 06/06/2014

Revision date: 22/03/2022

Supersedes: 15/05/2020

Version: 4.0

DLM-3940-S

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

1.1. Product identifier

Product form : Mixtures
Product name : TRI-N-BUTYL PHOSPHATE (D27, 98-99%) 1MG/ML IN ACETONITRILE
Product code : DLM-3940-S

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
Acute Tox. 4 (Oral) H302
Acute Tox. 4 (Dermal) H312
Acute Tox. 4 (Inhalation:vapour) H332
Eye Irrit. 2 H319

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

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

F; R11
Xn; R20/21/22
Xi; R36

Full text of R-phrases: see section 16

GHS-US classification

Flam. Liq. 2 H225
Acute Tox. 4 (Oral) H302
Acute Tox. 4 (Dermal) H312
Acute Tox. 4 (Inhalation:vapour) H332
Eye Irrit. 2A H319

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

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

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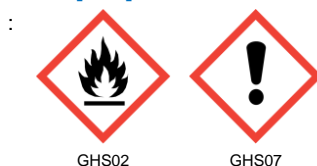
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2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Hazardous ingredients

: ACETONITRILE UNLABELED

Hazard statements (CLP)

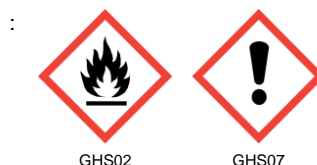
: H225 - Highly flammable liquid and vapor
H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled
H319 - Causes serious eye irritation

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.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.

GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H225 - Highly flammable liquid and vapor
H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled
H319 - Causes serious eye irritation

Precautionary statements (GHS-US)

: 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.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear eye protection, face protection, protective clothing, protective gloves.
P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell
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 lenses, if present and easy to do. Continue rinsing
P312 - Call a poison center or doctor if you feel unwell
P321 - Specific treatment (see Hazard pictograms (CLP) on this label)
P330 - Rinse mouth.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P370+P378 - In case of fire: Use Alcohol resistant foam, Carbon dioxide, Dry chemical, Water spray to extinguish.
P403+P235 - Store in a well-ventilated place. Keep cool.
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

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Directive 67/548/EEC
ACETONITRILE UNLABELED	(CAS-No.) 75-05-8 (EC-No.) 200-835-2 (EC Index-No.) 608-001-00-3 (REACH-no) 01-2119471307-38	99.8728	F; R11 Xi; R36 Xn; R20/21/22
TRI-N-BUTYL PHOSPHATE (D27, 98-99%)	(CAS-No.) 61196-26-7 (EC-No.) 204-800-2 (Unlabeled) (EC Index-No.) 015-014-00-2 (Unlabeled)	0.1272	Xn; R22 N; R51/53 Xi; R38 Carc.Cat.3; R40

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ACETONITRILE UNLABELED	(CAS-No.) 75-05-8 (EC-No.) 200-835-2 (EC Index-No.) 608-001-00-3 (REACH-no) 01-2119471307-38	99.8728	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2, H319
TRI-N-BUTYL PHOSPHATE (D27, 98-99%)	(CAS-No.) 61196-26-7 (EC-No.) 204-800-2 (Unlabeled) (EC Index-No.) 015-014-00-2 (Unlabeled)	0.1272	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Carc. 2, H351 Aquatic Chronic 3, H412

Name	Product identifier	%	GHS-US classification
ACETONITRILE UNLABELED	(CAS-No.) 75-05-8	99.8728	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2A, H319
TRI-N-BUTYL PHOSPHATE (D27, 98-99%)	(CAS-No.) 61196-26-7	0.1272	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Carc. 2, H351 Aquatic Chronic 3, H412

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	: 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. 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	: Wash off with soap and plenty of water. Consult a physician. Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Immediately call a poison center or doctor/physician. Specific measures (see Hazard pictograms (CLP) on this label). Wash with plenty of soap and water. Wash contaminated clothing before reuse.
First-aid measures after eye contact	: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
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. Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.

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

Symptoms/effects after inhalation	: Harmful if inhaled.
Symptoms/effects after skin contact	: Harmful in contact with skin.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects 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 : Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

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.

5.3. Advice for firefighters

Firefighting instructions : Use water spray to cool unopened containers.

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Flammable in presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking. 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. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

6.1.2. For emergency responders

No additional information available

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 : 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. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.

Precautions for safe handling : Avoid breathing dust, mist or spray. No open flames. No smoking. Use only non-sparking tools. Use only outdoors or in a well-ventilated area.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. 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 : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical 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

TRI-N-BUTYL PHOSPHATE (D27, 98-99%) 1MG/ML IN ACETONITRILE		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	20.00000000 ppm Lower Respiratory Tract irritation. Not classifiable as a human carcinogen.
USA OSHA	OSHA PEL (TWA) (ppm)	40 ppm
USA OSHA	OSHA PEL (STEL) (ppm)	60 ppm

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Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m ³)	5 mg/m ³ Eye & Upper Respiratory Tract irritation. Headache. Nausea. Substances for which there is a Biological Exposure Index or Indices (see BEI section), see BEI for Acetylcholinesterase Inhibiting Pesticide. Confirmed carcinogen with unknown relevance to humans.
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	0.20000000 ppm Eye & Upper Respiratory Tract irritation. Headache. Nausea. Substances for which there is a Biological Exposure Index or Indices (see BEI section), see BEI for Acetylcholinesterase Inhibiting Pesticide.
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	2.5 mg/m ³ USA. NIOSH Recommended Exposure Limits
USA NIOSH	NIOSH REL (TWA) (ppm)	0.2 ppm USA. NIOSH Recommended Exposure Limits
USA OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³ USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
USA OSHA	OSHA PEL (Ceiling) (mg/m ³)	2.5 mg/m ³ California permissible exposure limits for chemical contaminants (Title 8, Article 107)
USA OSHA	OSHA PEL (Ceiling) (ppm)	0.2 ppm California permissible exposure limits for chemical contaminants (Title 8, Article 107)

ACETONITRILE UNLABELED (75-05-8)		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	20.00000000 ppm Lower Respiratory Tract irritation. Not classifiable as a human carcinogen.
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	34 mg/m ³ Forms Cyanide in the body.
USA NIOSH	NIOSH REL (TWA) (ppm)	20 ppm Forms Cyanide in the body.
USA OSHA	OSHA PEL (TWA) (mg/m ³)	70 mg/m ³ The value in mg/m ³ is approximate.
USA OSHA	OSHA PEL (TWA) (ppm)	40 ppm The value in mg/m ³ is approximate.

8.2. Exposure controls

Personal protective equipment

: Gas mask with filter type NO at conc. in air >. Protective clothing. Protective goggles. Self-contained breathing apparatus. 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. Wear appropriate mask.

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, clear
Molecular mass	: 41.05 g/mol
Color	: Colorless
Odor	: Pungent
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: -48 °C (-54°F)
Freezing point	: No data available
Boiling point	: 81 - 82 °C (178 - 180 °F)
Flash point	: 2 °C (35.6 °F) - closed cup
Auto-ignition temperature	: 523 °C (973 °F)
Decomposition temperature	: No data available
Flammability (solid, gas)	: Highly flammable liquid and vapor

TRI-N-BUTYL PHOSPHATE (D27, 98-99%) 1MG/ML IN ACETONITRILE

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Vapor pressure	: 73.18 hPa (54.89 mmHg) at 15°C (59 °F), 119.81 hPa (89.86 mmHg) at 25°C(77 °F)
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Water: 100 %
Log Pow	: -0.34
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	: 4.4 - 16 vol %

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

See storage and expiration date on CoA.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Open flame. Direct sunlight.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed. Dermal: Harmful in contact with skin. Inhalation:vapour: Harmful if inhaled.

TRI-N-BUTYL PHOSPHATE (D27, 98-99%) 1MG/ML IN ACETONITRILE	
LD50 oral rat	2460 mg/kg
LD50 dermal rabbit	2000 mg/kg
LC50 inhalation rat (ppm)	7551 ppm - 8h
ATE CLP (oral)	500.000 mg/kg body weight
ATE CLP (dermal)	2000.000 mg/kg body weight
ATE CLP (vapors)	11.000 mg/l/4h

TRI-N-BUTYL PHOSPHATE (D27, 98-99%) (61196-26-7)	
LD50 oral rat	1552 mg/kg male and female
LD50 dermal rabbit	> 3100 mg/kg
ATE CLP (oral)	1552.000 mg/kg body weight
ATE CLP (vapors)	28.000 mg/l/4h
ATE CLP (dust, mist)	28.000 mg/l/4h

ACETONITRILE UNLABELED (75-05-8)	
LD50 oral rat	2460 mg/kg
LD50 dermal rabbit	2000 mg/kg
LC50 inhalation rat (mg/l)	≥ 26.8 mg/l
LC50 inhalation rat (ppm)	7551 ppm - 8h
ATE CLP (oral)	500.000 mg/kg body weight
ATE CLP (dermal)	2000.000 mg/kg body weight
ATE CLP (gases)	4500.000 ppmV/4h
ATE CLP (vapors)	11.000 mg/l/4h
ATE CLP (dust, mist)	1.500 mg/l/4h

Skin corrosion/irritation : Not classified

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Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified
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.
Symptoms/effects after inhalation	: Harmful if inhaled.
Symptoms/effects after skin contact	: Harmful in contact with skin.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects 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.

TRI-N-BUTYL PHOSPHATE (D27, 98-99%) 1MG/ML IN ACETONITRILE	
LC50 fish 1	1640 mg/l Pimephales promelas (fathead minnow) - 96h
EC50 Daphnia 1	3600 mg/l Daphnia magna (Water flea) - 48h
NOEC (chronic)	640 mg/l Daphnia magna (Water flea) - 14d

TRI-N-BUTYL PHOSPHATE (D27, 98-99%) (61196-26-7)	
LC50 fish 1	17 mg/l semi-static test LC50 - Oryzias latipes - 96 h (OECD Test Guideline 203)
ErC50 (algae)	1.1 mg/l Desmodesmus subspicatus (green algae) - 72 h

ACETONITRILE UNLABELED (75-05-8)	
LC50 fish 1	1640 mg/l Pimephales promelas (fathead minnow) - 96h
EC50 Daphnia 1	3600 mg/l Daphnia magna (Water flea) - 48h
NOEC (chronic)	640 mg/l Daphnia magna (Water flea) - 14d

12.2. Persistence and degradability

TRI-N-BUTYL PHOSPHATE (D27, 98-99%) (61196-26-7)	
Persistence and degradability	Aerobic - exposure time: 28 d.
Biodegradation	89 % Readily biodegradable

ACETONITRILE UNLABELED (75-05-8)	
Persistence and degradability	Biodegradability Result: - Readily biodegradable.

12.3. Bioaccumulative potential

TRI-N-BUTYL PHOSPHATE (D27, 98-99%) 1MG/ML IN ACETONITRILE	
Log Pow	-0.34

TRI-N-BUTYL PHOSPHATE (D27, 98-99%) (61196-26-7)	
BCF fish 1	93 ug/l - Oryzias latipes - 38 d
Bioconcentration factor (BCF REACH)	21 -

ACETONITRILE UNLABELED (75-05-8)	
Log Pow	-0.34
Bioaccumulative potential	No bioaccumulation is to be expected (log Pow <= 4).

12.4. Mobility in soil

ACETONITRILE UNLABELED (75-05-8)	
Ecology - soil	Not expected to absorb on soil.

12.5. Results of PBT and vPvB assessment

No additional information available

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12.6. Other adverse effects

Other adverse effects : Avoid release to the environment. Disposal must be done according to official regulations.

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) : 1648
DOT NA no. UN1648

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Acetonitrile
Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Hazard labels (DOT) : 3 - Flammable liquid



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)
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) : 150

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

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

Marine pollutant : No

14.3. Additional information

Other information : No supplementary information available.

Overland transport

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



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Orange plates	:	<table border="1"><tr><td>33</td></tr><tr><td>1648</td></tr></table>	33	1648
33				
1648				
Tunnel restriction code (ADR)	:	D/E		
Limited quantities (ADR)	:	11		
EAC	:	•2YE		
Excepted quantities (ADR)	:	E2		

Transport by sea

DOT Vessel Stowage Location	:	B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
DOT Vessel Stowage Other	:	40 - Stow "clear of living quarters"
MFAG-No	:	127

Air transport

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

14.4. Environmental hazards

Other information	:	No supplementary information available.
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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

TRI-N-BUTYL PHOSPHATE (D27, 98-99%) 1MG/ML IN ACETONITRILE	
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
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard
SARA Section 313 - Emission Reporting	Subject to reporting requirements of United States SARA Section 313
TRI-N-BUTYL PHOSPHATE (D27, 98-99%) (61196-26-7)	
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
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313
ACETONITRILE UNLABELED (75-05-8)	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of United States SARA Section 302
SARA Section 311/312 Hazard Classes	Fire hazard 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

TRI-N-BUTYL PHOSPHATE (D27, 98-99%) 1MG/ML IN ACETONITRILE
Listed on the Canadian DSL (Domestic Substances List)

15.2.1. National regulations

No additional information available

TRI-N-BUTYL PHOSPHATE (D27, 98-99%) 1MG/ML IN ACETONITRILE

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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

15.3. US State regulations

TRI-N-BUTYL PHOSPHATE (D27, 98-99%) 1MG/ML IN ACETONITRILE()	
U.S. - California - Proposition 65 - Carcinogens List	No
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No
State or local regulations	RTK - U.S. - Massachusetts - Right To Know List RTK - U.S. - Pennsylvania - RTK (Right to Know) List RTK - U.S. - New Jersey - Right to Know Hazardous Substance List

TRI-N-BUTYL PHOSPHATE (D27, 98-99%) (61196-26-7)				
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	

ACETONITRILE UNLABELED (75-05-8)				
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	

TRI-N-BUTYL PHOSPHATE (D27, 98-99%) (61196-26-7)				
State or local regulations				
RTK - U.S. - Massachusetts - Right To Know List RTK - U.S. - Pennsylvania - RTK (Right to Know) List RTK - U.S. - New Jersey - Right to Know Hazardous Substance List				

ACETONITRILE UNLABELED (75-05-8)				
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:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Carc. 2	Carcinogenicity Category 2
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Liq. 2	Flammable liquids Category 2
Skin Irrit. 2	Skin corrosion/irritation Category 2
H225	Highly flammable liquid and vapor
H302	Harmful if swallowed
H312	Harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H332	Harmful if inhaled
H351	Suspected of causing cancer
H412	Harmful to aquatic life with long lasting effects
R11	Highly flammable
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed
R22	Harmful if swallowed

TRI-N-BUTYL PHOSPHATE (D27, 98-99%) 1MG/ML IN ACETONITRILE

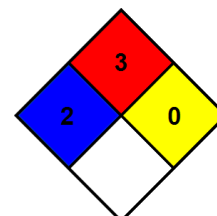
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R36	Irritating to eyes
R38	Irritating to skin
R40	Limited evidence of a carcinogenic effect
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
F	Highly flammable
N	Dangerous for the environment
Xi	Irritant
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 : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given
- 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