

SECTION 1: Identification**1.1. Identification**

Product form : Mixture
Formula : Non-flammable, Non-oxidizing gas mixture containing one or more of the following components: Sulfur dioxide, Hydrogen sulfide, Carbon Monoxide, Pentane, Oxygen, Carbon Dioxide, Nitrogen.

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

Use of the substance/mixture : Calibration / Reference
Use of the substance/mixture : Industrial use

1.3. Details of the supplier of the safety data sheet

Industrial Scientific Corporation(AU)
Imported By: Scientific Gas Australia Pty Ltd.
Unit 3, 1 Perry Road
Matraville NSW, 2036 - Australia
T PH 1300 880 531

1.4. Emergency telephone number

Emergency number : Emergency Phone: International call (outside USA): +1 813 248 0585; Emergency Phone: International call (outside USA): +1 813 248 058; Australian Fire Brigade: 000; Australian Poison Information Centre: 13 11 26
CHEMTREC: USA 1-800-424-9300, International 001-703-527-3887 (Collect calls accepted, contract 17729)

SECTION 2: Hazard(s) identification**2.1. Classification of the substance or mixture****GHS-US classification**

Compressed gas H280 - CONTAINS GAS UNDER PRESSURE; MAY EXPLODE IF HEATED

Full text of H-statements: see section 16

2.2. Label elements**GHS-US labelling**

Hazard pictograms (GHS-US) :



GHS04

Signal word (GHS-US) : WARNING
Hazard statements (GHS-US) : H280 - CONTAINS GAS UNDER PRESSURE; MAY EXPLODE IF HEATED
Precautionary statements (GHS-US) : P403 - Use and store only outdoors or in a well-ventilated place.
CGA-PG02 - Protect from sunlight when ambient temperature exceeds 52°C (125°F).
CGA-PG12 - Do not open valve until connected to equipment prepared for use.
CGA-PG10 - Use only with equipment rated for cylinder pressure.
CGA-PG21 - Open valve slowly.
CGA-PG06 - Close valve after each use and when empty.
CGA-PG05 - Use a back flow preventive device in the piping.
CGA-PG11 - Never put cylinders into unventilated areas of passenger vehicles.
CGA-PG27 - Read and follow the Safety Data Sheet (SDS) before use.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients**3.1. Substance**

Not applicable

3.2. Mixture

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Name	Product identifier	%	GHS-US classification
Nitrogen	(CAS No) 7727-37-9	79.1 - 99.999	Compressed gas, H280
Oxygen	(CAS No) 7782-44-7	0.0001 - 20.9	Ox. Gas 1, H270 Compressed gas, H280
Carbon dioxide	(CAS No) 124-38-9	0.0001 - 8.5	Compressed gas, H280
Hydrogen sulfide	(CAS No) 7783-06-4	0.0001 - 1	Flam. Gas 1, H220 Liquefied gas, H280 Acute Tox. 2 (Inhalation:gas), H330 Aquatic Acute 1, H400
Sulfur dioxide	(CAS No) 7446-09-5	0.0001 - 0.9999	Liquefied gas, H280 Acute Tox. 3 (Inhalation:gas), H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402
n-Pentane	(CAS No) 109-66-0	0.0001 - 0.6	Flam. Liq. 2, H225 Aquatic Acute 2, H401
Carbon monoxide	(CAS No) 630-08-0	0.0001 - 0.0999	Flam. Gas 1, H220 Compressed gas, H280 Acute Tox. 3 (Inhalation:gas), H331

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Immediately remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, qualified personnel may give oxygen. Call a physician.
- First-aid measures after skin contact : Adverse effects not expected from this product.
- First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Hold the eyelids open and away from the eyeballs to ensure that all surfaces are flushed thoroughly. Contact an ophthalmologist immediately.
- First-aid measures after ingestion : Ingestion is not considered a potential route of exposure.

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

No additional information available

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

None.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.

5.2. Special hazards arising from the substance or mixture

- Reactivity : No reactivity hazard other than the effects described in sub-sections below.

5.3. Advice for firefighters

- Firefighting instructions : Evacuate all personnel from the danger area. Use self-contained breathing apparatus (SCBA) and protective clothing. Immediately cool containers with water from maximum distance. Stop flow of gas if safe to do so, while continuing cooling water spray. Remove ignition sources if safe to do so. Remove containers from area of fire if safe to do so. On-site fire brigades must comply with OSHA 29 CFR 1910.156 and applicable standards under 29 CFR 1910 Subpart L—Fire Protection.
- Special protective equipment for fire fighters : Standard protective clothing and equipment (Self Contained Breathing Apparatus) for fire fighters.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent waste from contaminating the surrounding environment. Prevent soil and water pollution. Dispose of contents/container in accordance with local/regional/national/international regulations. Contact supplier for any special requirements.

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6.3. Methods and material for containment and cleaning up

No additional information available

6.4. Reference to other sections

See also sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wear leather safety gloves and safety shoes when handling cylinders. Protect cylinders from physical damage; do not drag, roll, slide or drop. While moving cylinder, always keep in place removable valve cover. Never attempt to lift a cylinder by its cap; the cap is intended solely to protect the valve. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Never insert an object (e.g., wrench, screwdriver, pry bar) into cap openings; doing so may damage the valve and cause a leak. Use an adjustable strap wrench to remove over-tight or rusted caps. Slowly open the valve. If the valve is hard to open, discontinue use and contact your supplier. Close the container valve after each use; keep closed even when empty. Never apply flame or localized heat directly to any part of the container. High temperatures may damage the container and could cause the pressure relief device to fail prematurely, venting the container contents. For other precautions in using this product, see section 16.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a cool, well-ventilated place. Store and use with adequate ventilation. Store only where temperature will not exceed 125°F (52°C). Firmly secure containers upright to keep them from falling or being knocked over. Install valve protection cap, if provided, firmly in place by hand. Store full and empty containers separately. Use a first-in, first-out inventory system to prevent storing full containers for long periods. OTHER PRECAUTIONS FOR HANDLING, STORAGE, AND USE: When handling product under pressure, use piping and equipment adequately designed to withstand the pressures to be encountered. Never work on a pressurized system. Use a back flow preventive device in the piping. Gases can cause rapid suffocation because of oxygen deficiency; store and use with adequate ventilation. If a leak occurs, close the container valve and blow down the system in a safe and environmentally correct manner in compliance with all international, federal/national, state/provincial, and local laws; then repair the leak. Never place a container where it may become part of an electrical circuit.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Sulfur dioxide (7446-09-5)		
ACGIH	ACGIH TLV-STEL (ppm)	0.25 ppm
OSHA	OSHA PEL (TWA) (mg/m ³)	13 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	5 ppm

Hydrogen sulfide (7783-06-4)		
ACGIH	ACGIH TLV-TWA (ppm)	1 ppm
ACGIH	ACGIH TLV-STEL (ppm)	5 ppm
OSHA	OSHA PEL (Ceiling) (ppm)	20 ppm

Carbon monoxide (630-08-0)		
ACGIH	ACGIH TLV-TWA (ppm)	25 ppm
OSHA	OSHA PEL (TWA) (mg/m ³)	55 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	50 ppm

Carbon dioxide (124-38-9)		
ACGIH	ACGIH TLV-TWA (ppm)	5000 ppm
ACGIH	ACGIH TLV-STEL (ppm)	30000 ppm
OSHA	OSHA PEL (TWA) (mg/m ³)	9000 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	5000 ppm

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n-Pentane (109-66-0)		
ACGIH	ACGIH TLV-TWA (ppm)	1000 ppm
OSHA	OSHA PEL (TWA) (mg/m ³)	2950 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	1000 ppm

8.2. Exposure controls

Appropriate engineering controls : Provide adequate general and local exhaust ventilation. Ensure exposure is below occupational exposure limits (where available).

Personal protective equipment : Gloves. Safety glasses.



Eye protection : Wear safety glasses when handling cylinders; vapor-proof goggles and a face shield during cylinder changeout or whenever contact with product is possible. Select eye protection in accordance with OSHA 29 CFR 1910.133.

Skin and body protection : Wear metatarsal shoes and work gloves for cylinder handling, and protective clothing where needed. Wear appropriate chemical gloves during cylinder changeout or wherever contact with product is possible. Select per OSHA 29 CFR 1910.132, 1910.136, and 1910.138.

Respiratory protection : When workplace conditions warrant respirator use, follow a respiratory protection program that meets OSHA 29 CFR 1910.134, ANSI Z88.2, or MSHA 30 CFR 72.710 (where applicable). Use an air-supplied or air-purifying cartridge if the action level is exceeded. Ensure that the respirator has the appropriate protection factor for the exposure level. If cartridge type respirators are used, the cartridge must be appropriate for the chemical exposure (e.g., an organic vapor cartridge). For emergencies or instances with unknown exposure levels, use a self-contained breathing apparatus (SCBA). Self contained breathing apparatus (SCBA) or positive pressure airline with mask are to be used in oxygen-deficient atmospheres.

Thermal hazard protection : Wear cold insulating gloves when transfilling or breaking transfer connections.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Gas
Colour	: Colourless
Odour	: No data available
Odour threshold	: No data available
pH	: Not applicable.
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Relative evaporation rate (ether=1)	: Not applicable.
Flammability (solid, gas)	: No data available
Explosive limits	: No data available
Explosive properties	: Not applicable.
Oxidising properties	: None.
Vapour pressure	: Not applicable.
Relative density	: No data available
Relative vapour density at 20 °C	: No data available
Solubility	: Water: No data available
Log Pow	: Not applicable. Not applicable.
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: Not applicable.

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Viscosity, dynamic : Not applicable.

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No reactivity hazard other than the effects described in sub-sections below.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None.

10.4. Conditions to avoid

None.

10.5. Incompatible materials

None.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Sulfur dioxide (7446-09-5)	
LC50 inhalation rat (ppm)	1260 ppm/4h
ATE US (gases)	1260.000 ppmv/4h

Hydrogen sulfide (7783-06-4)	
LC50 inhalation rat (mg/l)	0.99 mg/l (Exposure time: 1 h)
LC50 inhalation rat (ppm)	356 ppm/4h
ATE US (gases)	356.000 ppmv/4h
ATE US (vapours)	0.990 mg/l/4h
ATE US (dust,mist)	0.990 mg/l/4h

Carbon monoxide (630-08-0)	
LC50 inhalation rat (ppm)	3760 ppm/1h
ATE US (gases)	1880.000 ppmv/4h

n-Pentane (109-66-0)	
LD50 dermal rabbit	3000 mg/kg
LC50 inhalation rat (mg/l)	364 g/m ³ (Exposure time: 4 h)
LC50 inhalation rat (ppm)	246702 ppm/1h
ATE US (dermal)	3000.000 mg/kg bodyweight
ATE US (gases)	123351.000 ppmv/4h
ATE US (vapours)	364.000 mg/l/4h
ATE US (dust,mist)	364.000 mg/l/4h

Skin corrosion/irritation : Not classified
pH: Not applicable.

Serious eye damage/irritation : Not classified
pH: Not applicable.

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Sulfur dioxide (7446-09-5)	
IARC group	3 - Not classifiable

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Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Hydrogen sulfide (7783-06-4)	
LC50 fish 1	0.0448 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through])
LC50 fish 2	0.016 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])

n-Pentane (109-66-0)	
LC50 fish 1	9.87 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia 1	9.74 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	11.59 mg/l (Exposure time: 96 h - Species: Pimephales promelas)

12.2. Persistence and degradability

5 Gas mixture - Pentane	
Persistence and degradability	No ecological damage caused by this product.
Sulfur dioxide (7446-09-5)	
Persistence and degradability	Not applicable for inorganic gases.
Hydrogen sulfide (7783-06-4)	
Persistence and degradability	Not applicable for inorganic gases.
Oxygen (7782-44-7)	
Persistence and degradability	No ecological damage caused by this product.
Carbon dioxide (124-38-9)	
Persistence and degradability	No ecological damage caused by this product.
Nitrogen (7727-37-9)	
Persistence and degradability	No ecological damage caused by this product.

12.3. Bioaccumulative potential

5 Gas mixture - Pentane	
Log Pow	Not applicable.
Log Kow	Not applicable.
Bioaccumulative potential	No ecological damage caused by this product.
Sulfur dioxide (7446-09-5)	
BCF fish 1	(no bioaccumulation expected)
Log Pow	Not applicable for inorganic gases.
Bioaccumulative potential	No data available.
Hydrogen sulfide (7783-06-4)	
BCF fish 1	(no bioaccumulation expected)
Log Pow	Not applicable.
Log Kow	Not applicable.
Bioaccumulative potential	No data available.
Carbon monoxide (630-08-0)	
Log Kow	Not applicable.
Oxygen (7782-44-7)	
Log Pow	Not applicable.
Log Kow	Not applicable.

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Oxygen (7782-44-7)	
Bioaccumulative potential	No ecological damage caused by this product.
Carbon dioxide (124-38-9)	
BCF fish 1	(no bioaccumulation)
Log Pow	0.83
Log Kow	Not applicable.
Bioaccumulative potential	No ecological damage caused by this product.
Nitrogen (7727-37-9)	
Log Pow	Not applicable.
Log Kow	Not applicable.
Bioaccumulative potential	No ecological damage caused by this product.
n-Pentane (109-66-0)	
Log Pow	3.39

12.4. Mobility in soil

5 Gas mixture - Pentane	
Mobility in soil	No data available.
Sulfur dioxide (7446-09-5)	
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution.
Hydrogen sulfide (7783-06-4)	
Mobility in soil	No data available.
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution.
Carbon monoxide (630-08-0)	
Mobility in soil	No data available.
Oxygen (7782-44-7)	
Mobility in soil	No data available.
Ecology - soil	No ecological damage caused by this product.
Carbon dioxide (124-38-9)	
Mobility in soil	No data available.
Ecology - soil	No ecological damage caused by this product.
Nitrogen (7727-37-9)	
Mobility in soil	No data available.
Ecology - soil	No ecological damage caused by this product.

12.5. Other adverse effects

Effect on ozone layer	: None.
Effect on the global warming	: Contains greenhouse gas(es) not covered by 842/2006/EC.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations	: Do not attempt to dispose of residual or unused quantities. Return container to supplier.
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SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT	
Transport document description	: UN1956 Compressed gas, n.o.s., 2.2
UN-No.(DOT)	: UN1956
Proper Shipping Name (DOT)	: Compressed gas, n.o.s.
Transport hazard class(es) (DOT)	: 2.2 - Class 2.2 - Non-flammable compressed gas 49 CFR 173.115

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Hazard labels (DOT) : 2.2 - Non-flammable gas



DOT Packaging Non Bulk (49 CFR 173.xxx) : 302;305

DOT Packaging Bulk (49 CFR 173.xxx) : 314;315

DOT Symbols : G - Identifies proper shipping name (PSN) requiring the addition of technical name(s) in parentheses following the PSN.

DOT Packaging Exceptions (49 CFR 173.xxx) : 306;307

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 172.101 HMT, Column 9a) : 75 kg

DOT Quantity Limitations Cargo aircraft only (49 CFR 172.101 HMT, Column 9b) : 150 kg

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

Emergency Response Guide (ERG) Number : 126

Other information : No supplementary information available.

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.

TDG

Transport document description : UN1956 Compressed Gas, n.o.s., 2.2

UN-No. (TDG) : UN1956

TDG Proper Shipping Name : Compressed Gas, n.o.s.

TDG Primary Hazard Classes : 2.2 - Class 2.2 - Non-Flammable, Non-Toxic Gas.

Transport by sea

UN-No. (IMDG) : 1956

Proper Shipping Name (IMDG) : COMPRESSED GAS, N.O.S.

Class (IMDG) : 2.2 - Non-flammable, non-toxic gases

Limited quantities (IMDG) : 120ml

EmS-No. (1) : F-C

MFAG-No : 620

EmS-No. (2) : S-V

Air transport

UN-No. (IATA) : 1956

Proper Shipping Name (IATA) : COMPRESSED GAS, N.O.S.

Class (IATA) : 2

Instruction "cargo" (ICAO) : 200

Instruction "passenger" (ICAO) : 200

Instruction "passenger" - Limited quantities (ICAO) : FORBIDDEN

SECTION 15: Regulatory information

15.1. US Federal regulations

Sulfur dioxide (7446-09-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on the United States SARA Section 302

SARA Section 302 Threshold Planning Quantity (TPQ)	500
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Hydrogen sulfide (7783-06-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on the United States SARA Section 302 Subject to reporting requirements of United States SARA Section 313	
SARA Section 302 Threshold Planning Quantity (TPQ)	500
SARA Section 313 - Emission Reporting	1.0 %
Carbon monoxide (630-08-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Oxygen (7782-44-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Carbon dioxide (124-38-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Nitrogen (7727-37-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
n-Pentane (109-66-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.

15.2. International regulations

CANADA

Sulfur dioxide (7446-09-5)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class A - Compressed Gas Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects Class E - Corrosive Material
Hydrogen sulfide (7783-06-4)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class A - Compressed Gas Class B Division 1 - Flammable Gas Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects
Carbon monoxide (630-08-0)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class A - Compressed Gas Class B Division 1 - Flammable Gas Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
Oxygen (7782-44-7)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class A - Compressed Gas Class C - Oxidizing Material
Carbon dioxide (124-38-9)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class A - Compressed Gas
Nitrogen (7727-37-9)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class A - Compressed Gas
n-Pentane (109-66-0)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class B Division 2 - Flammable Liquid

EU-Regulations

No additional information available

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National regulations

Sulfur dioxide (7446-09-5)

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 Japanese ENCS (Existing & New Chemical Substances) inventory
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 Canadian IDL (Ingredient Disclosure List)

Hydrogen sulfide (7783-06-4)

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 Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
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Carbon monoxide (630-08-0)

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 Japanese ENCS (Existing & New Chemical Substances) inventory
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 Canadian IDL (Ingredient Disclosure List)

Oxygen (7782-44-7)

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 Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Carbon dioxide (124-38-9)

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 Japanese ENCS (Existing & New Chemical Substances) inventory
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)
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Nitrogen (7727-37-9)

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 Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

n-Pentane (109-66-0)

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 Japanese ENCS (Existing & New Chemical Substances) inventory
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 Canadian IDL (Ingredient Disclosure List)

15.3. US State regulations

Sulfur dioxide (7446-09-5)

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	Non-significant risk level (NSRL)
No	Yes	No	No	

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Carbon monoxide (630-08-0)				
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	Non-significant risk level (NSRL)
No	Yes	No	No	

Sulfur dioxide (7446-09-5)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List

Hydrogen sulfide (7783-06-4)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List

Carbon monoxide (630-08-0)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List

Oxygen (7782-44-7)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Carbon dioxide (124-38-9)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Nitrogen (7727-37-9)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

n-Pentane (109-66-0)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Revision date : 07/01/2015

PTG-4041

Safety Data Sheet

This SDS conforms to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.

Other information

: When you mix two or more chemicals, you can create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an industrial hygienist or other trained person when you evaluate the end product. Before using any plastics, confirm their compatibility with this product. Praxair asks users of this product to study this SDS and become aware of the product hazards and safety information. To promote safe use of this product, a user should (1) notify employees, agents, and contractors of the information in this SDS and of any other known product hazards and safety information, (2) furnish this information to each purchaser of the product, and (3) ask each purchaser to notify its employees and customers of the product hazards and safety information. The opinions expressed herein are those of qualified experts within Praxair, Inc. We believe that the information contained herein is current as of the date of this Safety Data Sheet. Since the use of this information and the conditions of use are not within the control of Praxair, Inc., it is the user's obligation to determine the conditions of safe use of the product. Praxair SDSs are furnished on sale or delivery by Praxair or the independent distributors and suppliers who package and sell our products. To obtain current SDSs for these products, contact your Praxair sales representative, local distributor, or supplier, or download from www.praxair.com. If you have questions regarding Praxair SDSs, would like the document number and date of the latest SDS, or would like the names of the Praxair suppliers in your area, phone or write the Praxair Call Center (Phone: 1-800-PRAXAIR/1-800-772-9247; Address: Praxair Call Center, Praxair, Inc., P.O. Box 44, Tonawanda, NY 14151-0044). PRAXAIR and the Flowing Airstream design are trademarks or registered trademarks of Praxair Technology, Inc. in the United States and/or other countries.

Full text of H-statements:

Acute Tox. 2 (Inhalation:gas)	Acute toxicity (inhalation:gas) Category 2
Acute Tox. 3 (Inhalation:gas)	Acute toxicity (inhalation:gas) Category 3
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Acute 2	Hazardous to the aquatic environment — Acute Hazard, Category 2
Aquatic Acute 3	Hazardous to the aquatic environment — Acute Hazard, Category 3
Compressed gas	Gases under pressure : Compressed gas
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Flam. Gas 1	Flammable gases, Category 1
Flam. Liq. 2	Flammable liquids, Category 2
Liquefied gas	Gases under pressure : Liquefied gas
Ox. Gas 1	Oxidising Gases, Category 1
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
H220	EXTREMELY FLAMMABLE GAS
H225	HIGHLY FLAMMABLE LIQUID AND VAPOUR
H270	MAY CAUSE OR INTENSIFY FIRE; OXIDIZER
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
H331	TOXIC IF INHALED
H400	VERY TOXIC TO AQUATIC LIFE
H401	TOXIC TO AQUATIC LIFE
H402	HARMFUL TO AQUATIC LIFE

SDS US (GHS HazCom 2012)

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.

ISC Part Numbers: 1810-9259