

SIG SOUTHERN INDUSTRIAL GAS SDN BHD


SAFETY DATA SHEET

PROPANE AND AIR (SYN.) BALANCE

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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

2. HAZARDS IDENTIFICATION

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

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.

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 ₂ & N ₂)	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

Suitable extinguishing media	Carbon dioxide, Regular dry chemical.
Unsuitable extinguishing media	None known
Special hazards arising from the chemical	-
Special protective equipment and precautions for fire fighters	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

Personal precautions	Evacuate area. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Ensure adequate air ventilation.
Environmental precautions	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.
Clean up methods	Provide adequate ventilation.

7. HANDLING AND STORAGE

Precaution for safe handling	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.
Condition for safe storage	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
Air Formula: O ₂ & N ₂	No specific exposure limits for this product's components.			
Propane Formula: C ₃ H ₈	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

Appearance	Colorless, gas
Odour	Gasoline odor, colorless gas
Odour threshold	Not Applicable
pH	Not Available

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

Melting point / Freezing point	-216.2 °C
Boiling point	-194.3 °C
Flash point	Not Available
Evaporation rate	Not Available
Flammability	Non flammable (Air) Extremely flammable (Propane)
Upper/lower explosive limit	For Propane LOWER: 2.1 % UPPER: 9.5 %
Vapour pressure	Not Available
Vapour density (Air =1)	1
Relative density	1
Solubility (H₂O)	0.0292
Partition coefficient	Not Available
Auto ignition temperature	Not Available
Decomposition temperature	Not Available
Viscosity	Not Available

10. STABILITY AND REACTIVITY

Reactivity	Unreactive under normal conditions.
Chemical Stability	Stable under normal conditions.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Condition to avoid	Heat, flames and sparks. May decompose violently at high temperature and/ or pressure in the presence of a catalyst.
Incompatible materials	Fuels may form explosive mixtures in air. Propane is incompatible with strong oxidizers (i.e. chlorine, bromine pentafluoride, oxygen difluoride, and nitrogen trifluoride).
Hazardous decomposition products	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.

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

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

12. ECOLOGICAL INFORMATION

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

13. DISPOSAL CONSIDERATIONS

Waste from residue / unused product	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.
Contaminated packaging	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

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

LC₅₀ : median lethal concentration
LD₅₀ : median lethal dose
PEL : Permissible exposure limits

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