

**SAFETY DATA SHEET - CALIBRATION CHECK GAS**

**PRODUCT:** <2000ppm HYDROGEN SULPHIDE/<5% CARBON MONOXIDE /<2.5% METHANE/<21% OXYGEN / NITROGEN **PAGE: 1/4**

**SDS NO: 059B** **Version: 3** **Date: 29<sup>th</sup> October 2008**

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY**

SDS NO: 059B  
 Product Name: Hydrogen Sulphide/Carbon Monoxide/Methane/Oxygen Balance Nitrogen (≥ 17 litres)  
 Company Identification: See heading and/or footer

**2. HAZARDS IDENTIFICATION**

Hazards identification: May impair fertility or cause harm to the unborn child  
 Hydrogen Sulphide and Carbon Monoxide are both toxic by inhalation

**3. COMPOSITION/INFORMATION OF INGREDIENTS**

Substance/Preparation: Preparation  
 Composition/Impurities: Contains no other components or impurities, which will influence the classification of the product

**4. FIRST AID MEASURES**

Inhalation: In high concentrations may cause asphyxiation and/or Cyanosis. Symptoms may include loss of mobility/consciousness. Victim is not aware of asphyxiation. Remove victim to uncontaminated area wearing a 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.

**5. FIRE-FIGHTING MEASURES**

Fire-fighting measures: These containers hold gas under pressure, with no liquid phase. If involved in a major fire, they should be sprayed with water to avoid pressure increases, otherwise pressures will rise and ultimately they may distort or burst to release the contents. The gases will not add significantly to the fire, but containers or fragments may be projected considerable distances - thereby hampering fire-fighting efforts.

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**6. ACCIDENTAL RELEASE MEASURES**

Accidental Release Measures      In terms of weight, these containers hold very little contents, such that any accidental release by puncturing etc. will be of no practical concern. However, care should be taken in small enclosed areas. (See Section 3)

**7. HANDLING AND STORAGE**

Handling and Storage      Suck back of water into the container must be prevented. Do not allow back feed 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.

Cylinders should be stored upright and it is good practice to keep inert, flammables and oxidants apart. All cylinders should be stored with the regulator detached, this provides a very useful safety measure as it prevents accidental high pressure gas discharge. Store either outside or in a well ventilated area, away from ignition sources, ideally in a secure storage area.

High temperatures will cause the gas to expand resulting in a rise in pressure, the upper recommended limit is 45°C or 50°C, however, there is a large safety margin on the burst pressure. Mtech guarantees all mixtures to 0°C.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Personal protection      Ensure adequate ventilation. Do not smoke while handling product.  
 Carbon Monoxide WEL = 30ppm (8hr TWA) 200ppm (15min TWA)  
 Hydrogen Sulphide WEL = 5ppm (8hr TWA) 10ppm (15min TWA)  
 No WEL data available for Methane or Oxygen

**9. PHYSICAL AND CHEMICAL PROPERTIES**

|                       |                  |
|-----------------------|------------------|
| Relative density, gas | Heavier than air |
| Solubility mg/l water | Not known        |
| Appearance/Colour     | Colourless gas   |
| Odour                 | Rotten eggs      |

**10. STABILITY AND REACTIVITY**

Stability and reactivity      Stable under normal conditions.

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**11. TOXICOLOGICAL INFORMATION**

General Toxic by inhalation. Delayed adverse effects possible.

**12. ECOLOGICAL INFORMATION**

General No ecological damage caused by this product

**13. DISPOSAL INFORMATION**

Disposal Used containers are acceptable for disposal in the normal waste stream. A recycle tool is available from Mtech to enable a used non-refillable cylinder to be punctured and safely disposed of.

**14. TRANSPORT INFORMATION**

Land transport ADR/RID  
 Sea transport IMDG  
 Air transport ICAO/IATA

|                          |   |                 |
|--------------------------|---|-----------------|
| UN number:               | UN1956  |                 |
| Proper Shipping Name:    | Compressed gas n.o.s. (contains nitrogen, carbon monoxide, hydrogen sulphide) |                 |
| Class:                   | 2 (ADR)   | 2.2 (IMDG/IATA) |
| ADR classification code: | 1A  |                 |
| Packing Group:           | N/A   |                 |
| Marine Pollutant:        | N/A   |                 |

**15. REGULATORY INFORMATION**

Regulatory Information Following the HSE Approved Supply List (L142) and the UK's CHIP (as currently amended) Regulations –

Mixtures of <0.2% Carbon Monoxide are classified as non-toxic/ non-flammable.  
 Mixtures of  $\geq 0.2\%$  and <5% Carbon Monoxide are classified as harmful/ non-flammable

Mixtures of <200ppm Hydrogen Sulphide are classified as non-toxic / non-flammable. Mixtures <2000ppm but >200ppm are classified as Harmful

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**16. OTHER INFORMATION**

Mixtures containing >0.2% to ≤5% Carbon Monoxide (or >200ppm Hydrogen Sulphide)

- R20 Harmful by inhalation
- R50 Very toxic to aquatic organisms.
- R61 May cause harm to the unborn child
- R48 Danger of serious damage to health by prolonged exposure through inhalation
  
- S1/2 Keep locked up / out of reach of children.
- S9 Keep container in well-ventilated place.
- S36 Wear suitable protective clothing.
- S38 In case of insufficient ventilation, wear suitable respiratory equipment.
- S45 In case of accident or if you feel unwell seek medical advice immediately
- S53 Avoid exposure – obtain special instructions before use
- S60 This material and its container must be disposed of as hazardous waste.
- S61 Avoid release to the environment. Refer to special instructions / safety data sheets

This SDS has been prepared in accordance with the Chemicals (Hazard Information and Packaging for Supply Regulation (as currently amended)). The information is based on the best knowledge of Mtech and its advisors and is given in good faith, but we cannot guarantee its accuracy, reliability or completeness and therefore disclaim any liability for loss or damage arising out of use of this data. Since conditions of use are outside the control of the Company and its advisors we disclaim any liability for loss or damage when the product is used for other purposes than it is intended.

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