

Safety Data Sheet

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

Product Name • Chlorine in Air
Product Code • M-C202321/E-1

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

Relevant identified use(s) • Please provide product use

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
sds@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
DSD/DPD • Not classified

2.2 Label Elements

CLP

WARNING

Hazard statements • H280 - Contains gas under pressure; may explode if heated

Precautionary statements

Storage/Disposal • Protect from sunlight when ambient temperature exceeds 125°F (52°C)
P403 - Store in a well-ventilated place.

DSD/DPD

Risk phrases • No label element(s) required

2.3 Other Hazards**CLP**

- Contact with rapidly expanding gas may cause burns or frostbite. According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

DSD/DPD

- Contact with rapidly expanding gas may cause burns or frostbite. According to European Directive 1999/45/EC this preparation is not 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

2.2 Label elements**OSHA HCS 2012****WARNING**

Hazard statements • Contains gas under pressure; may explode if heated - H280

Precautionary statements

Storage/Disposal • Protect from sunlight when ambient temperature exceeds 125°F (52°C)
Store in a well-ventilated place. - P403

2.3 Other hazards**OSHA HCS 2012**

- Contact with rapidly expanding gas may cause burns or frostbite. 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

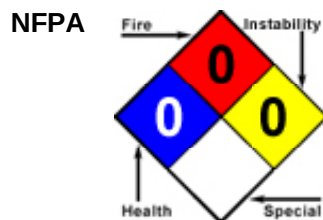
2.2 Label elements**WHMIS**

- Compressed Gas - A

2.3 Other hazards**WHMIS**

- Contact with rapidly expanding gas may cause burns or frostbite. In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

2.4 Other information



Section 3 - Composition/Information on Ingredients

3.1 Substances

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

3.2 Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Air	CAS:132259-10-0	99.9% TO 99.9999%	NDA	EU DSD/DPD: Not Classified EU CLP: Self Classified: Press. Gas - Comp., H280 OSHA HCS 2012: Press. Gas - Comp.	NDA
Chlorine	CAS:7782-50-5 EC Number:231-959-5 EU Index:017-001-00-7	0% TO 0.1%	Inhalation-Rat LC50 • 293 ppm 1 Hour(s)	EU DSD/DPD: Annex I: T; R23 Xi; R36/37/38 N; R50 EU CLP: Annex VI: Acute Tox. 2, H330; Eye Irrit. 2, H319; STOT SE 3: Resp. Irrit., H335; Skin Irrit. 2, H315; Aquatic Acute 1, H400; M=100 OSHA HCS 2012: Ox. Gas 1; Press. Gas - Comp.; Eye Dam. 1; Skin Corr. 1A; Acute Tox. 2 (Inhl)	0.6-1000ppm

See Section 16 for full text of H-statements and R-phrases.

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

- If frostbite has occurred, seek medical attention immediately; do NOT rub the affected area(s) or flush them with water. In order to prevent further tissue damage, do NOT attempt to remove frozen clothing from frostbitten areas. If frostbite has not occurred, immediately and thoroughly wash contaminated skin with soap and water.

Eye

- If eye tissue is frozen, seek medical attention immediately; if tissue is not frozen, immediately and thoroughly flush the eyes with large amounts of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation, pain, swelling, lacrimation or photophobia persist, get medical attention as soon as possible.

Ingestion

- If frostbite has occurred, seek medical attention immediately; do NOT rub the affected area(s) or flush them with water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting.

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.
LARGE FIRES: Water spray or fog.

- Unsuitable Extinguishing Media**
- No data available

5.2 Special hazards arising from the substance or mixture

- Unusual Fire and Explosion Hazards**
- 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.
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**
- Ventilate the area before entry. Do not walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Emergency Procedures**
- 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

- No special environmental precautions necessary.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures

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

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. 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. Do not allow area where cylinders are stored to exceed 52C (125F).

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						
	Result	ACGIH	Canada Ontario	Canada Quebec	China	China Highly Toxic Goods
Chlorine (7782-50-5)	Ceilings	Not established	Not established	Not established	1 mg/m ³ Ceiling [MAC]	1 mg/m ³ Ceiling
	STELs	1 ppm STEL	1 ppm STEL	1 ppm STEV; 2.9 mg/m ³ STEV	Not established	Not established
	TWAs	0.5 ppm TWA	0.5 ppm TWA	0.5 ppm TWAEV; 1.5 mg/m ³ TWAEV	Not established	Not established
Exposure Limits/Guidelines (Con't.)						
	Result	Europe	France	Germany DFG	Germany TRGS	Ireland
	STELs	0.5 ppm STEL; 1.5 mg/m ³ STEL	0.5 ppm STEL [VLCT] (restrictive limit); 1.5 mg/m ³ STEL [VLCT] (restrictive limit)	Not established	Not established	0.5 ppm STEL; 1.5 mg/m ³ STEL
					0.5 ppm TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are	

Chlorine (7782-50-5)	TWAs	Not established	Not established	Not established	observed, exposure factor 1); 1.5 mg/m ³ TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 1)	Not established
	Ceilings	Not established	Not established	0.5 ppm Peak; 1.5 mg/m ³ Peak	Not established	Not established
	MAKs	Not established	Not established	0.5 ppm TWA MAK; 1.5 mg/m ³ TWA MAK	Not established	Not established

Exposure Limits/Guidelines (Con't.)

	Result	Israel	Italy	NIOSH	OSHA	OSHA Vacated
Chlorine (7782-50-5)	STELs	1 ppm STEL	0.5 ppm STEL; 1.5 mg/m ³ STEL	Not established	Not established	1 ppm STEL; 3 mg/m ³ STEL
	TWAs	0.5 ppm TWA	Not established	Not established	Not established	0.5 ppm TWA; 1.5 mg/m ³ TWA
	Ceilings	Not established	Not established	0.5 ppm Ceiling (15 min); 1.45 mg/m ³ Ceiling (15 min)	1 ppm Ceiling; 3 mg/m ³ Ceiling	Not established

Exposure Limits/Guidelines (Con't.)

	Result	Portugal	Spain	Sweden
Chlorine (7782-50-5)	STELs	1 ppm STEL [VLE-CD]	0.5 ppm STEL [VLA-EC]; 1.5 mg/m ³ STEL [VLA-EC]	Not established
	TWAs	0.5 ppm TWA [VLE-MP]	Not established	0.5 ppm LLV; 1.5 mg/m ³ LLV
	Ceilings	Not established	Not established	1 ppm CLV; 3 mg/m ³ CLV

Exposure Control Notations

Portugal

•Chlorine (7782-50-5): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen)

Germany DFG

•Chlorine (7782-50-5): **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to)

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

- In case of insufficient ventilation, wear suitable respiratory equipment. 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.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

LLV = Limit Level Value is the exposure limit for 8-hour work day

MAK = Maximale Arbeitsplatz Konzentration is the maximum permissible concentration

NIOSH = National Institute of Occupational Safety and Health

OSHA = Occupational Safety and Health Administration

STEL = Short Term Exposure Limits are based on 15-minute exposures

STEV = Short Term Exposure Value

TWAEV = Time-Weighted Average Exposure Value

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

Section 9 - Physical and Chemical Properties**9.1 Information on Physical and Chemical Properties**

Material Description			
Physical Form	Gas	Appearance/Description	Colorless gas with suffocating pungent odor.
Color	Colorless	Odor	Suffocating pungent odor.
Odor Threshold	Data lacking		
General Properties			
Boiling Point	-194.5 C(-318.1 F) Air	Melting Point	-213.4 C(-352.12 F) Air
Decomposition Temperature	Data lacking	pH	Data lacking
Specific Gravity/Relative Density	Data lacking	Water Solubility	Data lacking
Viscosity	Data lacking	Explosive Properties	Not explosive.
Oxidizing Properties:	Not an oxidizing gas.		
Volatility			
Vapor Pressure	Data lacking	Vapor Density	Data lacking
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

- Excess heat.

10.5 Incompatible materials

- Combustibles. Reducing agents.

10.6 Hazardous decomposition products

- Chlorine will react with steam and water to give HCl fumes. Material combines with CO and CO₂ to form phosgene and suluryl chloride.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Components		
Chlorine (0% TO 0.1%)	7782-50-5	Acute Toxicity: Inhalation-Rat LC50 • 293 ppm 1 Hour(s); Mutagen: Sperm Morphology • Ingestion/Oral-Mouse • 20 mg/kg 5 Day(s)-Continuous; Reproductive: Ingestion/Oral-Rat TDLo • 565 mg/kg (8W male/2W pre-3W post); <i>Reproductive Effects: Effects on Newborn:</i> Biochemical and metabolic; Tumorigen / Carcinogen: Ingestion/Oral-Rat TDLo • 5047 mg/kg 103 Week(s)-Continuous; <i>Tumorigenic:</i> Equivocal tumorigenic agent by RTECS criteria; Blood:Leukemia

GHS Properties	Classification
Acute toxicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
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 • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
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 • Classification criteria not met

Potential Health Effects

Inhalation

Acute (Immediate)

- Contact with rapidly expanding gas may cause burns or frostbite.

Chronic (Delayed)

- No data available

Skin

Acute (Immediate)

- Contact with gas or liquefied gas will cause burns, severe injury and/or frostbite.

Chronic (Delayed)

- No data available

Eye**Acute (Immediate)**

- Contact with gas or liquefied gas will cause burns, severe injury and/or frostbite.

Chronic (Delayed)

- No data available

Ingestion**Acute (Immediate)**

- Ingestion can cause burns similar to frostbite.

Chronic (Delayed)

- No data available

Key to abbreviations

LC = Lethal Concentration

TD = Toxic Dose

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	UN1956	Compressed gas, n.o.s (Air, Chlorine)	2.2	NDA	NDA
TDG	UN1956	COMPRESSED GAS, N.O.S. (Air, Chlorine)	2.2	NDA	NDA

IMO/IMDG	UN1956	COMPRESSED GAS, N.O.S. (Air, Chlorine)	2.2	NDA	NDA
IATA/ICAO	UN1956	Compressed gas, n.o.s (Air, Chlorine)	2.2	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.

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

- Not relevant.

14.8 Other information

- DOT** • Chlorine has a reportable quantity of 10 lbs (4.54kg) as listed in Appendix A to 49 CFR 172.101.

Section 15 - Regulatory Information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****SARA Hazard Classifications** • Pressure(Sudden Release of)

State Right To Know				
Component	CAS	MA	NJ	PA
Air	132259-10-0	No	No	No
Chlorine	7782-50-5	Yes	Yes	Yes

Inventory						
Component	CAS	Canada DSL	Canada NDSL	China	EU EINECS	EU ELNICS
Air	132259-10-0	No	No	Yes	No	No
Chlorine	7782-50-5	Yes	No	Yes	Yes	No

Inventory (Con't.)		
Component	CAS	TSCA
Air	132259-10-0	No
Chlorine	7782-50-5	Yes

Canada**Labor****Canada - WHMIS - Classifications of Substances**

- | | | |
|------------|-------------|-----------|
| • Air | 132259-10-0 | A |
| • Chlorine | 7782-50-5 | A, D1A, E |

Canada - WHMIS - Ingredient Disclosure List

- | | | |
|------------|-------------|------------|
| • Air | 132259-10-0 | Not Listed |
| • Chlorine | 7782-50-5 | 1 % |

Environment**Canada - CEPA - Priority Substances List**

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	Not Listed

Canada - DWQ (Drinking Water Quality) - IMACs

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	Not Listed

China**Environment****China - Ozone Depleting Substances - First Schedule**

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	Not Listed

China - Ozone Depleting Substances - Second Schedule

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	Not Listed

China - Ozone Depleting Substances - Third Schedule

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	Not Listed

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

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	Not Listed

China - Dangerous Goods List

• Air	132259-10-0	(compressed or refrigerated liquid)
• Chlorine	7782-50-5	

China - Export Control List - Part I Chemicals

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	Not Listed

Europe**Other****EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification**

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	T; R23 Xi; R36/37/38 N; R50

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	0.25%≤C: N; R:50

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	T N R:23-36/37/38-50 S:(1/2)-9-45-61

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations

• Air	132259-10-0	Not Listed
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• Chlorine	7782-50-5	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases		
• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	S:(1/2)-9-45-61

Germany

Environment

Germany - TA Luft - Types and Classes

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	inorganic gas Substance: 5.2.4, Class II

Germany - Water Classification (VwVwS) - Annex 1

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	Not Listed

Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	ID Number 223, hazard class 2 - hazard to waters (footnote 8)

Germany - Water Classification (VwVwS) - Annex 3

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	Not Listed

Other

Germany - Specifically Regulated Chemicals in TRGS

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	Not Listed

Portugal

Other

Portugal - Prohibited Substances

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	Not Listed

United Kingdom

Environment

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

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	10000 kg

Other

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

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	Not Listed

United Kingdom - List of Dangerous Substances in Water

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	Not Listed

United States

Labor

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

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	1500 lb TQ

U.S. - OSHA - Specifically Regulated Chemicals

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	Not Listed

Environment

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

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	10 lb final RQ; 4.54 kg final RQ

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	10 lb EPCRA RQ

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	100 lb TPQ

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	1.0 % de minimis concentration

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	Not Listed

U.S. - EPA - Designated Generic Categories - Aqueous Ammonia

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	Not Listed

U.S. - EPA - Designated Generic Categories - Certain Glycol Ethers

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	Not Listed

United States - California

Environment

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

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	Not Listed

United States - Pennsylvania**Labor****U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List**

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	

U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

• Air	132259-10-0	Not Listed
• Chlorine	7782-50-5	Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

Section 16 - Other Information**Relevant Phrases (code & full text)**

- H315 - Causes skin irritation
- H319 - Causes serious eye irritation
- H330 - Fatal if inhaled
- H335 - May cause respiratory irritation
- H400 - Very toxic to aquatic life
- R23 - Toxic by inhalation.
- R36/37/38 - Irritating to eyes, respiratory system and skin.
- R50 - Very toxic to aquatic organisms.

Last Revision Date

- 09/September/2014

Preparation Date

- 09/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
