



## MATERIAL SAFETY DATA SHEET - CALIBRATION CHECK GAS

**PRODUCT NAME: 99.999% SILANE**

**MSDS NO: SIH4**

**Version:3**

**Date: January, 2009**

### 1. Chemical Product and Company Identification

Gasco Affiliates, LLC  
320 Scarlett Blvd.  
Oldsmar, FL 34677

TELEPHONE NUMBER: (800) 910-0051  
FAX NUMBER: (866) 755-8920  
E-MAIL: info@gascogas.com

24-HOUR EMERGENCY NUMBER: 1-800-424-9300

PRODUCT NAME: SILANE  
CHEMICAL NAME:  $SiH_4$   
COMMON NAMES/ SYNONYMS: SILANE  
TDG (Canada) CLASSIFICATION: 2.1  
WHIMIS CLASSIFICATION: A, B1

### 2. COMPOSITION/ INFORMATION ON INGREDIENTS

INGREDIENT	%VOLUME	PEL-OSHA	TLV-ACGIH	LD <sub>50</sub> or LC <sub>50</sub> Route/Species
Silane FORMULA: $SiH_4$	99.999%	Simple Asphyxiate	Simple Asphyxiate	Not Available

### 3. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

Simple asphyxiant – May explode on contact with water. Flammable gas. May cause flash fire. Extremely flammable. May ignite spontaneously on exposure to air.

#### ROUTE OF ENTRY:

Skin Contact No	Skin Absorption No	Eye Contact No	Inhalation Yes	Ingestion No
HEALTH EFFECTS: Exposure Limits No	Irritant No	Sensitization No	Reproductive Hazard No	Mutagen No

Carcinogenicity: --NTP: No IARC: No OSHA: No

#### EYE EFFECTS:

Irritation, blurred vision

#### SKIN EFFECTS:

Irritation, nausea, headache

#### INGESTION EFFECTS:

Ingestion unlikely. Gas at room temperature.



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#### **INHALATION EFFECTS:**

Due to the small size of an individual cylinder of this product, no unusual health effects from exposure to the product are anticipated under routine circumstances of use. If this product is released in a small, poorly ventilated area, an oxygen deficient environment may occur. Individuals breathing such an atmosphere may experience symptoms which include headaches, ringing in ears, dizziness, drowsiness, unconsciousness, nausea, vomiting, and depression of all the senses.

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#### **4. FIRST AID MEASURES**

##### **EYES:**

Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

##### **SKIN:**

Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

##### **INGESTION:**

If a large amount is swallowed, get medical attention.

##### **INHALATION:**

PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE. RESCUE PERSONNEL SHOULD BE EQUIPPED WITH THE SELF-CONTAINED BREATHING APPARATUS. Victims should be assisted to an uncontaminated area and inhale fresh air. Quick removal from the contaminated area is most important. If breathing has stopped administer artificial resuscitation and supplemental oxygen. Further treatment should be symptomatic and supportive.

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#### **5. 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. Severe fire hazard. May ignite on exposure to air. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back.

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#### **6. 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.

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#### **7. HANDLING AND STORAGE**

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. Use only in well-ventilated areas. Do not heat cylinder by any means to increase rate of product from the cylinder. Do not allow the temperature where cylinders are stored to exceed 130°F (54°C).

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#### **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Use adequate ventilation for extended use of gas.

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#### **9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>PARAMETER:</b>	<b>VALUE:</b>
Physical state	: Gas
Evaporation point	: N/A
pH	: N/A
Odor and appearance	: Colorless, unpleasant odor



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### 10. STABILITY AND REACTIVITY

Stable under normal conditions. Expected shelf life 12 months.

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### 11. TOXICOLOGICAL INFORMATION

No toxicological damage caused by this product.

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### 12. ECOLOGICAL INFORMATION

No ecological damage caused by this product.

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### 13. DISPOSAL INFORMATION

Do not discharge into any place where its accumulation could be dangerous. Used containers are acceptable for disposal in the normal waste stream as long as the cylinder is empty and valve removed or cylinder wall is punctured; but GASCO encourages the consumer to return cylinders.

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### 14. TRANSPORT INFORMATION

	<u>United States DOT</u>	<u>Canada TDG</u>
PROPER SHIPPING NAME:	Silane, compressed	Silane, compressed
HAZARD CLASS:	2.1	2.1
IDENTIFICATION NUMBER:	UN2203	UN2203
SHIPPING LABEL:	FLAMMABLE GAS	FLAMMABLE GAS

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### 15. REGULATORY INFORMATION

Silane is listed under the accident prevention provisions of section 112(r) of the Clean Air Act (CAA) with a threshold quantity (TQ) of 10,000 pounds.

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### 16. OTHER INFORMATION

This MSDS has been prepared in accordance with the Chemicals (Hazard Information and Packaging for Supply (Amendment) Regulation 1996. The information is based on the best knowledge of GASCO, 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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