

Safety Data Sheet

**Section 1: Identification of the Substance/Mixture and of the Company/Undertaking****1.1 Product identifier**

Product Name	• Boron Trichloride
Synonyms	• Boron chloride
CAS Number	• 10294-34-5
Product Code	• MSDS No. 20009
EC Number	• 233-658-4
Molecular Formula	• :B 1:Cl 3:

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified use(s)	• For metal refining, electronics, optical fiber production and other analytical/synthetic chemical uses.
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1.3 Details of the supplier of the safety data sheet

Manufacturer	• Air Liquide 2700 Post Oak Blvd. Houston, TX 77056 United States www.us.airliquide.com
Telephone (Technical)	• 713-896-2896
Telephone (Technical)	• 800-819-1704

1.4 Emergency telephone number

Manufacturer	• 800-424-9300
Manufacturer	• +1 703-527-3887

Section 2: Hazards Identification**EU/EEC**

According to Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]
According to EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture

CLP	• Compressed Gas - H280 Acute Toxicity Oral 2 - H300 Skin Corrosion 1B - H314 Acute Toxicity Inhalation 2 - H330 EUH014
DSD/DPD	• Corrosive (C) Very Toxic (T+) R14, R26/28, R34

2.2 Label Elements

CLP

DANGER

- Hazard statements**
- H280 - Contains gas under pressure; may explode if heated
 - H300 - Fatal if swallowed
 - H314 - Causes severe skin burns and eye damage
 - H330 - Fatal if inhaled
 - EUH014 - Reacts violently with water.

Precautionary statements

- Prevention**
- P260 - Do not breathe fume/gas.
 - P264 - Wash 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 protective gloves/protective clothing/eye protection/face protection.
 - P284 - Wear respiratory protection.
- Response**
- P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 - P310 - Immediately call a POISON CENTER or doctor/physician.
 - P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 - P363 - Wash contaminated clothing before reuse.
 - P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
 - P330 - Rinse mouth.
 - P331 - Do NOT induce vomiting.
 - P321 - Specific treatment, see supplemental first aid information.
- Storage/Disposal**
- P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
 - P405 - Store locked up.
 - P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

DSD/DPD



- Risk phrases**
- R14 - Reacts violently with water.
 - R26/28 - Very toxic by inhalation and if swallowed.
 - R34 - Causes burns.
- Safety phrases**
- S8 - Keep container dry
 - S28 - After contact with skin, wash immediately with plenty of ...
 - S36 - Wear suitable protective clothing.
 - S37 - Wear suitable gloves.
 - S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

2.3 Other Hazards

CLP

- According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

DSD/DPD

- According to European Directive 1999/45/EC this preparation is considered dangerous.

United States (US)

According to OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012

- Compressed Gas - H280
- Skin Corrosion 1B - H314
- Serious Eye Damage 1 - H318
- Acute Toxicity Inhalation 3 - H331
- Hazards Not Otherwise Classified - Physical Hazard - Reacts violently with water

2.2 Label elements

OSHA HCS 2012

DANGER



- Hazard statements**
- Contains gas under pressure; may explode if heated - H280
 - Causes severe skin burns and eye damage - H314
 - Causes serious eye damage - H318
 - Toxic if inhaled - H331

Precautionary statements

- Prevention**
- Do not breathe fume/gas. - P260
 - Wash thoroughly after handling. - P264
 - Do not eat, drink or smoke when using this product. - P270
 - Use only outdoors or in a well-ventilated area. - P271
 - Wear protective gloves/protective clothing/eye protection/face protection. - P280
- Response**
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. - P304+P340
 - Call a POISON CENTER or doctor/physician. - P311
 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. - P303+P361+P353
 - Wash contaminated clothing before reuse. - P363
 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. - P305+P351+P338
 - Immediately call a POISON CENTER or doctor/physician. - P310
 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. - P301+P330+P331
 - Specific treatment, see supplemental first aid information. - P321
- Storage/Disposal**
- Store in a well-ventilated place. Keep container tightly closed. - P403+P233
 - Store locked up. - P405
 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. - P501

2.3 Other hazards

OSHA HCS 2012

- Reacts violently with water. Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Canada

According to WHMIS

2.1 Classification of the substance or mixture

WHMIS

- Compressed Gas - A
- Very Toxic - D1A
- Corrosive - E

2.2 Label elements

WHMIS



- Compressed Gas - A
- Very Toxic - D1A

Corrosive - E

2.3 Other hazards

WHMIS

- Reacts violently with water.
In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

Section 3 - Composition/Information on Ingredients

3.1 Substances

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Borane, trichloro-	CAS:10294-34-5 EC Number:233-658-4 EU Index:005-002-00-5	99%	Inhalation-Rat LC50 • 2541 ppm 1 Hour(s)	EU DSD/DPD: Annex VI, Table 3.2: R14 T+; R26/28 C; R34 EU CLP: Annex VI, Table 3.1: Press. Gas - Comp., H280; Acute Tox. 2 * H330; Acute Tox. 2 * H300; Skin Corr. 1B, H314; EUH014 OSHA HCS 2012: Press. Gas - Comp.; Skin Corr. 1B; Eye Dam. 1; Acute Tox. 3 (inhl); HNOX - Reacts violently with water	NDA

3.2 Mixtures

- Material does not meet the criteria of a mixture in accordance with Regulation (EC) No 1272/2008.

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation

- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. If signs/symptoms continue, get medical attention.

Skin

- Although exposure is unlikely, in case of contact immediately flush skin with running water. If skin irritation develops get medical advice/attention.

Eye

- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately if symptoms occur.

Ingestion

- Never give anything by mouth to an unconscious person. Do NOT induce vomiting. First aid is not expected to be necessary if material is used under ordinary conditions and as recommended.

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician

- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

4.4 Other information

- Ensure that medical personnel are aware of the material(s) involved and take

precautions to protect themselves. RESCUERS SHOULD NOT ATTEMPT TO RETRIEVE VICTIMS OF EXPOSURE TO GASES WITHOUT ADEQUATE PERSONAL PROTECTIVE EQUIPMENT. At a minimum, Self-Contained Breathing Apparatus must be worn. Victim(s) who experience any adverse effect after over-exposure to this gas mixture must be taken for medical attention. Rescuers should be taken for medical attention if necessary. Take a copy of the label and the MSDS to physician or other health professional with victim(s).

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media • Use extinguishing agent suitable for type of surrounding fire.
SMALL FIRES: Dry chemical or CO₂.

Unsuitable Extinguishing Media • Water

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards • TOXIC; may be fatal if inhaled, ingested or absorbed through skin.
Vapors are extremely irritating and corrosive.
Cylinders exposed to fire may vent and release toxic and/or corrosive gas through pressure relief devices.
Containers may explode when heated.
Ruptured cylinders may rocket.

Hazardous Combustion Products • No data available

5.3 Advice for firefighters

- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.
Always wear thermal protective clothing when handling refrigerated/cryogenic liquids.
Wear positive pressure self-contained breathing apparatus (SCBA).
Move containers from fire area if you can do it without risk.
FIRE: If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.
FIRE INVOLVING TANKS: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
FIRE INVOLVING TANKS: Cool containers with flooding quantities of water until well after fire is out.
FIRE INVOLVING TANKS: Do not direct water at source of leak or safety devices; icing may occur.
FIRE INVOLVING TANKS: Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
FIRE INVOLVING TANKS: ALWAYS stay away from tanks engulfed in fire.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions • Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Self contained breathing apparatus and fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Do not touch or walk through spilled material. Ventilate the area before entry.

Emergency Procedures • Stop leak if you can do it without risk. Keep unauthorized personnel away. Keep out of low areas. Stay upwind. Do not direct water at spill or source of leak. LARGE SPILL: Consider initial downwind evacuation for at least 500 meters (1/3 mile)

6.2 Environmental precautions

- Prevent spreading of vapors through sewers, ventilation systems and confined areas.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures

- Stop leak if you can do it without risk.
Do not direct water at spill or source of leak.
Use water spray to reduce vapors; do not put water directly on leak, spill area or inside container.
If possible, turn leaking containers so that gas escapes rather than liquid.
Isolate area until gas has dispersed.
Ventilate the area.
Allow substance to evaporate.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

- Use only with adequate ventilation. Ventilate closed spaces before entering. Wear appropriate personal protective equipment, avoid direct contact. Be aware of any signs of dizziness or fatigue, especially if work is done in a poorly ventilated area; exposures to fatal concentrations of this gas mixture could occur without any significant warning symptoms, due to olfactory fatigue or oxygen deficiency. Cylinders should be firmly secured to prevent falling or being knocked-over. Do not attempt to repair, adjust, or in any other way modify cylinders. If there is a malfunction or another type of operational problem, contact nearest distributor immediately. Empty containers retain product residue and can be hazardous. Do not cut, weld, puncture or incinerate container.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Store in a cool, dry, well-ventilated place. Protect cylinders against physical damage. Cylinders should be firmly secured to prevent falling or being knocked-over.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines

- Currently there are no applicable exposure limits established for this material.

8.2 Exposure controls

Engineering Measures/Controls

- Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Equipment

Respiratory

- Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- Wear safety glasses.

Skin/Body

- Wear leather gloves when handling cylinders.

Environmental Exposure Controls

- Follow best practice for site management and disposal of waste. Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Gas	Appearance/Description	Colorless gas with acrid odor.
Color	Colorless	Odor	Acrid
Odor Threshold	Data lacking		
General Properties			
Boiling Point	12.5 C(54.5 F)	Melting Point	-107 C(-160.6 F)
Decomposition Temperature	Data lacking	pH	Data lacking
Specific Gravity/Relative Density	1.35 Water=1	Water Solubility	Data lacking
Viscosity	Data lacking	Explosive Properties	Data lacking
Oxidizing Properties:	Data lacking		
Volatility			
Vapor Pressure	1 atm @ 12.7 C(54.86 F)	Vapor Density	4 Air=1
Evaporation Rate	Data lacking		
Flammability			
Flash Point	Data lacking	UEL	Data lacking
LEL	Data lacking	Autoignition	Data lacking
Flammability (solid, gas)	Not flammable.		
Environmental			
Octanol/Water Partition coefficient	Data lacking		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid

- Avoid exposing cylinders to extremely high temperatures, which could cause cylinders to rupture.

10.5 Incompatible materials

- Avoid contact with water. Boron Trichloride which reacts violently with water.

10.6 Hazardous decomposition products

- No data available

Section 11 - Toxicological Information

11.1 Information on toxicological effects

	CAS	
Boron Trichloride	10294-34-5	Acute Toxicity: Inhalation-Rat LC50 • 2541 ppm 1 Hour(s)

GHS Properties	Classification
Acute toxicity	EU/CLP • Acute Toxicity - Inhalation 2; Acute Toxicity - Oral 2 OSHA HCS 2012 • Acute Toxicity - Inhalation 3
Aspiration Hazard	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Carcinogenicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Germ Cell Mutagenicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Skin corrosion/Irritation	EU/CLP • Skin Corrosion 1B OSHA HCS 2012 • Skin Corrosion 1B
Skin sensitization	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
STOT-RE	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
STOT-SE	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Toxicity for Reproduction	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Respiratory sensitization	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Serious eye damage/Irritation	EU/CLP • Classification criteria not met OSHA HCS 2012 • Serious Eye Damage 1

Potential Health Effects

Inhalation

Acute (Immediate)

- Toxic by inhalation. Boron Tribromide is extremely irritating or corrosive, depending on concentration and duration of exposure. Low levels of this material may irritate the lungs and throat. At higher levels, inhalation exposure may result in severe irritation and burns of mucous membranes, throat and lungs. Delayed pulmonary damage, chemical pneumonitis and breathing difficulty may also occur. Severe inhalation over-exposures can be fatal. As a result of severe exposures to this material, permanent lung injury may occur. Prolonged or repeated over-exposures to low levels of Boron Tribromide may cause impaired lung function, bronchitis, or emphysema. The onset of the symptoms of pulmonary edema can be delayed for hours or days after the exposure. Inhalation of high concentrations of the vapors (as may occur if this product is used or released in a poorly-ventilated area or confined space, or during a release of large volumes of this product), may be fatal. Additional symptoms may include coughing, nose bleeds, abdominal pain and diarrhea, and measles-like eruptions on torso and extremities.

Chronic (Delayed)

- No data available

Skin

Acute (Immediate)

- Causes severe skin burns and eye damage. Boron trichloride, a component in this material, is corrosive to the skin due to its rapid hydrolysis to hydrochloric acid (and boric acid) by moisture.

Chronic (Delayed)

- No data available

Eye

Acute (Immediate)

- Causes serious eye damage. Boron trichloride, a component in this material, is corrosive to mucous surfaces due to its rapid hydrolysis to hydrochloric acid (and boric acid) by moisture.

Chronic (Delayed)

- No data available

Ingestion**Acute (Immediate)**

- Fatal if swallowed.

Chronic (Delayed)

- No data available

Key to abbreviations

LC = Lethal Concentration

Section 12 - Ecological Information

12.1 Toxicity

- Material data lacking.

12.2 Persistence and degradability

- Material data lacking.

12.3 Bioaccumulative potential

- Material data lacking.

12.4 Mobility in Soil

- Material data lacking.

12.5 Results of PBT and vPvB assessment

- PBT and vPvB assessment has not been conducted for this material.

12.6 Other adverse effects

- No studies have been found.

Section 13 - Disposal Considerations

13.1 Waste treatment methods**Product waste**

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	UN1741	Boron trichloride	2.3,8	NDA	NDA
TDG	UN1741	BORON TRICHLORIDE	2.3,8	NDA	NDA
IMO/IMDG	UN1741	BORON TRICHLORIDE	2.3,8	NDA	NDA
IATA/ICAO	UN1741	Boron trichloride	2.3,8	NDA	NDA

14.6 Special precautions for user

- Cylinders should be transported in a secure position, in a well-ventilated vehicle. The transportation of compressed gas cylinders in automobiles or in closed-body vehicles can present serious safety hazards. If transporting these cylinders in vehicles, ensure these cylinders are not exposed to extremely high temperatures (as may occur in an enclosed vehicle on a hot day). Additionally, the vehicle should be well-ventilated

during transportation. Boron Trichloride carries a Special Provision 3 Inhalation Hazard Zone C

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

- Not relevant.

14.8 Other information

- DOT** • Forbidden for Passenger aircraft/rail transport and Cargo aircraft.
- TDG** • Forbidden for Transport in Passenger carrying ship, Passenger Road Vehicle or Passenger Carrying Railway.
- IATA/ICAO** • Forbidden for Transport.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications • Acute, Pressure(Sudden Release of), Reactive

State Right To Know				
Component	CAS	MA	NJ	PA
Borane, trichloro-	10294-34-5	Yes	Yes	Yes

Inventory						
Component	CAS	Canada DSL	Canada NDSL	China	EU EINECS	EU ELNICS
Borane, trichloro-	10294-34-5	Yes	No	Yes	Yes	No

Inventory (Con't.)		
Component	CAS	TSCA
Borane, trichloro-	10294-34-5	Yes

Canada

Labor

Canada - WHMIS - Classifications of Substances

• Borane, trichloro- 10294-34-5 Not Listed

Canada - WHMIS - Ingredient Disclosure List

• Borane, trichloro- 10294-34-5 1 %

Environment

Canada - CEPA - Priority Substances List

• Borane, trichloro- 10294-34-5 Not Listed

China

Environment

China - Ozone Depleting Substances - First Schedule

• Borane, trichloro- 10294-34-5 Not Listed

China - Ozone Depleting Substances - Second Schedule

• Borane, trichloro- 10294-34-5 Not Listed

China - Ozone Depleting Substances - Third Schedule

• Borane, trichloro- 10294-34-5 Not Listed

Other**China - Annex I & II - Controlled Chemicals Lists**

• Borane, trichloro-	10294-34-5	Not Listed
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China - Dangerous Goods List

• Borane, trichloro-	10294-34-5	
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China - Export Control List - Part I Chemicals

• Borane, trichloro-	10294-34-5	Not Listed
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Europe**Other****EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification**

• Borane, trichloro-	10294-34-5	R14 T+; R26/28 C; R34
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EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

• Borane, trichloro-	10294-34-5	Not Listed
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EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling

• Borane, trichloro-	10294-34-5	T+ R:14-26/28-34 S:(1/2)-9-26-28-36/37/39-45
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EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations

• Borane, trichloro-	10294-34-5	Not Listed
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EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

• Borane, trichloro-	10294-34-5	S:(1/2)-9-26-28-36/37/39-45
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Germany**Environment****Germany - TA Luft - Types and Classes**

• Borane, trichloro-	10294-34-5	Not Listed
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Germany - Water Classification (VwVwS) - Annex 1

• Borane, trichloro-	10294-34-5	Not Listed
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Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes

• Borane, trichloro-	10294-34-5	Not Listed
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Germany - Water Classification (VwVwS) - Annex 3

• Borane, trichloro-	10294-34-5	Not Listed
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Other**Germany - Specifically Regulated Chemicals in TRGS**

• Borane, trichloro-	10294-34-5	Not Listed
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Portugal**Other****Portugal - Prohibited Substances**

• Borane, trichloro-	10294-34-5	Not Listed
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United Kingdom

Environment

United Kingdom - Pollution Inventory - Schedule 1 - Thresholds for Releases to Air

• Borane, trichloro-	10294-34-5	Not Listed
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Other

United Kingdom - Workplace Exposure Limits (WELs) - Substances in Review

• Borane, trichloro-	10294-34-5	Not Listed
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United Kingdom - List of Dangerous Substances in Water

• Borane, trichloro-	10294-34-5	Not Listed
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United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

• Borane, trichloro-	10294-34-5	2500 lb TQ
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U.S. - OSHA - Specifically Regulated Chemicals

• Borane, trichloro-	10294-34-5	Not Listed
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Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

• Borane, trichloro-	10294-34-5	Not Listed
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U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• Borane, trichloro-	10294-34-5	Not Listed
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U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

• Borane, trichloro-	10294-34-5	Not Listed
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U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

• Borane, trichloro-	10294-34-5	500 lb EPCRA RQ
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U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

• Borane, trichloro-	10294-34-5	500 lb TPQ
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U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• Borane, trichloro-	10294-34-5	1.0 % de minimis concentration
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U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

• Borane, trichloro-	10294-34-5	Not Listed
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United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List

• Borane, trichloro-	10294-34-5	Not Listed
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U.S. - California - Proposition 65 - Developmental Toxicity

• Borane, trichloro-	10294-34-5	Not Listed
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U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

• Borane, trichloro-	10294-34-5	Not Listed
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U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

• Borane, trichloro-	10294-34-5	Not Listed
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U.S. - California - Proposition 65 - Reproductive Toxicity - Female

• Borane, trichloro-	10294-34-5	Not Listed
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U.S. - California - Proposition 65 - Reproductive Toxicity - Male

• Borane, trichloro-	10294-34-5	Not Listed
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United States - Pennsylvania**Labor****U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List**

• Borane, trichloro-	10294-34-5
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U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

• Borane, trichloro-	10294-34-5	Not Listed
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15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

Section 16 - Other Information**Last Revision Date**

- 08/September/2014

Preparation Date

- 08/September/2014

Disclaimer/Statement of Liability

- To the best of Air Liquide's knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either express or implied, are provided. The information contained herein relates only to this specific product. If this gas mixture is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.

Key to abbreviations

NDA = No Data Available