



# MATERIAL SAFETY DATA SHEET

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Revised edition no : 3

Date : 6 / 10 / 2009

Supersedes : 23 / 1 / 2009

**0-250PPM H<sub>2</sub>S, 0-500PPM CO, 0-2.5% METHANE IN AIR****AL413**

Xn : Harmful



Label 2.2 : Non flammable, non toxic gas.

## 1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Trade name** : 0-250PPM H<sub>2</sub>S, 0-500PPM CO, 0-2.5% METHANE IN AIR  
**MSDS Nr** : AL413  
**Use** : Calibration.  
**Company identification** : Air Liquide  
Level 9, 380 St.Kilda Road  
3004 Melbourne AUSTRALIA  
**Emergency phone nr** : 1800 812 588

## 2 HAZARDS IDENTIFICATION

**Hazard classification** : Classified as hazardous according to NOHSC criteria.  
Classified as a dangerous good by the criteria of the ADG code.  
**Hazards identification** : Harmful by inhalation.  
Compressed gas.  
**R Phrase(s)** : R20 : Harmful by inhalation.  
**S Phrase(s)** : S9 : Keep container in a well-ventilated place. - S23 : Do not breathe the gas, fumes, vapours, spray.

## 3 COMPOSITION/INFORMATION ON INGREDIENTS

**Substance / Preparation** : Preparation.  
**Components** : This product is hazardous.

| Substance name    | Contents                 | CAS No    | EC No     | Annex No     | Classification                               |
|-------------------|--------------------------|-----------|-----------|--------------|--|
| Hydrogen sulphide | : Between 0.02 and 0.2 % | 7783-06-4 | 231-977-3 | 016-001-00-4 | F+; R12<br>T+; R26<br>N; R50                 |
| Carbon monoxide   | : Between 0.02 and 0.2 % | 630-08-0  | 211-128-3 | 006-001-00-2 | F+; R12<br>Repr. Cat. 1; R61<br>T; R23-48/23 |
| Methane           | :                        | 74-82-8   | 200-812-7 | 601-001-00-4 | F+; R12                                      |
| Oxygen            | :                        | 7782-44-7 | 231-956-9 | 008-001-00-8 | O; R8  |
| Nitrogen          | :                        | 7727-37-9 | 231-783-9 | ----         |  |

## 4 FIRST AID MEASURES

**First aid measures**  
**- Inhalation** : Harmful by inhalation.  
Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.  
**- Ingestion** : Ingestion is not considered a potential route of exposure.

**Air Liquide**

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## 5 FIRE-FIGHTING MEASURES

- Flammable class** : Non flammable.
- Specific hazards** : Exposure to fire may cause containers to rupture/explode.
- Hazardous combustion products** : Carbon dioxide.
- Extinguishing media**
- **Suitable extinguishing media** : All known extinguishants can be used.
- Specific methods** : If possible, stop flow of product.  
Move away from the container and cool with water from a protected position.
- Special protective equipment for fire fighters** : Use self-contained breathing apparatus.

## 6 ACCIDENTAL RELEASE MEASURES

- Personal precautions** : Evacuate area.  
Ensure adequate air ventilation.  
Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.
- Environmental precautions** : Try to stop release.
- Clean up methods** : Ventilate area.

## 7 HANDLING AND STORAGE

- Storage** : Keep container below 50°C in a well ventilated place.
- Handling** : Avoid exposure, obtain special instructions before use.  
Open valve slowly to avoid pressure shock.  
Suck back of water into the container must be prevented.  
Do not allow backfeed into the container.  
Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt.  
Refer to supplier's container handling instructions.

## 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

- Personal protection** : Do not smoke while handling product.  
Ensure adequate ventilation.  
Keep self contained breathing apparatus readily available for emergency use.
- Occupational Exposure Limits** : Carbon monoxide : TLV© -TWA [ppm] : 25  
Hydrogen sulphide : TLV© -TWA [ppm] : 5

## 9 PHYSICAL AND CHEMICAL PROPERTIES

- Physical state at 20 °C** : Compressed gas.
- Colour** : Colourless.
- Odour** : Characteristic.
- Relative density, gas (air=1)** : Lighter or similar to air.
- Solubility in water [mg/l]** : Not known.



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## 10 STABILITY AND REACTIVITY

Stability and reactivity : Stable.

## 11 TOXICOLOGICAL INFORMATION

Toxicity information : Harmful by inhalation.

## 12 ECOLOGICAL INFORMATION

Effect on ozone layer : None.

Global warming potential [CO<sub>2</sub>=1] : Contains greenhouse gas(es) not covered by 842/2006/EC

## 13 DISPOSAL CONSIDERATIONS

General : Do not discharge into any place where its accumulation could be dangerous.  
Avoid discharge to atmosphere.  
Contact supplier if guidance is required.

Disposal method : Consult supplier for specific recommendations.

## 14 TRANSPORT INFORMATION

UN No. : 1956

Labelling ADG : Label 2.2 : Non flammable, non toxic gas.

H.I. nr : 20

Proper shipping name : COMPRESSED GAS, N.O.S. (Nitrogen, Hydrogen sulphide)

HAZCHEM - Emergency Action Code : 2TE

: 2 = Fine water spray.

*T = Recommended personal protective equipment : Full fire kit and breathing apparatus.**Appropriate measures : dilute.**E = There may be a public safety hazard outside the immediate area of the incident, and that the following actions should be considered :**1. People should be warned to stay indoors with all doors and windows closed, preferably in rooms upstairs and facing away from the incident. Ignition sources should be eliminated and any ventilation stopped.**2. Effects may spread beyond the immediate vicinity. all non-essential personnel should be instructed to move at least 250 metres away from the incident.**3. Police and fire brigade incident commanders should consult each other and with a product expert, or with a source of product expertise.**4. The possible need for subsequent evacuation should be considered, but it should be remembered that in most cases it will be safer to remain in a building than to evacuate.*

- ADG Class : 2

- ADG Classification code : 1 A

Other transport information : 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 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.

- Ensure there is adequate ventilation.

- Compliance with applicable regulations.



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## 15 REGULATORY INFORMATION

**EC Classification** : Xn; R20  
**EC Labelling**  
**Symbol(s)** : Xn : Harmful  
**R Phrase(s)** : R20 : Harmful by inhalation.  
**S Phrase(s)** : S9 : Keep container in a well-ventilated place.  
S23 : Do not breathe the gas. normal

## 16 OTHER INFORMATION

Users of breathing apparatus must be trained.  
Receptacle under pressure.  
Ensure all national/local regulations are observed.

This Safety Data Sheet has been established in accordance with the applicable European Directives and applies to all countries that have translated the Directives in their national laws.

**DISCLAIMER OF LIABILITY** : Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.  
Details given in this document are believed to be correct at the time of going to press. Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.

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