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SAFETY DATA SHEET - CALIBRATION CHECK GAS

PRODUCT: 0.5 to 75PPM PHOSPHINE/BALANCE NITROGEN **PAGE:** 1/3
SDS NO: 091B **Version:** 6 **Date:** 26 September 2006

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

SDS NO: 091B
Product Name: 0.5 to ≤75PPM Phosphine Balance Nitrogen (>17L cylinder)
Company Identification: See heading and/or footer

2. HAZARDS IDENTIFICATION

Hazards identification In high concentration may cause asphyxiation
Compressed gas
Phosphine is a toxic gas – see WELs (Section 8)

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. 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.

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.

SAFETY DATA SHEET - CALIBRATION CHECK GAS

PRODUCT: 0.5 to 75PPM PHOSPHINE/BALANCE NITROGEN **PAGE:** 2/3
SDS NO: 091B **Version:** 6 **Date:** 26 September 2006

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
 Phosphine WELs = 0.3ppm (15min TWA)

9. PHYSICAL AND CHEMICAL PROPERTIES

Relative density, gas Heavier than air
Solubility mg/l water Not known, but considered to have low solubility
Appearance/Colour Colourless gas
Odour None

10. STABILITY AND REACTIVITY

Stability and reactivity Stable under normal conditions.

11. TOXICOLOGICAL INFORMATION

General Phosphine is a toxic gas.

12. ECOLOGICAL INFORMATION

General No ecological damage caused by this product.

SAFETY DATA SHEET - CALIBRATION CHECK GAS

PRODUCT: 0.5 to 75PPM PHOSPHINE/BALANCE NITROGEN **PAGE:** 3/3
SDS NO: 091B **Version:** 6 **Date:** 26 September 2006

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 phosphene, nitrogen)
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 <0.02% are classified as non-toxic/ non-flammable.

16. OTHER INFORMATION

S1/2 Keep locked up / out of reach of children
 S9 Keep container in a well ventilated place

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.