



# SAFETY DATA SHEET

Doc. No.: SDS – 007 (3)  
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Owner: Safety & Quality  
Rev. Date: 08 August 2016

## 5.7% TO 50% HYDROGEN IN NITROGEN

### 1 IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

**Trade name** : 5.7% to 50% Hydrogen in Nitrogen  
**SDS No.** : 007  
**Company Identification** : Air Liquide Philippines Inc.  
**Main Office** : 12F Ecotower, 32<sup>nd</sup> St. cor. 9<sup>th</sup> Ave., Bonifacio Global City, Taguig City 1634, Philippines  
**Main Plant** : Sandoval Ave., Pinagbuhatan, Pasig City  
**Phone No.** : (02) 838 – 1780 to 83 / 837-8135 to 37 / 8378-156  
: 09189168312 (Customer hotline 6PM-8AM)

### 2 HAZARDS IDENTIFICATION

**Hazards identification** : Extremely flammable  
Compressed gas

#### Label Elements

- **Hazard Pictogram**



- **Signal word** : Danger
- **Hazard Statement** : Extremely flammable gas  
Contains gas under pressure, may explode if heated
- **Precautionary statements**
  - **Prevention** : Keep away from heat / spark / open flames / hot surfaces
  - **Response** : Leaking gas fire: Do not extinguish unless leak can be stopped safely
  - **Storage** : Eliminate ignition sources if safe to do so  
: Store in a well ventilated area

### 3 COMPOSITION / INFORMATION ON INGREDIENTS

**Substance / Preparation** : Preparation

Substance Name	Contents	CAS No.	EC No.	Index No.	Classification (DSD)
Hydrogen	Between 5.7% and 50%	1333-74-0	215-605-7	001-001-00-9	F+; R12
Nitrogen	Balance %	7727-37-9	231-783-9	-----	



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### 4 FIRST AID MEASURES

- Inhalation** : In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation.
- Remove the victim to uncontaminated area wearing 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

- Flammable class** : Extremely flammable
- Specific hazards** : Exposure to fire may cause containers to rupture / explode
- Hazardous Combustion Products** : Under fire conditions, hazardous fumes will be present.
- Extinguishing media**
- Suitable extinguishing media** : All known extinguishants can be used.
- Specific methods** : Do not extinguished a leaking gas flame unless absolutely necessary. Spontaneous/explosive re-ignition may occur. Extinguish any other fire.  
If possible, stop flow of product  
Move away from the container and cool with water from a protected position.
- Special protective equipment for fire fighters** : Do not enter fire area without proper protective equipment, including respiratory protection.

### 6 ACCIDENTAL RELEASE MEASURES

- Personal precautions** : Evacuate area  
Ensure adequate air ventilation.  
Eliminate ignition sources.  
Environmental Precautions
- Clean up methods** : Try to stop release.  
: Ventilate area.



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### 7 HANDLING AND STORAGE

- Storage** : Segregate from oxidant gases and other oxidants in store.  
Keep container below 50°C in a well ventilated place.
- Handling** : Keep away from ignition sources (including static discharges).  
Open valve slowly to avoid pressure shock.  
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. Contact your gas supplier if in doubt.  
Refer to supplier's container handling instructions.

### 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

- Appropriate engineering controls** : Provide adequate general and local exhaust ventilation. Systems under pressure should be regularly checked for leakages. Oxygen detectors should be used when asphyxiating gases may be released. Consider work permit system e.g. for maintenance activities.
- Hand protection** : Wear working gloves when handling gas containers
- Eye protection** : Wear safety glasses with side shields.
- Skin and body protection** : Wear suitable protective clothing, e.g. lab coats, coveralls or flame resistant clothing.
- Respiratory protection** : None necessary during normal and routine operations.
- Thermal hazard protection** : None necessary during normal and routine operations.
- Environmental exposure controls** : Refer to local regulations for restriction of emissions to the atmosphere.
- Other information** : Wear safety shoes while handling containers

### 9 PHYSICAL AND CHEMICAL PROPERTIES

- Physical state at 20°C** : Compressed gas.
- Color** : Colorless
- Odor** : Odorless
- Relative density, gas (air=1)** : Lighter or similar to air.
- Solubility in water (mg/l)** : No reliable data available

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### 10 STABILITY AND REACTIVITY

**Stability and reactivity** : Can form explosive mixture with air.  
May react violently with oxidants

### 11 TOXICOLOGICAL INFORMATION

**Toxicity information** : No known toxicological effects from this product

### 12 ECOLOGICAL INFORMATION

**Effect on the global warming** : No known ecological damage caused by this product.  
**Effect on ozone layer** : None

### 13 DISPOSAL CONSIDERATIONS

**General** : Do not discharge into areas where there is a risk of forming an explosive mixture with air. Waste gas should be flared through a suitable burner with flask back arrestor.  
Do not discharge into any place where accumulation could be dangerous. Contact supplier if guidance is required.  
**Disposal method** : Consult supplier for specific recommendations.

### 14 TRANSPORT INFORMATION

**UN No.** : 1954  
**H.I. nr** : 23  
**ADR / RID**  
- **Proper shipping name** : COMPRESSED GAS, FLAMMABLE, N.O.S (Nitrogen, Hydrogen)  
- **ADR Class** : 2  
- **ADR / RID Classification code** : 1 F  
- **Labelling ADR** :



Label 2.1: flammable gas.

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### Other transport information

: Avoid transport on vehicles where the load space is not separated from the driver's compartment  
Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.

Before transporting product containers:

- Ensure that containers are firmly secured.
- Ensure cylinder valve is closed and not leaking.
- Ensure valve outlet cap nut or plug (where provided) is correctly fitted.
- Ensure valve protection device (where provided) is correctly fitted.
- Ensure there is adequate ventilation
- Compliance with applicable regulations.

## 15 REGULATORY INFORMATION

### EC Classification

: F+; R12

### EC Labelling

### Symbol(s)

: F+: Extremely flammable

### R Phrase(s)

: R12: Extremely flammable

### S Phrase(s)

: S9: Keep container in a well-ventilated place.

S16: Keep away from sources of ignition – No smoking

S33: Take precautionary measures against static discharges.

## 16 OTHER INFORMATION

### Training advice

: Ensure operators understand the flammability hazard.  
The hazard of asphyxiation is often overlooked and must be stressed during operator training.  
Receptacle under pressure.  
Ensure all national/local regulations are observed.

### Recommended uses and restrictions:

This SDS is for information purposes only and is subject to change without prior notice. [Prior to purchase of products, please contact your local AIR LIQUIDE office for the latest SDS edition].

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