330

Safety Data Sheet

according to the Model Work Health and Safety Regulations
Issue date: 3/24/2021 Revision date: 3/24/2026 Version: 1.1

SECTION 1: Product identifier

1.1. Product identifier

Product form : Mixture
Trade name : 330

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use : For use in the Calibration and Test of Gas Detection Instruments.

1.4. Supplier's details

CAC Gas & Instrumentation Pty Ltd
Unit 3, 36 Holbeche Road
Arndell Park
2148 - Australia
T +61 2 8676 6500
cac@cacgas.com.au

1.5. Emergency phone number

Emergency number : +61 2 8676 6500

SECTION 2: Hazards identification

2.1. Classification of the hazardous chemical

Classification according to the model Work Health and Safety Regulations (WHS Regulations)

Gases under pressure : Compressed gas H280

2.2. Label elements

Hazard pictograms (GHS AU) :

Gas cylinder

Signal word (GHS AU) : Warning
Hazard statements (GHS AU) : H280 - Contains gas under pressure; may explode if heated.
Precautionary statements (GHS AU) : P410+P403 - Protect from sunlight. Store in a well-ventilated place.

2.3. Other hazards

Other hazards which do not result in classification : Asphyxiant in high concentrations.

SECTION 3: Composition/information on ingredients

Name	CAS-No.	%	Classification according to the model Work Health and Safety Regulations (WHS Regulations)
Nitrogen	7727-37-9	75.4 – 87.9	Press. Gas (Comp.), H280
oxygen	7782-44-7	12 – 22	Ox. Gas 1, H270 Press. Gas (Comp.), H280

Name	CAS-No.	%	Classification according to the model Work Health and Safety Regulations (WHS Regulations)
methane	74-82-8	0.1 – 2.5	Flam. Gas 1, H220 Press. Gas (Comp.), H280
hydrogen sulphide	7783-06-4	0.0005 – 0.05	Flam. Gas 1, H220 Press. Gas (Liq.), H280 Acute Tox. 2 (Inhalation:gas), H330 Aquatic Acute 1, H400
carbon monoxide	630-08-0	0.0005 – 0.05	Flam. Gas 1, H220 Press. Gas (Comp.), H280 Repr. 1A, H360 Acute Tox. 3 (Inhalation:gas), H331 STOT RE 1, H372
Other substances (not contributing to the classification of this product)	-	0 – 12.5	-

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Perform cardiopulmonary resuscitation if breathing stopped.

First-aid measures after skin contact : Adverse effects not expected from this product.

First-aid measures after eye contact : Adverse effects not expected from this product.

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

4.2. Symptoms caused by exposure

Most important symptoms and effects, both acute and delayed : In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Refer to section 11.

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

Other medical advice or treatment : None.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray or fog.

Unsuitable extinguishing media : Do not use water jet to extinguish.

5.2. Special hazards arising from the substance or mixture

General measures : Try to stop release. Evacuate area. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Ensure adequate air ventilation. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Act in accordance with local emergency plan. Stay upwind. Oxygen detectors should be used when asphyxiating gases may be released.

Hazardous combustion products : Sulphur dioxide. carbon monoxide. Carbon monoxide.

5.3. Special protective equipment and precautions for fire-fighters

Hazchem Code : 2TE

Special protective equipment for fire fighters : In confined space use self-contained breathing apparatus. Standard protective clothing and equipment (Self Contained Breathing Apparatus) for fire fighters. Standard EN 137 - Self-contained open-circuit compressed air breathing apparatus with full face mask. Standard EN 469 - Protective clothing for firefighters. Standard - EN 659: Protective gloves for firefighters.

Specific methods : Use fire control measures appropriate for the surrounding fire. Exposure to fire and heat radiation may cause gas receptacles to rupture. Cool endangered receptacles with water spray jet from a protected position. Prevent water used in emergency cases from entering sewers and drainage systems. If possible, stop flow of product. Use water spray or fog to knock down fire fumes if possible. Move containers away from the fire area if this can be done without risk.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Try to stop release. Evacuate area. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Ensure adequate air ventilation. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Act in accordance with local emergency plan. Stay upwind. Oxygen detectors should be used when asphyxiating gases may be released.

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

Try to stop release.

6.3. Methods and material for containment and cleaning up

Methods and material for containment and cleaning up : Ventilate area.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Safe handling of the gas receptacle : Refer to supplier's container handling instructions. Do not allow backfeed into the container. Protect containers from physical damage; do not drag, roll, slide or drop. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Leave valve protection caps in place until the container has been secured against either a wall or bench or placed in a container stand and is ready for use. If user experiences any difficulty operating valve discontinue use and contact supplier. Never attempt to repair or modify container valves or safety relief devices. Damaged valves should be reported immediately to the supplier. Keep container valve outlets clean and free from contaminants particularly oil and water. Replace valve outlet caps or plugs and container caps where supplied as soon as container is disconnected from equipment. Close container valve after each use and when empty, even if still connected to equipment. Never attempt to transfer gases from one cylinder/container to another. Never use direct flame or electrical heating devices to raise the pressure of a container. Do not remove or deface labels provided by the supplier for the identification of the content of the container. Suck back of water into the container must be prevented. Open valve slowly to avoid pressure shock.

Safe use of the product : The product must be handled in accordance with good industrial hygiene and safety procedures. Only experienced and properly instructed persons should handle gases under pressure. Consider pressure relief device(s) in gas installations. Ensure the complete gas system was (or is regularly) checked for leaks before use. Do not smoke while handling product. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Use only oxygen approved lubricants and oxygen approved sealings. Avoid suck back of water, acid and alkalis. Do not breathe gas. Avoid release of product into work area.

7.2. Conditions for safe storage, including any incompatibilities

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.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters - exposure standards

No additional information available

8.2. Monitoring

No additional information available

8.3. Appropriate engineering controls

Appropriate engineering controls : Provide adequate general and local exhaust ventilation. Systems under pressure should be regularly checked for leakages. Oxygen detectors should be used when asphyxiating gases may be released. Consider the use of a work permit system e.g. for maintenance activities.

8.4. Personal protective equipment

Personal protective equipment : A risk assessment should be conducted and documented in each work area to assess the risks related to the use of the product and to select the PPE that matches the relevant risk. The following recommendations should be considered: Protective clothing, Safety glasses. PPE compliant to the recommended EN/ISO standards should be selected.

Hand protection : Wear working gloves when handling gas containers. Standard EN 388 - Protective gloves against mechanical risk.

Eye protection : Wear safety glasses with side shields. Standard EN 166 - Personal eye-protection - specifications

Respiratory protection : Self contained breathing apparatus (SCBA) or positive pressure airline with mask are to be used in oxygen-deficient atmospheres. Standard EN 137 - Self-contained open-circuit compressed air breathing apparatus with full face mask.

Thermal hazard protection : None in addition to the above sections.

Environmental exposure controls : None necessary.

Other information : Wear safety shoes while handling containers. Standard EN ISO 20345 - Personal protective equipment - Safety footwear.

SECTION 9: Physical and chemical properties

Physical state : Gas

Appearance : No data available

Molecular mass : Not applicable for gas mixtures.

Colour : Mixture contains one or more component(s) which have the following colour(s): Colourless.

Odour : There may be no odour warning properties, odour is subjective and inadequate to warn of overexposure.
Mixture contains one or more component(s) which have the following odour: Rotten eggs.

Odour threshold : Odour threshold is subjective and inadequate to warn of overexposure.

pH : Not applicable for gases and gas mixtures.

Relative evaporation rate (butylacetate=1) : No data available

Relative evaporation rate (ether=1) : Not applicable for gases and gas mixtures.

Melting point / Freezing point : Melting point: Not applicable for gas mixtures.

Boiling point : Not applicable for gas mixtures.

Flash point : Not applicable for gases and gas mixtures.

Auto-ignition temperature : Non flammable.

Decomposition temperature	:	Not applicable.
Flammability (solid, gas)	:	No data available
Vapour pressure	:	Vapour pressure: Not applicable. Vapour pressure at 50 °C: Not applicable.
Relative density	:	Relative vapour density at 20 °C: Not applicable. Relative gas density: Heavier than air.
Density	:	No data available
Solubility	:	No data available
Partition coefficient n-octanol/water (Log Pow)	:	Not applicable for gas mixtures.
Viscosity, kinematic	:	No reliable data available.
Viscosity, dynamic	:	No reliable data available.
Explosive properties	:	Not applicable.
Oxidising properties	:	Not applicable.
Explosive limits	:	Non flammable.
Minimum ignition energy	:	No data available
Fat solubility	:	No data available
Additional information	:	Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

SECTION 10: Stability and reactivity

Reactivity	:	No reactivity hazard other than the effects described in sub-sections below.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No additional information available
Conditions to avoid	:	Avoid moisture in installation systems.
Incompatible materials	:	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

Acute toxicity (oral)	:	Not classified
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Classification criteria are not met.

hydrogen sulphide (7783-06-4)	
LC50 Inhalation - Rat [ppm]	356 ppm/4h

carbon monoxide (630-08-0)	
LC50 Inhalation - Rat [ppm]	3760 ppm/1h (ADR)

Skin corrosion/irritation	:	No known effects from this product. pH: Not applicable for gases and gas mixtures.
Serious eye damage/irritation	:	No known effects from this product. pH: Not applicable for gases and gas mixtures.
Respiratory or skin sensitisation	:	No known effects from this product.
Germ cell mutagenicity	:	No known effects from this product.
Carcinogenicity	:	No known effects from this product.
Reproductive toxicity	:	Not classified
STOT-single exposure	:	No known effects from this product.
STOT-repeated exposure	:	Classification criteria are not met.

carbon monoxide (630-08-0)	
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard :

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Viscosity, kinematic	No reliable data available.

SECTION 12: Ecological information

According to the National Code of Practice for the Preparation of Material Safety Data Sheets, Environmental classification information is not mandatory. Information relevant for GHS classification is available on request

12.1. Ecotoxicity

Ecology - general : Classification criteria are not met.
Hazardous to the aquatic environment, short-term (acute) : Not classified
Hazardous to the aquatic environment, long-term (chronic) : Not classified

330	
Partition coefficient n-octanol/water (Log Kow)	Not applicable for gas mixtures.
Partition coefficient n-octanol/water (Log Pow)	Not applicable for gas mixtures.

hydrogen sulphide (7783-06-4)	
Partition coefficient n-octanol/water (Log Pow)	Not applicable for inorganic products.

carbon monoxide (630-08-0)	
Partition coefficient n-octanol/water (Log Pow)	1.78

methane (74-82-8)	
Partition coefficient n-octanol/water (Log Pow)	1.09

oxygen (7782-44-7)	
Partition coefficient n-octanol/water (Log Pow)	Not applicable for inorganic products.

Nitrogen (7727-37-9)	
Partition coefficient n-octanol/water (Log Pow)	Not applicable for inorganic products.

12.2. Persistence and degradability

330	
Persistence and degradability	No data available.

hydrogen sulphide (7783-06-4)	
Persistence and degradability	Not applicable for inorganic products.

carbon monoxide (630-08-0)	
Persistence and degradability	Will not undergo hydrolysis. Not readily biodegradable.

methane (74-82-8)	
Persistence and degradability	The substance is readily biodegradable. Unlikely to persist.

oxygen (7782-44-7)	
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

330	
Partition coefficient n-octanol/water (Log Pow)	Not applicable for gas mixtures.
Partition coefficient n-octanol/water (Log Kow)	Not applicable for gas mixtures.
Bioaccumulative potential	No data available.

hydrogen sulphide (7783-06-4)	
Partition coefficient n-octanol/water (Log Pow)	Not applicable for inorganic products.
Bioaccumulative potential	No data available.

carbon monoxide (630-08-0)	
Partition coefficient n-octanol/water (Log Pow)	1.78
Bioaccumulative potential	Not expected to bioaccumulate due to the low log Kow (log Kow < 4). Refer to section 9.

methane (74-82-8)	
Partition coefficient n-octanol/water (Log Pow)	1.09
Bioaccumulative potential	Not expected to bioaccumulate due to the low log Kow (log Kow < 4). Refer to section 9.

oxygen (7782-44-7)	
Partition coefficient n-octanol/water (Log Pow)	Not applicable for inorganic products.
Bioaccumulative potential	No ecological damage caused by this product.

Nitrogen (7727-37-9)	
Partition coefficient n-octanol/water (Log Pow)	Not applicable for inorganic products.
Bioaccumulative potential	No ecological damage caused by this product.

12.4. Mobility in soil

330	
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution. Partition into soil is unlikely.

hydrogen sulphide (7783-06-4)	
Partition coefficient n-octanol/water (Log Pow)	Not applicable for inorganic products.
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution. Partition into soil is unlikely.

carbon monoxide (630-08-0)	
Partition coefficient n-octanol/water (Log Pow)	1.78
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution. Partition into soil is unlikely.

methane (74-82-8)	
Partition coefficient n-octanol/water (Log Pow)	1.09
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution. Partition into soil is unlikely.

oxygen (7782-44-7)	
Partition coefficient n-octanol/water (Log Pow)	Not applicable for inorganic products.
Ecology - soil	No ecological damage caused by this product.

Nitrogen (7727-37-9)	
Partition coefficient n-octanol/water (Log Pow)	Not applicable for inorganic products.
Ecology - soil	No ecological damage caused by this product.

12.5. Other adverse effects

Ozone : Not classified
Other adverse effects : No known effects from this product.
Effect on the ozone layer : None.

330	
Effect on the ozone layer	None.
Fluorinated greenhouse gases	False
GWPmix comment	Contains greenhouse gas(es).

hydrogen sulphide (7783-06-4)	
Effect on the ozone layer	No effect on the ozone layer.
Effect on global warming	No known effects from this product.
Fluorinated greenhouse gases	False

carbon monoxide (630-08-0)	
Effect on the ozone layer	No effect on the ozone layer.
Effect on global warming	No known effects from this product.
Fluorinated greenhouse gases	False

methane (74-82-8)	
Effect on the ozone layer	No effect on the ozone layer.
Effect on global warming	When discharged in large quantities may contribute to the greenhouse effect. Contains greenhouse gas(es).
Fluorinated greenhouse gases	False
GWP 100 years	25

oxygen (7782-44-7)	
Effect on the ozone layer	No effect on the ozone layer.
Effect on global warming	None.
Fluorinated greenhouse gases	False

Nitrogen (7727-37-9)	
Effect on the ozone layer	No effect on the ozone layer.
Effect on global warming	None.
Fluorinated greenhouse gases	False

SECTION 13: Disposal considerations

Waste treatment methods : May be vented to atmosphere in a well ventilated place. Do not discharge into any place where its accumulation could be dangerous. Return unused product in original container to supplier.

Additional information : External treatment and disposal of waste should comply with applicable local and/or national regulations.

SECTION 14: Transport information

14.1. UN number

UN-No. (ADG) : 1956
UN-No. (IMDG) : 1956
UN-No. (IATA) : 1956

14.2. Proper Shipping Name - Addition

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

Proper Shipping Name (IATA) : Compressed gas, n.o.s.

14.3. Transport hazard class(es)

ADG

Transport hazard class(es) (ADG) : 2.2
Danger labels (ADG) : 2.2
:

IMDG

Transport hazard class(es) (IMDG) : 2.2
Danger labels (IMDG) : 2.2
:

IATA

Transport hazard class(es) (IATA) : 2.2
Danger labels (IATA) : 2.2
:

14.4. Packing group

Packing group (ADG) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable

14.5. Environmental hazards

Marine pollutant : No
Dangerous for the environment : No
Other information : No supplementary information available

14.6. Special precautions for user

Specific storage requirement : No data available
Shock sensitivity : No data available

14.7. Additional information

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 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.

Transport by road and rail

UN-No. (ADG) : 1956
Special provision (ADG) : 274, 292
Limited quantities (ADG) : 120ml
Packing instructions (ADG) : P200

Transport by sea

UN-No. (IMDG)	:	1956
Special provisions (IMDG)	:	274
Limited quantities (IMDG)	:	120 ml
Excepted quantities (IMDG)	:	E1
Packing instructions (IMDG)	:	P200
EmS-No. (Fire)	:	F-C - FIRE SCHEDULE Charlie - NON-FLAMMABLE GASES
EmS-No. (Spillage)	:	S-V - SPILLAGE SCHEDULE Victor - GASES (NON-FLAMMABLE, NON-TOXIC)
Stowage category (IMDG)	:	A

Air transport

UN-No. (IATA)	:	1956
PCA Excepted quantities (IATA)	:	E1
PCA Limited quantities (IATA)	:	Forbidden
PCA limited quantity max net quantity (IATA)	:	Forbidden
PCA packing instructions (IATA)	:	200
PCA max net quantity (IATA)	:	75kg
CAO packing instructions (IATA)	:	200
CAO max net quantity (IATA)	:	150kg
ERG code (IATA)	:	2L

14.8. Hazchem or Emergency Action Code

Hazchem Code : 2TE

SECTION 15: Regulatory information

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

No additional information available

15.2. International agreements

No additional information available

SECTION 16: Other information

Abbreviations and acronyms : ATE - Acute Toxicity Estimate
CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
EINECS - European Inventory of Existing Commercial Chemical Substances
CAS# - Chemical Abstract Service number
PPE - Personal Protection Equipment
LC50 - Lethal Concentration to 50 % of a test population
RMM - Risk Management Measures
PBT - Persistent, Bioaccumulative and Toxic
vPvB - Very Persistent and Very Bioaccumulative
STOT- SE : Specific Target Organ Toxicity - Single Exposure
CSA - Chemical Safety Assessment
EN - European Standard
UN - United Nations
ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road
IATA - International Air Transport Association
IMDG code - International Maritime Dangerous Goods
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
WGK - Water Hazard Class
STOT - RE : Specific Target Organ Toxicity - Repeated Exposure

Revision date : 24/03/2026

Other information : Classification using data from databases maintained by the European Industrial Gases Association (EIGA). Data is maintained in EIGA doc 169 : 'Classification and Labelling Guide', downloadable at : http://www.eiga.eu. Classification in accordance with the procedures and calculation methods of Regulation (EC) 1272/2008 (CLP).

Classification	
Press. Gas (Comp.)	H280

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
Flam. Gas 1	Flammable gases, Category 1
Ox. Gas 1	Oxidising Gases, Category 1
Press. Gas (Comp.)	Gases under pressure : Compressed gas
Press. Gas (Liq.)	Gases under pressure : Liquefied gas
Repr. 1A	Reproductive toxicity, Category 1A
STOT RE 1	Specific target organ toxicity — Repeated exposure, Category 1
H220	Extremely flammable gas.
H270	May cause or intensify fire; oxidiser.
H280	Contains gas under pressure; may explode if heated.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H360	May damage fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.

Safety Data Sheet (SDS), Australia

Before using this product in any new process or experiment, a thorough material compatability and safety study should be carried out.
Details given in the document are believed to be correct at the time of SDS generation.
Whilst proper care has been taken by competent individuals in the preparation of this document, no liability for injury or damage to property resulting from its use can be accepted.