

# SIG SOUTHERN INDUSTRIAL GAS SDN BHD

## SAFETY DATA SHEET

### PROPANE AND AIR (SYN.) BALANCE

#### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<b>Product name</b>	Propane 1.05% Balance Nitrogen
<b>Synonyms</b>	Propane and Air (Syn) Balance
<b>Chemical Formula</b>	C <sub>3</sub> H <sub>8</sub> (Propane) , O <sub>2</sub> & N <sub>2</sub> (Air)
<b>CAS No</b>	74-98-6 (Porpane) ; 132259-10-0 (Air)
<b>Use of Substance</b>	For general analytical/synthetic chemical uses
<b>Manufacturer</b>	SOUTHERN INDUSTRIAL GAS SDN. BHD. PLO 137, Kawasan Perindustrian Senai III, 81400 Senai, Johor.
<b>Contact Number</b>	07-598 3863
<b>Emergency Phone Number (24 hr)</b>	07-598 3863

#### 2. HAZARDS IDENTIFICATION

Chemical Name	CAS No.	Classification Code	Labeling		
			H-code	Signal Word	H0azard Pictogram
Propane and Air (Syn) Balance	132259-10-0 (Air); 74-98-6 (Propane)	Press. Gas	H 280	Warning	

<b>Classification of the substance</b>	Press. Gas	: Gases under pressure (Compressed gas)
<b>Hazard Statement</b>	H 280	: Contains gas under pressure; may explode if heated.
<b>Precautionary Statement</b>	P403	: Store in a well-ventilated place.

**Other Hazards**

Nausea, vomiting, irregular heartbeat, headache, drowsiness, dizziness, disorientation, mood swings, loss of coordination, suffocation, convulsions, unconsciousness, coma

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Common Name	Ingredient	CAS Number	% volume	OSHA-PEL
Propane 1.05% Balance Nitrogen	Propane	74-98-6	< 0.5-2.1	1000
	Air (O <sub>2</sub> & N <sub>2</sub> )	132259-10-0	>97.9	No specific exposure limits

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

**4. FIRST AID MEASURES****Eye Contact**

None known or expected.  
Flush eyes with plenty of water.

**Inhalation**

Product is a simple asphyxiant.  
High concentrations may exclude an adequate supply of oxygen to the lungs.  
Move exposed person to fresh air.  
If not breathing, provide artificial respiration or oxygen by trained personnel.  
Loosen tight clothing such as a collar, tie, belt or waistband.

**Skin Contact**

Get medical attention if symptoms occur.  
Flush contaminated skin with soap and water.  
Contaminated clothing and shoes should be removed.  
Get medical attention if symptoms occur.

**Ingestion**

Ingestion is not considered as a potential route of exposure.  
If a large amount is swallowed, get medical attention.

**Most important symptoms and effects, both acute and delayed**

In high concentrations may cause asphyxiation.  
Symptoms may include loss of mobility/ consciousness.  
Victim may not be aware of asphyxiation.  
As asphyxiation progresses, nausea, vomiting, prostration, and loss of consciousness may result, eventually leading to convulsions, coma, and death.

**5. FIRE FIGHTING MEASURES**

<b>Suitable extinguishing media</b>	Carbon dioxide, Regular dry chemical.
<b>Unsuitable extinguishing media</b>	None known
<b>Special hazards arising from the chemical</b>	-
<b>Special protective equipment and precautions for fire fighters</b>	Cool containers with water spray until well after fire is out. Stay away from ends of tanks. Eliminate all ignition sources if safe to do so. If possible stop the flow of product. Continue spray water from protected area until the container stays cool. Use Self-contained breathing apparatus while in confined space.

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal precautions</b>	Evacuate area. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Ensure adequate air ventilation.
<b>Environmental precautions</b>	Try to stop release. Prevent from entering sewers, basements and work pits, or any place where its accumulation can be dangerous. Ventilate area. Collect spilled material using mechanical equipment. Keep out of water supplies and sewers.
<b>Clean up methods</b>	Provide adequate ventilation.

**7. HANDLING AND STORAGE**

<b>Precaution for safe handling</b>	Operators should wear protective clothing while handling this gas. If ventilation controls are not adequate to provide sufficient oxygen content, proper respiratory protection equipment should be provided.
<b>Condition for safe storage</b>	Cylinders should be stored upright and be secured firmly to prevent falling. Protect cylinders against extreme weather and from dampness from ground to prevent rusting. Stored cylinders in well-ventilated area, away from direct heat and ignition source. Do not allow area where cylinders are stored to exceed 52°C

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Control parameters**

INGREDIENT	Exposure Limit in Air			
	ACGIH-TLV		OSHA - STEL	
	TWA ppm	STEL ppm	TWA ppm	STEL ppm
<b>Air</b> <b>Formula: O<sub>2</sub> &amp; N<sub>2</sub></b>	No specific exposure limits for this product's components.			
<b>Propane</b> <b>Formula: C<sub>3</sub>H<sub>8</sub></b>	1000	Non established	1000	Non established

**Appropriate engineering controls**

Provide adequate general and local exhaust ventilation to maintain concentration below exposure limits and to avoid asphyxiation.  
Oxygen detectors should be used when asphyxiating gases may be released.  
Provide local exhaust ventilation system.  
Ensure compliance with applicable exposure limit.

**Personal protection equipment**

Eye protection recommended.  
Provide emergency eye wash fountain and quick drench shower in immediate work area.  
Protective industrial work gloves made of any suitable material.  
Under conditions of frequent use or exposure, respiratory protection may be needed.  
Wear safety shoes

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	Colorless, gas
<b>Odour</b>	Gasoline odor, colorless gas
<b>Odour threshold</b>	Not Applicable
<b>pH</b>	Not Available

The following information is for the main component of this gas mixture (air)

<b>Melting point / Freezing point</b>	-216.2 °C
<b>Boiling point</b>	-194.3 °C
<b>Flash point</b>	Not Available
<b>Evaporation rate</b>	Not Available
<b>Flammability</b>	Non flammable (Air) Extremely flammable (Propane)
<b>Upper/lower explosive limit</b>	<b>For Propane</b> <b>LOWER: 2.1 %</b> <b>UPPER: 9.5 %</b>
<b>Vapour pressure</b>	Not Available
<b>Vapour density (Air =1)</b>	1
<b>Relative density</b>	1
<b>Solubility (H<sub>2</sub>O)</b>	0.0292
<b>Partition coefficient</b>	Not Available
<b>Auto ignition temperature</b>	Not Available
<b>Decomposition temperature</b>	Not Available
<b>Viscosity</b>	Not Available

**10. STABILITY AND REACTIVITY**

<b>Reactivity</b>	Unreactive under normal conditions.
<b>Chemical Stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Condition to avoid</b>	Heat, flames and sparks. May decompose violently at high temperature and/ or pressure in the presence of a catalyst.
<b>Incompatible materials</b>	Fuels may form explosive mixtures in air. Propane is incompatible with strong oxidizers (i.e. chlorine, bromine pentafluoride, oxygen difluoride, and nitrogen trifluoride).
<b>Hazardous decomposition products</b>	Propane will decompose into carbon dioxide and carbon monoxide at extremely high temperatures. The other components of this gas mixture do not decompose, per se, but can react with other compounds in the heat of a fire.

**11. TOXICOLOGICAL INFORMATION****Information on toxicological effects**

No Mutagenicity, Embryotoxicity, Teratogenicity and Reproductive toxicity effects on the gas mixture.

<b>Acute toxicity</b>	Oral: LD <sub>50</sub> > No information available. Dermal: LD <sub>50</sub> > No information available. Inhalation: LC <sub>50</sub> > No information available. Inhalation: No known significant effects or critical hazards
<b>Skin corrosion / irritation</b>	No specific data.
<b>Serious eye damage/ irritation</b>	No specific data.
<b>Respiratory or skin sensitisation</b>	No specific data.
<b>Germ cell mutagenicity</b>	No specific data.
<b>Carcinogenicity product</b>	No specific data.
<b>Reproductive toxicity product</b>	No specific data.

<b>Specific target organ toxicity – single exposure product.</b>	No specific data.
<b>Specific target organ toxicity – repeated exposure product</b>	No specific data.
<b>Aspiration hazard product</b>	Not applicable to gases and gas mixtures.

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity effect</b>	
<b>Acute toxicity product</b>	Not Available
<b>Additional ecological information</b>	Not Available
<b>Persistence and degradability</b>	Not applicable to gases and gas mixtures.
<b>Bioaccumulative potential</b>	Not Available
<b>Mobility in soil</b>	Not Available
<b>Other adverse effects</b>	No other adverse effects are identified

## 13. DISPOSAL CONSIDERATIONS

<b>Waste from residue / unused product</b>	Do not discharge into areas where there is a risk of forming an explosive mixture with air. Do not discharge into a place where its accumulation could be dangerous.
<b>Contaminated packaging</b>	Do not reuse empty containers. Empty remaining contents. Dispose of container and unused contents in accordance with local and national regulation. Return cylinder to supplier

## 14. TRANSPORT INFORMATION

<b>UN Number</b>	UN 1956
<b>UN proper shipping name</b>	Compressed gas, n.o.s. (Oxygen, Argon)
<b>Transport hazard class(es)</b>	2.2(Nonflammable)
<b>Packing group</b>	-
<b>Environmental hazards</b>	None
<b>Special precautions for user</b>	None

Revision Date: 6 September 2014

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Information**

Not applicable

Ensure the driver is understand well on the potential hazards of the load and knows what to do in the event of an accident or an emergency.

Secured the product containers before transporting it.

Ensure that the cylinder valve is closed and not leaking.

Container valve guards or caps should be in place.

Ensure adequate air ventilation.

## 15. REGULATORY INFORMATION

Contact local government authority.

## 16. OTHER INFORMATION

**Date of Preparation / Revision of SDS** 6 September 2014 / Rev. 01

**Legend to the abbreviations and acronyms used**

**Classification of the substance** Press. Gas : Gases under pressure (Compressed gas)

**Hazard Statement** H 280 : Contains gas under pressure; may explode if heated.

**Precautionary Statement** P403 : Store in a well-ventilated place

**Abbreviations**  
 LC<sub>50</sub> : median lethal concentration  
 LD<sub>50</sub> : median lethal dose  
 PEL : Permissible exposure limits

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