

Revised date 01.08.2024

# MATERIAL SAFETY DATA SHEET

## HC 290

### CHEMICAL PRODUCT

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Corporate MSDS Number : TAB-004001  
Composition : HC 290 (100%)  
Chemical Formula : C<sub>3</sub>H<sub>8</sub>  
Chemical Name : Propane  
CAS# : 74-98-6  
UN# : 1978  
HS Code : 290110  
Hazard : 2.1

### COMPANY IDENTIFICATION

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TABRIGAS Egypt  
Port Said Free Zone area - Egypt  
Sunday - Thursday (9:00 - 17:00)  
00 202 2734 22 77 / 78 / 79  
[info@tabrigas.com](mailto:info@tabrigas.com)  
[www.tabrigas.com](http://www.tabrigas.com)

### PRODUCT USE

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Refrigerant

### TRADE NAMES & SYNONYMS

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R 290  
HC 290

### HAZARDS IDENTIFICATION

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#### EMERGENCY OVERVIEW:

WARNING! Flammable gas. Contents under pressure. Causes damage to the following organs: Nervous System. Vapor may cause flash fire. Keep away from heat, sparks, and flame. Do not puncture or incinerate the container. Keep the container closed. Use only with adequate ventilation. Contact with rapidly expanding gases can cause frostbite.

#### POTENTIAL ACUTE HEALTH EFFECTS:

SKIN : No known significant effects or critical hazards.

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- EYES : No known significant effects or critical hazards.  
INHALATION : Acts as simple asphyxiate.  
INGESTION : Ingestion is not a normal route of exposure for gases.

**POTENTIAL CHRONIC HEALTH EFFECTS:**

- CARCINOGENIC EFFECTS : Not available.  
MUTAGENIC EFFECTS : Not available.  
TERATOGENIC EFFECTS : Not available.

**MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:**

Acute or chronic respiratory conditions may be aggravated by overexposure to this gas.

**FIRST-AID**

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**MEASURES**

No action shall be taken involving any personal risk or without suitable training. If fumes are still suspected to be present, the rescuer should wear an appropriate mask or a self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

**SKIN:**

In case of contact, immediately flush the skin with plenty of water. Remove contaminated clothing and Shoes.

Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

**EYES:**

Immediately flush your eyes with plenty of warm water for at least 15 minutes. Get medical attention.

**INHALATION:**

Immediately remove to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, qualified personnel may give oxygen. Get medical attention immediately.

**INGESTION:**

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.

**FROSTBITE:**

Try to warm up the frozen tissues and seek medical attention.

**FIRE FIGHTING MEASURES**

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**FLAMMABLE PROPERTIES**

- Flammability of product : FLAMMABLE  
Auto ignition temperature : 841.7°F (449.85°C)  
Upper flame limit (volume % in air) : 9.5%

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Lower flame limit (volume % in air) : 2.1%  
Products of combustion : These products are carbon oxides (CO, CO<sub>2</sub>).

Fire hazards in the presence of various substances:

Extremely flammable in the presence of open flames, sparks, and static discharge of oxidizing materials.

Firefighting media and instructions:

CO<sub>2</sub>, dry chemicals, water spray, or fog.

If involved in the fire, shut off flow immediately if it can be done without risk. Apply water from a safe distance to cool the container and protect the surrounding area.

Special protective equipment for fire-fighters:

Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full-face piece operated in positive pressure mode.

## ACCIDENTAL RELEASE MEASURES

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PERSONAL PRECAUTIONS:

Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment (Section 8). Shut off the gas supply if this can be done safely. Isolate the area until the gas has dispersed.

ENVIRONMENTAL PRECAUTIONS:

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## HANDLING AND STORAGE

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NORMAL HANDLING:

Keep the container closed. Use only with adequate ventilation. Keep away from heat, sparks, and flame. To avoid fire, minimize ignition sources. Use explosion-proof electrical (ventilating, lighting, and material handling) equipment. Do not puncture or incinerate the container. High-pressure gas. Use equipment rated for cylinder pressure. Close the valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.

STORAGE RECOMMENDATIONS:

Keep the container tightly closed. Keep the container in a cool, well-ventilated area. Cylinders should be stored upright, with a valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52°C (125°F).

## EXPOSURE CONTROLS/PERSONAL PROTECTION

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ENGINEERING CONTROLS:

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. The engineering

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controls also need to keep gas, vapor, or dust concentrations below any explosive limits. Use explosion-proof ventilation equipment

**PERSONAL PROTECTION:****SKIN:**

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**EYE:**

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

**RESPIRATORY:**

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. The applicable standards are (US) 29 CFR 1910.134 and (Canada) Z94.4-93

**HANDS:**

Chemical-resistant, impervious gloves or gauntlets complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**PHYSICAL AND CHEMICAL PROPERTIES**

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MOLECULAR WEIGHT	: 44.11 g/mole
MOLECULAR FORMULA	: C <sub>3</sub> H <sub>8</sub>
BOILING/CONDENSATION POINT	: -43.2°F (-41.79°C)
MELTING/FREEZING POINT	: -302.6°F (-185.89°C)
CRITICAL TEMPERATURE	: 205.9°F (96.6°C)
VAPOR PRESSURE	: 109 psig
VAPOR DENSITY	: 1.6 (Air=1)
SPECIFIC VOLUME (ft <sup>3</sup> /lb)	: 8.62069
GAS DENSITY (lb/ft <sup>3</sup> )	: 0.116
PHYSICAL-CHEMICAL COMMENTS	: Not available

**STABILITY AND REACTIVITY**

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**STABILITY and REACTIVITY:**

The product is stable.

**INCOMPATIBILITIES with various substances:**

Extremely reactive or incompatible with oxidizing agents.

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**TOXICOLOGICAL INFORMATION**

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**TOXICITY DATA:**

IDLH : 2100 ppm  
Chronic effects on humans : Causes damage to the following organs: the nervous system.  
Other toxic effects on humans: No specific information is available in our database  
Regarding the other toxic effects of this material on humans.

**SPECIFIC EFFECTS:**

Carcinogenic effects : No known significant effects or critical hazards.  
Mutagenic effects : No known significant effects or critical hazards.  
Reproductive toxicity : No known significant effects or critical hazards.

**ECOLOGICAL INFORMATION**

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**Products of degradation:**

These products are carbon oxides (CO, CO<sub>2</sub>) and water.

**Toxicity of the products of biodegradation:**

The product itself and its products of degradation are not toxic.

**Environmental fate:**

Not available

**Environmental hazards:**

No known significant effects or critical hazards.

**Toxicity to the environment:**

Not available.

**DISPOSAL CONSIDERATIONS**

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The product removed from the cylinder must be disposed of under appropriate Federal, State, and local regulations. Return cylinders with the residual product to Airgas, Inc. Do not dispose of them locally.

**TRANSPORTATION INFORMATION**

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DOT PROPER SHIPPING NAME : Propane, see also Petroleum Gases, Liquefied  
SHIPPING LABEL(s) : FLAMMABLE GAS  
PACKING GROUP : Not applicable (gas)  
HAZARD CLASS : 2.1  
UN NUMBER : UN 1978

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**REGULATORY INFORMATION**

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**U.S. FEDERAL REGULATIONS:**

- TSCA 8(b) inventory: Propane
- SARA 302/304/311/312 extremely hazardous substances: No products were found.
- SARA 302/304 emergency planning and notification: No products were found.
- SARA 302/304/311/312 hazardous chemicals: Propane
- SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Propane: Fire hazard, Sudden Release of Pressure
- Clean Water Act (CWA) 307: No products were found.
- Clean Water Act (CWA) 311: No products were found.
- Clean Air Act (CAA) 112 Accidental release prevention: Propane
- Clean Air Act (CAA) 112 regulated flammable substances: Propane
- Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

**STATE REGULATIONS:**

- Pennsylvania RTK: Propane: (generic environmental hazard)
- Massachusetts RTK: Propane
- New Jersey: Propane

**CANADA**

- WHMIS (Canada): Class A: Compressed gas
- Class B-1: Flammable gas
- CEPA DSL: Propane

**OTHER INFORMATION**

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**UNITED STATES**

**LABEL REQUIREMENTS:**

- Flammable Gas
- Contents under pressure
- Causes damage to the following organs: Nervous System.
- Vapor may cause flash fire

**CANADA**

**LABEL REQUIREMENTS:**

- Class A: Compressed Gas
- Class B-1: Flammable gas

**HAZARD RATING SYSTEMS:**

**NFPA RATINGS:**

HEALTH =1

FLAMMABILITY =4

**HMIS RATINGS:**

HEALTH =1

FIRE HAZARD =4

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INSTABILITY =0  
SPECIAL =None

REACTIVITY =0  
PERSONAL PROTECTION =C

End of MSDS  
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