

Phosphine (Compressed)

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

Date of issue: 05/24/2017

Version: 1.0

SECTION 1: Identification

1.1. Product identifier

Product form	: Substance
Substance name	: Phosphine (Compressed)
CAS-No.	: 7803-51-2
Product code	: CA-1001-07378
Formula	: PH ₃
Synonyms	: Hydrogen phosphide / Phosphorus trihydride / Phosphorus hydride / Phosphine, adsorbed

1.2. Recommended use and restrictions on use

Recommended uses and restrictions	: Semiconductor
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1.3. Supplier

Air Liquide Canada Inc.
 1250, René Lévesque West Blvd. Suite 1700
 H3B 5E6 Montreal, QC - Canada
 T 1-800-817-7697
www.airliquide.ca

1.4. Emergency telephone number

Emergency number	: 514-878-1667
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SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classification (GHS-CA)

Pyrophoric Gas	H250
Flammable gases, Category 1	H220
Gases under pressure : Liquefied gas	H280
Acute toxicity (inhalation:gas) Category 1	H330
Skin corrosion/irritation, Category 1B	H314
Serious eye damage/eye irritation, Category 1	H318
Hazardous to the aquatic environment — Acute Hazard, Category 1	H400
Full text of H statements : see section 16	

2.2. GHS Label elements, including precautionary statements

GHS-CA labelling

Hazard pictograms (GHS-CA)



Signal word (GHS-CA)

: Danger

Hazard statements (GHS-CA)

: H280 - Contains gas under pressure; may explode if heated
 H250 - Catches fire spontaneously if exposed to air
 H220 - Extremely flammable gas
 H318 - Causes serious eye damage
 H330 - Fatal if inhaled
 H314 - Causes severe skin burns and eye damage
 H400 - Very toxic to aquatic life
 CGA-HG01 - May cause frostbite
 CGA-HG04 - May form explosive mixtures with air

Precautionary statements (GHS-CA)

: P381 - In case of leakage, eliminate all ignition sources
 P377 - Leaking gas fire: Do not extinguish unless leak can be stopped safely
 P363 - Wash contaminated clothing before reuse
 P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.
 P403 - Store in a well-ventilated place
 P403+P233 - Store in a well-ventilated place. Keep container tightly closed
 P391 - Collect spillage

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P410+P403 - Protect from sunlight. Store in a well-ventilated place
P405 - Store locked up
P260 - Do not breathe dust/fume/gas/mist/vapours/spray
P202 - Do not handle until all safety precautions have been read and understood
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P310 - Immediately call a POISON CENTER or doctor
P321 - Specific treatment (see supplemental first aid instruction on this label)
P320 - Specific treatment is urgent (see supplemental first aid instruction on this label)
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P284 - In case of inadequate ventilation wear respiratory protection
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P264 - Wash hands, forearms and face thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P273 - Avoid release to the environment
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P302 - IF ON SKIN:
P336+P315 - Thaw frosted parts with lukewarm water. Do not rub affected area
P307+P311 - If exposed: Call a poison center/doctor
CGA-PG02 - Protect from sunlight when ambient temperature exceeds 52 °C/125 °F
CGA-PG05 - Use a back flow preventive device in the piping
CGA-PG06 - Close valve after each use and when empty
CGA-PG10 - Use only with equipment rated for cylinder pressure
CGA-PG14 - Approach suspected leak area with caution
CGA-PG17 - Use only with equipment purged with inert gas or evacuated prior to discharge from cylinder
CGA-PG18 - When returning cylinder, install leak tight valve outlet cap or plug
CGA-PG20 - Use only with equipment of compatible materials of construction and rated for cylinder pressure
CGA-PG21 - Open valve slowly

2.3. Other hazards

Other hazards not contributing to the classification : Spontaneously flammable in air.

2.4. Unknown acute toxicity (GHS-CA)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	Chemical name/Synonyms	Product identifier	%	Classification (GHS-CA)
Phosphine (Compressed) (Main constituent)	Hydrogen phosphide / Phosphorus trihydride / Phosphorus hydride / Phosphine, adsorbed	(CAS-No.) 7803-51-2	> 99	Pyr. Gas, H250 Flam. Gas 1, H220 Press. Gas (Liq.), H280 Acute Tox. 1 (Inhalation:gas), H330 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400

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

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Apply artificial respiration with bag and mask if breathing stopped. Get immediate medical advice/attention.

First-aid measures after skin contact : Thaw frosted parts with lukewarm water. Do not rub affected area. Get immediate medical advice/attention.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

First-aid measures after ingestion : Ingestion is not considered a potential route of exposure.

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4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation	: Fatal if inhaled.
Symptoms/effects after skin contact	: May cause frostbite. Causes severe skin burns and eye damage.
Symptoms/effects after eye contact	: Contact with the product may cause cold burns or frostbite. Causes serious eye damage.
Symptoms/effects after ingestion	: Ingestion is not considered a potential route of exposure.
Symptoms/effects upon intravenous administration	: Not known.
Chronic symptoms	: Adverse effects not expected from this product.
Most important symptoms and effects, both acute and delayed	: May cause severe chemical burns to skin and cornea. Suitable first-aid treatment should be immediately available. Seek medical advice before using product. Delayed adverse effects possible. Refer to section 11.

4.3. Immediate medical attention and special treatment, if necessary

Other medical advice or treatment	: Obtain medical assistance.
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SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media	: Use extinguishing media appropriate for surrounding fire.
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5.2. Unsuitable extinguishing media

Unsuitable extinguishing media	: Do not use water jet to extinguish. Carbon dioxide.
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5.3. Specific hazards arising from the hazardous product

Fire hazard	: This product is flammable.
Explosion hazard	: Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. May form flammable/explosive vapour-air mixture. In use may form pyrophoric vapor-air mixture.
Hazardous combustion products	: If involved in a fire the following toxic and/or corrosive fumes may be produced by thermal decomposition: Phosphorus oxides/acids.

5.4. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Exposure to fire may cause containers to rupture/explode.
Protection during firefighting	: Standard protective clothing and equipment (e.g. Self Contained Breathing Apparatus) for fire fighters. 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	: Ensure adequate ventilation.
Personal Precautions, Protective Equipment and Emergency Procedures	: EVACUATE ALL PERSONNEL FROM AFFECTED AREA. Use appropriate protective equipment. If leak is on user's equipment, be certain to purge piping before attempting repairs. If leak is on a container or container valve contact the closest Air Liquide Canada location.

6.2. Methods and materials for containment and cleaning up

For containment	: Try to stop release if without risk.
Methods for cleaning up	: Dispose of contents/container in accordance with local/regional/national/international regulations.
Methods and material for containment and cleaning up	: Ventilate area.

6.3. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection"

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area. Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Use only non-sparking tools.
Hygiene measures	: Do not eat, drink or smoke when using this product.

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Additional hazards when processed : Pressurized container: Do not pierce or burn, even after use. Use only with equipment rated for cylinder pressure. Close valve after each use and when empty. Handle empty containers with care because residual vapours are flammable. In use may form flammable vapour-air mixture. In use may form pyrophoric vapor-air mixture.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations. Proper grounding procedures to avoid static electricity should be followed.

Storage conditions : Do not expose to temperatures exceeding 52 °C/ 125 °F. Keep container closed when not in use. Protect cylinders from physical damage; do not drag, roll, slide or drop. Store in well ventilated area. Store locked up.

Incompatible products : None known.

Incompatible materials : Oxidizing materials. Air. Water.

Conditions for safe storage, including any incompatibilities : Observe all regulations and local requirements regarding storage of containers. Containers should not be stored in conditions likely to encourage corrosion. Container valve guards or caps should be in place. Containers should be stored in the vertical position and properly secured to prevent them from falling over. Stored containers should be periodically checked for general condition and leakage. Keep container below 50°C in a well ventilated place. Store containers in location free from fire risk and away from sources of heat and ignition. Keep away from combustible materials. Segregate from oxidant gases and other oxidants in store. All electrical equipment in the storage areas should be compatible with the risk of a potentially explosive atmosphere.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Phosphine (Compressed) (7803-51-2)		
USA - ACGIH	ACGIH TWA (ppm)	0.3 ppm
USA - ACGIH	ACGIH STEL (ppm)	1 ppm
USA - OSHA	OSHA PEL (TWA) (mg/m ³)	0.4 mg/m ³
USA - OSHA	OSHA PEL (TWA) (ppm)	0.3 ppm
Canada (Quebec)	VECD (mg/m ³)	1.4 mg/m ³
Canada (Quebec)	VECD (ppm)	1 ppm
Canada (Quebec)	VEMP (mg/m ³)	0.42 mg/m ³
Canada (Quebec)	VEMP (ppm)	0.3 ppm
Alberta	OEL STEL (mg/m ³)	1.4 mg/m ³
Alberta	OEL STEL (ppm)	1 ppm
Alberta	OEL TWA (mg/m ³)	0.4 mg/m ³
Alberta	OEL TWA (ppm)	0.3 ppm
British Columbia	OEL STEL (ppm)	1 ppm
British Columbia	OEL TWA (ppm)	0.3 ppm
Manitoba	OEL STEL (ppm)	1 ppm
Manitoba	OEL TWA (ppm)	0.3 ppm
New Brunswick	OEL STEL (mg/m ³)	1.4 mg/m ³
New Brunswick	OEL STEL (ppm)	1 ppm
New Brunswick	OEL TWA (mg/m ³)	0.42 mg/m ³
New Brunswick	OEL TWA (ppm)	0.3 ppm
New Foundland & Labrador	OEL STEL (ppm)	1 ppm
New Foundland & Labrador	OEL TWA (ppm)	0.3 ppm
Nova Scotia	OEL STEL (ppm)	1 ppm
Nova Scotia	OEL TWA (ppm)	0.3 ppm
Nunavut	OEL STEL (ppm)	1 ppm
Nunavut	OEL TWA (ppm)	0.3 ppm
Northwest Territories	OEL STEL (ppm)	1 ppm
Northwest Territories	OEL TWA (ppm)	0.3 ppm
Ontario	OEL STEL (ppm)	1 ppm

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Ontario	OEL TWA (ppm)	0.3 ppm
Prince Edward Island	OEL STEL (ppm)	1 ppm
Prince Edward Island	OEL TWA (ppm)	0.3 ppm
Saskatchewan	OEL STEL (ppm)	1 ppm
Saskatchewan	OEL TWA (ppm)	0.3 ppm
Yukon	OEL STEL (mg/m ³)	1 mg/m ³
Yukon	OEL STEL (ppm)	1 ppm
Yukon	OEL TWA (mg/m ³)	0.4 mg/m ³
Yukon	OEL TWA (ppm)	0.3 ppm

8.2. Appropriate engineering controls

- Appropriate engineering controls : Product to be handled in a closed system and under strictly controlled conditions. Provide adequate general and local exhaust ventilation. Preferably use permanent leak-tight installations (e.g. welded pipes). Systems under pressure should be regularly checked for leakages. Ensure exposure is below occupational exposure limits (where available). Alarm detectors should be used when toxic gases may be released. Consider the use of a work permit system e.g. for maintenance activities.
- Environmental exposure controls : Refer to local regulations for restriction of emissions to the atmosphere. See section 13 for specific methods for waste gas treatment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Gloves. Safety glasses. Protective clothing. Safety shoes.

Hand protection:

Wear working gloves when handling gas containers. Wear chemically resistant protective gloves when making or breaking process connections. Wear leather safety gloves.

Eye protection:

Wear safety glasses with side shields. Wear goggles and a face shield when transfilling or breaking transfer connections.

Skin and body protection:

Wear suitable protective clothing, e.g. lab coats, coveralls or flame resistant clothing.

Respiratory protection:

Wear a respirator when performing non-routine tasks not limited to line breaking or sampling. Wear a respirator during routine operations if determined to be necessary during a process-specific review. Consult respirator suppliers' product information or their representatives for the selection of the appropriate respirator. See Sections 5 & 6.



Thermal hazard protection:

None necessary during routine operations.

Other information:

Wear safety shoes while handling containers.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Gas
- Appearance : Colorless gas.
- Colour : Colourless.

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Odour	: Garlic like. Odour can persist. Rotten fish.
Odour threshold	: No data available
pH	: Not applicable.
Relative evaporation rate (butylacetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Molecular mass	: 34 g/mol
Melting point	: -134 °C
Freezing point	: -134 °C
Boiling point	: -86.75 °C
Flash point	: No data available
Critical temperature	: 52.35 °C
Auto-ignition temperature	: 100 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: See Section 2.1 and 2.2
Vapour pressure	: 20488 mbar
Vapour pressure at 50 °C	: No data available
Critical pressure	: 6540 kPa
Relative vapour density at 20 °C	: 1.17
Relative density	: 0.74
Relative gas density	: Heavier than air
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: Not applicable.
Viscosity, dynamic	: Not applicable.
Explosive properties	: Not applicable.
Oxidising properties	: None.
Explosive limits	: 1.6 - 100 vol % Pyrophoric.

9.2. Other information

Gas group	: Press. Gas (Liq.)
Additional information	: Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	: Catches fire spontaneously if exposed to air.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Can ignite spontaneously in air (fire cannot be put out). Can form spontaneous, violently explosive mixture in air. May react violently with oxidants.
Conditions to avoid	: Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
Incompatible materials	: Air, Oxidisers. For additional information on compatibility refer to ISO 11114.
Hazardous decomposition products	: Under normal conditions of storage and use hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Inhalation:gas: Fatal if inhaled.

Phosphine (Compressed) (f)7803-51-2	
LC50 inhalation rat (ppm)	10 ppm/4h
ATE CA (gases)	10.00000000 ppmv/4h

Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: Not applicable.
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Serious eye damage/irritation	: Causes serious eye damage. pH: Not applicable.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Very toxic to aquatic life.
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12.2. Persistence and degradability

Phosphine (Compressed) (7803-51-2)

Persistence and degradability	Not applicable for inorganic gases.
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12.3. Bioaccumulative potential

Phosphine (Compressed) (7803-51-2)

Bioaccumulative potential	No ecological damage caused by this product.
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12.4. Mobility in soil

Phosphine (Compressed) (7803-51-2)

Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution.
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12.5. Other adverse effects

Effect on global warming	: No known effects from this product.
Effect on ozone layer	: None.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods	: Must not be discharged to atmosphere. Toxic and corrosive gases formed during combustion should be scrubbed before discharge to atmosphere. Gas may be scrubbed in alkaline solution under controlled conditions to avoid violent reaction. Ensure that the emission levels from local regulations or operating permits are not exceeded. Consult supplier for specific recommendations. Refer to supplier's waste gas recovery programme.
Product/Packaging disposal recommendations	: Refer to the CGA Pamphlet P-63 "Disposal of Gases" available at www.cganet.com for more guidance on suitable disposal methods.
List of hazardous wastes	: 16 05 04 *: Gases in pressure containers (including halons) containing dangerous substances.

SECTION 14: Transport information

14.1. Basic shipping description

In accordance with TDG

Transportation of Dangerous Goods

UN-No. (TDG)	: UN2199
TDG Primary Hazard Classes	: 2.3 - Class 2.3 - Toxic Gas.
TDG Subsidiary Classes	: 2.1
Transport Document Description	: UN2199 PHOSPHINE, 2.3 (2.1)
Proper Shipping Name	: PHOSPHINE

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Hazard labels (TDG)

: 2.3 - Toxic gases
2.1 - Flammable gases



TDG Special Provisions

: 23 - (1) A consignor of these dangerous goods must include, except for UN1005, ANHYDROUS AMMONIA, the words "toxic by inhalation" or "toxic — inhalation hazard" or "toxique par inhalation" or "toxicité par inhalation" in the following places, unless the words are already part of the shipping name: (a) on a shipping document, immediately after the description of the dangerous goods; (b) on a small means of containment, next to the shipping name of the dangerous goods; and (c) on a large means of containment, next to the placard for the primary class of the dangerous goods or the placard for the subsidiary class, if any. For example, the notation on a shipping document would be "UN1935, CYANIDE SOLUTION, N.O.S, Class 6.1, PG I, toxic by inhalation". (2) This special provision does not apply to a person who transports these dangerous goods in accordance with an exemption set out in sections 1.15, 1.17 or 1.17.1 of Part 1 (Coming Into Force, Repeal, Interpretation, General Provisions and Special Cases). (3) A consignor of UN1005, ANHYDROUS AMMONIA, must include the words "inhalation hazard" or "dangereux par inhalation": (a) on a shipping document, immediately after the shipping name of the dangerous goods; and (b) on a small means of containment, next to the shipping name of the dangerous goods. When UN1005, ANHYDROUS AMMONIA, is contained in a large means of containment on which is affixed the anhydrous ammonia placard, the words "Anhydrous Ammonia, Inhalation Hazard" or "Ammoniac anhydre, dangereux par inhalation" must be displayed next to the placard in accordance with paragraph 4.18.2(b).
SOR/2014-306
38 - A person must not handle, offer for transport or transport these dangerous goods in a large means of containment if they are in direct contact with the large means of containment.
SOR/2014-306

ERAP Index

: 25

Explosive Limit and Limited Quantity Index

: 0

Passenger Carrying Ship Index

: Forbidden

Excepted quantities (TDG)

: E0

Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index

: Forbidden

14.2. Transport information/DOT - USA

Department of Transport

DOT NA no.

: UN2199

UN-No.(DOT)

: 2199

Transport Document Description

: UN2199 Phosphine, 2.3 (2.1)

Proper Shipping Name (DOT)

: Phosphine

Contains Statement Field Selection (DOT)

: DOT_TECHNICAL - Proper Shipping Name - Technical (DOT)

Class (DOT)

: 2.3 - Class 2.3 - Poisonous gas 49 CFR 173.115

Division (DOT)

: 2.3

Hazard labels (DOT)

: 2.3 - Poison gas
2.1 - Flammable gas



Dangerous for the environment

: No

DOT Special Provisions (49 CFR 172.102)

: 1 - This material is poisonous by inhalation (see 171.8 of this subchapter) in Hazard Zone A (see 173.116(a) or 173.133(a) of this subchapter), and must be described as an inhalation hazard under the provisions of this subchapter.

DOT Packaging Exceptions (49 CFR 173.xxx)

: None

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DOT Packaging Non Bulk (49 CFR 173.xxx)	: 192
DOT Packaging Bulk (49 CFR 173.xxx)	: 245
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: Forbidden
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: Forbidden
DOT Vessel Stowage Location	: D - The material must be stowed "on deck only" 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, but the material is prohibited on passenger vessels in which the limiting number of passengers is exceeded.
DOT Vessel Stowage Other	: 40 - Stow "clear of living quarters"
Emergency Response Guide (ERG) Number	: 119;173
Special transport precautions	: Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers: - Ensure there is adequate ventilation. - Ensure that containers are firmly secured. - Ensure cylinder valve is closed and not leaking. - Ensure valve outlet cap nut or plug (where provided) is correctly fitted. - Ensure valve protection device (where provided) is correctly fitted.
Other information	: No supplementary information available.

14.3. Air and sea transport

IMDG

UN-No. (IMDG)	: 2199
Transport Document Description (IMDG)	: UN 2199 , 2
Class (IMDG)	: 2 - Gases
MFAG-No	: 119
Ship Safety Act	: Gases under pressure/Gases toxic under pressure(Dangerous Goods Notification Schedule first second and third Article Dangerous Goods Regulations)
Port Regulation Law	: Hazardous materials/High pressure gas (Article 21, Paragraph 2 of Law, Article 12 rule, notice attached table that defines the type of dangerous goods)

IATA

UN-No. (IATA)	: 2199
Proper Shipping Name (IATA)	: Phosphine
Transport Document Description (IATA)	: UN 2199 Phosphine, 2.3 (2.1), ENVIRONMENTALLY HAZARDOUS
Class (IATA)	: 2
Civil Aeronautics Law	: Gases under pressure/Gases toxic under pressure(Hazardous materials notice Appended Table 1 Article 194 of the Enforcement Regulations)

SECTION 15: Regulatory information

15.1. National regulations

Phosphine (Compressed) (7803-51-2)

Listed on the Canadian DSL (Domestic Substances List)

15.2. International regulations

Phosphine (Compressed) (7803-51-2)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Japanese Poisonous and Deleterious Substances Control Law
Listed on INSQ (Mexican National Inventory of Chemical Substances)

SECTION 16: Other information

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Date of issue	: 05/24/2017
Other information	: This Safety Data Sheet has been established in accordance with the applicable European Union legislation.

Full text of H-statements:

H220	Extremely flammable gas
H250	Catches fire spontaneously if exposed to air
H280	Contains gas under pressure; may explode if heated
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H330	Fatal if inhaled
H400	Very toxic to aquatic life

SDS Canada (GHS)

THE INFORMATION, RECOMMENDATIONS AND DATA CONTAINED IN THIS DOCUMENT ARE INTENDED TO BE USED BY PROPERLY TRAINED AND QUALIFIED PERSONNEL ONLY AND AT THEIR SOLE RISKS AND DISCRETION. THE INFORMATION, RECOMMENDATIONS AND DATA HEREIN CONTAINED ARE DERIVED FROM SOURCES WHICH WE BELIEVE TO BE RELIABLE. HOWEVER, AIR LIQUIDE CANADA INC. MAKES NO REPRESENTATION AND GIVES NO WARRANTY OF ANY KIND WHATSOEVER WITH RESPECT TO THEIR ACCURACY OR COMPLETENESS AND ASSUMES NO LIABILITY FOR DAMAGES OR LOSS ARISING DIRECTLY OR INDIRECTLY FROM THEIR USE, WHETHER PROPER OR IMPROPER.