

Hydrogen sulphide

EIGA073



F+ : Extremely flammable



T+ : Very toxic



N : Dangerous for the environment



Label 2.3 : Toxic gas.



Label 2.1 : flammable gas.

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

Trade name : Hydrogen sulphide
 MSDS Nr : EIGA073
 Use : Chemical reagent.
 Chemical formula : H₂S
 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 : Liquefied gas.
 Extremely flammable.
 Very toxic by inhalation.
 R Phrase(s) : R12 : Extremely flammable. - R26 : Very toxic by inhalation. - R50 : Very toxic to aquatic organisms.
 S Phrase(s) : S9 : Keep container in a well-ventilated place. - S16 : Keep away from sources of ignition - No smoking. - S28 : After contact with skin, wash immediately with - S36/37 : Wear suitable protective clothing and gloves. - S45 : In case of accident or if you feel unwell, seek medical advice immediately (show the label when possible). - S61 : Avoid release to the environment. Refer to special instructions/ Safety data sheets.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Preparation : Substance.

Substance name	Contents	CAS No	EC No	Annex No	Classification
Hydrogen sulphide	100 %	7783-06-4	231-977-3	016-001-00-4	F+; R12 T+; R26 N; R50

Contains no other components or impurities which will influence the classification of the product.

4 FIRST AID MEASURES

First aid measures

- Inhalation : Very toxic by inhalation.
 May cause damaging effects to central nervous system, metabolism and gastrointestinal tract.
 Prolonged exposure to small concentrations may result in pulmonary oedema.
 Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.



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4 FIRST AID MEASURES (continued)

- Ingestion : Ingestion is not considered a potential route of exposure.

5 FIRE-FIGHTING MEASURES

Specific hazards : Exposure to fire may cause containers to rupture/explode.

Hazardous combustion products : If involved in a fire the following toxic and/or corrosive fumes may be produced by thermal decomposition : Sulphur 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.

Do not extinguish a leaking gas flame unless absolutely necessary. Spontaneous/explosive re-ignition may occur. Extinguish any other fire.

Special protective equipment for fire fighters : Use self-contained breathing apparatus.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions : Evacuate area.
Eliminate ignition sources.
Ensure adequate air ventilation.
Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.

Environmental precautions : Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.
Try to stop release.

Clean up methods : Ventilate area.
Keep area evacuated and free from ignition sources until any spilled liquid has evaporated. (Ground free from frost).

7 HANDLING AND STORAGE

Storage : Keep container below 50°C in a well ventilated place.
Segregate from oxidant gases and other oxidants in store.

Handling : Ensure equipment is adequately earthed.
Suck back of water into the container must be prevented.
Purge air from system before introducing gas.
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.
Keep away from ignition sources (including static discharges).
Refer to supplier's container handling instructions.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protection : Ensure adequate ventilation.
Keep suitable chemically resistant protective clothing readily available for emergency use.
Do not smoke while handling product.
Keep self contained breathing apparatus readily available for emergency use.

Hydrogen sulphide**EIGA073****8 EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)****Occupational Exposure Limits** : Hydrogen sulphide : TLV[©] -TWA [ppm] : 5**9 PHYSICAL AND CHEMICAL PROPERTIES**

Physical state at 20 °C : Gas.
Colour : Colourless.
Odour : Rotten eggs. Odour can persist. Poor warning properties at low concentrations.
Molecular weight : 34
Melting point [°C] : -86
Boiling point [°C] : -60.2
Critical temperature [°C] : 100
Vapour pressure [20°C] : 18.8 bar
Relative density, gas (air=1) : 1.2
Relative density, liquid (water=1) : 0.92
Solubility in water [mg/l] : 3980
Flammability range [vol% in air] : 4.3 to 45.5
Auto-ignition temperature [°C] : 270
Other data : Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

10 STABILITY AND REACTIVITY

Stability and reactivity : Can form explosive mixture with air.
With water causes rapid corrosion of some metals.
May react violently with oxidants.

11 TOXICOLOGICAL INFORMATION

Toxicity information : Damage to central nervous system.
LC50 [ppm/1h] : 712

12 ECOLOGICAL INFORMATION

Ecological effects information : May cause pH changes in aqueous ecological systems.
Endangering to drinking water.

13 DISPOSAL CONSIDERATIONS

General : Avoid discharge to atmosphere.
Do not discharge into any place where its accumulation could be dangerous.
Toxic and corrosive gases formed during combustion should be scrubbed before discharge to atmosphere.
Do not discharge into areas where there is a risk of forming an explosive mixture with air. Waste gas should be flared through a suitable burner with flash back arrestor.
Contact supplier if guidance is required.



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14 TRANSPORT INFORMATION

UN No.	: 1053
Labelling ADG	: Label 2.3 : Toxic gas. Label 2.1 : flammable gas.
H.I. nr	: 263
Proper shipping name	: HYDROGEN SULPHIDE
HAZCHEM - Emergency Action Code	: 2WE : 2 = <i>Fine water spray.</i> <i>W = Risk of violent reaction or explosion. Recommended personal protective equipment : Liquid-tight chemical protective clothing and breathing apparatus. Appropriate measures : contain.</i> <i>E = There may be a public safety hazard outside the immediate area of the incident, and that the following actions should be considered :</i> <i>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.</i> <i>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.</i> <i>3. Police and fire brigade incident commanders should consult each other and with a product expert, or with a source of product expertise.</i> <i>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.</i>
- ADG Class	: 2
- ADG Classification code	: 2 TF
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.

15 REGULATORY INFORMATION

EC Classification	: Annex No : 016-001-00-4 F+; R12 T+; R26 N; R50
EC Labelling	
Symbol(s)	: F+ : Extremely flammable T+ : Very toxic N : Dangerous for the environment
R Phrase(s)	: R12 : Extremely flammable. R26 : Very toxic by inhalation. R50 : Very toxic to aquatic organisms.
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15 REGULATORY INFORMATION (continued)

sheets.

16 OTHER INFORMATION

Ensure all national/local regulations are observed.
Ensure operators understand the flammability hazard.
Contact with liquid may cause cold burns/frostbite.
Users of breathing apparatus must be trained.
Ensure operators understand the toxicity hazard.

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

: 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.
Details given in this document are believed to be correct at the time of going to press. Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.

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