

**MITSUBISHI GAS CHEMICAL COMPANY, INC.**  
MATERIAL SAFETY DATA SHEET

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Product Name: AnaeroPack System

Preparation date: 5/29/06

**SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

MSDS REVISION #: 005

AnaeroPack System consists of an anaerobic jar, plastic pouch and foil pouches, which contain the oxygen-absorber sachet. The precautions detailed in this MSDS apply ONLY to the oxygen-absorber sachet AFTER REMOVAL from the foil pouch. Do not open the pouch until ready to use. Do not tear or damage the sachet.

PRODUCT NAME: AnaeroPack (Pack-Anaero, MicroAero, CO<sub>2</sub>),  
AnaeroPouch (Pouch-Anaero)

MANUFACTURED BY: Mitsubishi Gas Chemical Company, Inc.  
5-2, Marunouchi 2-chome, Chiyoda-ku  
Tokyo, Japan 100-8324

DISTRIBUTED BY: Mitsubishi Gas Chemical America, Inc.  
655 Third Avenue, 24<sup>th</sup> Floor  
New York, NY 10017

PHONE NUMBERS: Inquiries - (212) 687-9030 (business hours)  
Inquiries - 81-3-3283-4875 (Japan)  
CHEMTREC - (800) 424-9300 (transportation emergencies)

**SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS**

The AnaeroPack System oxygen-absorber sachet contains the chemicals listed below.

<u>Component</u>	<u>%</u>	<u>CAS No.</u>	<u>Exposure Limits</u>
Activated carbon (coated) and other particulates (PNOR or PNOC)	--- ---	7440-44-0 Proprietary	OSHA PEL 15 mg/M <sup>3</sup> (total dust) 5 mg/M <sup>3</sup> (respirable dust) ACGIH TLV 2 mg/M <sup>3</sup> (graphite - respirable) 3 mg/M <sup>3</sup> (respirable) 10 mg/M <sup>3</sup> (inhalable)
Sodium ascorbate	---	134-03-2	Not established
Water	---	7732-18-5	Not established

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<b>SECTION 3 - HAZARDS IDENTIFICATION</b>
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**EMERGENCY**

**OVERVIEW**

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AnaeroPack System contents include a foil pouch, containing an oxygen-absorbing sachet comprised of black or gray granules. These granules, if removed from the sachet, may cause skin and eye irritation. Breathing dust can cause irritation of the nose, throat and respiratory tract. Large quantities of the granules (approximately 1 pound or more), when exposed to oxygen AND temperatures of 140° F (60° C) or more, may spontaneously generate sufficient heat to ignite nearby combustible material.

In the case of intact sachets which have been removed from the foil pouches, large numbers (20 or more of the sachets), accumulated in one place and exposed to oxygen AND temperatures of 140° F (60° C) or more, may spontaneously generate sufficient heat to ignite nearby combustible material.

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**POTENTIAL HEALTH EFFECTS**

The foil pouch and sachet provide effective protection from the adverse health effects of the contents. If, however, the pouch and sachet are torn or damaged and the contents released, exposed persons may experience adverse health effects.

**EYES:**

Can cause eye irritation, which may be severe.

**SKIN:**

Prolonged or repeated exposure may cause skin irritation.

**INGESTION (swallowing):**

Can cause irritation to the mouth and throat.

**INHALATION (breathing):**

Can cause irritation of the nose and throat.

**CHRONIC EFFECTS/CARCINOGENICITY**

This product (or components) is not listed in IARC Monographs, the NTP Eleventh Annual Report or the ACGIH TLVs as a carcinogen or potential carcinogen. OSHA does not regulate it as a carcinogen.

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#### SECTION 4 - FIRST AID MEASURES

##### EYE CONTACT:

If any contents of the sachet come into contact with the eyes, immediately flush with large amounts of water for at least 15 minutes, lifting upper and lower lids occasionally. Get medical attention. Do not use chemical antidote.

##### SKIN CONTACT:

If any contents of the sachet come into contact with the skin, thoroughly flush the exposed area with soap and water. Remove contaminated clothing and launder before re-use.

##### INGESTION (swallowing):

If conscious, give two large glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

##### INHALATION (breathing):

If affected, move to fresh air. If breathing has stopped, give artificial respiration and call a physician.

#### SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: Not applicable

FLASH POINT METHOD: Not applicable

UPPER EXPLOSION LIMIT:

Unavailable

LOWER EXPLOSION LIMIT:

Unavailable

AUTOIGNITION TEMPERATURE:

> 482° F (250° C)

##### EXTINGUISHING MEDIA:

Water, regular foam, dry chemical or carbon dioxide as appropriate for other materials involved in the fire.

##### FIRE AND EXPLOSION HAZARDS:

When 1 pound (about 20 sachets of Pack-Anaero; 35 sachets of Pack-MicroAero; 96 sachets of Pack-CO<sub>2</sub>; or 69 sachets of Pouch-Anaero) or more of this product, whether contained in the sachets or not, is exposed to oxygen AND temperatures of 140° F (60° C) or more, it may spontaneously generate sufficient heat to ignite surrounding materials.

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### **SECTION 5 - FIRE FIGHTING MEASURES (continued)**

#### **FIRE-FIGHTING EQUIPMENT:**

Wear full protective clothing and self-contained breathing apparatus with full face-piece. Keep personnel removed from and upwind of fire. Combustion products may include smoke, fumes, carbon dioxide and carbon monoxide.

### **SECTION 6 - ACCIDENTAL RELEASE MEASURES**

Persons not wearing protective equipment should be excluded from the area of the spill until clean up has been completed. Keep away from combustible materials. When a large quantity of this product is exposed to oxygen AND temperatures of 140° F (60° C) or more, it may spontaneously generate sufficient heat to ignite surrounding materials.

If the foil pouches have been damaged, shovel the spilled material into a plastic bag. Never put more than 1 pound (about 20 sachets of Pack-Anaero; 35 sachets of Pack-MicroAero; 96 sachets of Pack-CO<sub>2</sub>; or 69 sachets of Pouch-Anaero) into a single plastic bag. Thoroughly sweep up residual material. Avoid generating dust during clean-up operation. Heat-seal the plastic bags.

### **SECTION 7 - HANDLING AND STORAGE**

#### **HANDLING:**

Do not open the foil pouch until ready to use. Do not damage the sachet.

#### **STORAGE:**

Do not remove from shipping containers until ready for use. Do not store at temperatures exceeding 100° F (38° C). Store in a cool, dry place away from direct sunlight. Do not store near combustible materials.

Used sachets being held for disposal should be placed in hermetically sealed plastic bags, and stored at temperatures not exceeding 100° F (38° C).

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<b>SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION</b>
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**RESPIRATORY PROTECTION:**

Not required under normal conditions of use.

**SKIN PROTECTION:**

Wear protective gloves.

**EYE PROTECTION:**

Wear safety glasses or splash goggles when handling any chemical substance.

**OTHER PROTECTION:**

Not required under normal conditions of use.

**ENGINEERING CONTROLS:**

To avoid contact with contents, **never** open the AnaeroPack System inner sachet.

<b>SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES</b>
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**APPEARANCE:**

Sachet containing:

black or gray granules @ 77° F (25° C)

SPECIFIC GRAVITY (H<sub>2</sub>O=1):

Not applicable

VAPOR PRESSURE (mm Hg):

Unavailable

VAPOR DENSITY (Air = 1):

Unavailable

INITIAL BOILING POINT:

Unavailable

EVAPORATION RATE:

Nil

(Ethyl Ether = 1)

SOLUBILITY in WATER:

>50%

BULK DENSITY:

0.3-0.7 @ 77° F (25° C)

VOLATILE %.

Unavailable

pH:

8.5-10.5

pH METHOD:

5% in Distilled Water

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### SECTION 10 - STABILITY AND REACTIVITY

**STABILITY (conditions to avoid):**

Avoid exposure to heat or air (oxygen). The AnaeroPack and AnaeroPouch oxygen absorbers are shipped in hermetically sealed foil pouches. As long as the foil pouch is unopened, there will be no reaction. As soon as the foil pouch is opened, it will begin absorbing oxygen and generating carbon dioxide.

**INCOMPATIBILITIES (materials to avoid):**

Avoid contact with hydrogen peroxide.

**HAZARDOUS DECOMPOSITION PRODUCTS:**

Carbon dioxide

**HAZARDOUS POLYMERIZATION:**

Not known to occur

### SECTION 11 - TOXICOLOGICAL INFORMATION

Acute oral LD<sub>50</sub> (rat) - greater than 24,000 mg/Kg

### SECTION 12 - ECOLOGICAL INFORMATION

No data available

### SECTION 13 - DISPOSAL CONSIDERATIONS

Place waste AnaeroPack System oxygen-absorbing sachets into plastic bags. **Never** put more than 1 pound (about 20 sachets) into a single plastic bag. Heat-seal the bags to provide a hermetic seal, and store in a cool place away from other wastes and combustible materials.

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**SECTION 13 - DISPOSAL CONSIDERATIONS (continued)**

Do not accumulate a large number of AnaeroPack System oxygen-absorbing sachets in one place. Large quantities of used sachets, when exposed to oxygen AND temperatures of 140° F (60° C) or more, may generate sufficient heat to ignite nearby combustible materials. Store waste AnaeroPack System oxygen-absorbing sachets in a manner that provides for adequate heat dissipation (e.g. do not build large piles).

Incineration is the recommended disposal method for this and all chemical wastes; however, this material may be deposited in a landfill in accordance with all applicable Federal, state and local regulations. AnaeroPack and AnaeroPouch are not considered hazardous wastes under current RCRA regulations.

**SECTION 14 - TRANSPORT INFORMATION**

Not regulated under current DOT, IMO or ICAO regulations.

**SECTION 15 - REGULATORY INFORMATION**

**TSCA INFORMATION:**

All components in this product are in compliance with TSCA Inventory requirements.

**SARA 313 INFORMATION:**

SARA requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372. This information must be included in all MSDS that are copied and distributed for this material.

Components present in this product at a level that could require reporting under the statute are: None

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<b>SECTION 16 - OTHER INFORMATION</b>
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HAZARD RATING:

HEALTH	1	0 - LEAST
FIRE	1	1 - SLIGHT
REACTIVITY	1	2 - MODERATE
OTHER	-	3 - HIGH
		4 - EXTREME

HAZARD RATING METHOD: NFPA

REASON FOR REVISION:

Changed company address and phone number; reviewed and updated.

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The product information contained herein is believed to be accurate as of the date of the Material Safety Data Sheet, and is provided without warranty, expressed or implied, as to the results of use of this information or the product to which it relates. Recipient assumes all responsibility for the use of this information and the use (alone or in combination with any other product), storage or disposal of the product, including any resultant personal injury or property damage.

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\*\*\*\* END OF REPORT \*\*\*\*