

Material Safety Data Sheet

(Propane R-290)

Information in this format is provided as a service to our customers and is intended only for their use. Others may use it at their own discretion and risk. It is subject to revision as additional knowledge and experience are gained. Please return to this website for the most current version.

1. PRODUCT AND COMPANY IDENTIFICATION

Material Identification

Corporate MSDS Number: HC 290 CAS Number: 74-98-6
Product Name R-290
Chemical Formula C₃H₈
Chemical Name Propane
Product Use refrigerant

Company Identification

MANUFACTURER/DISTRIBUTOR: Cosutin Industrial CO., Limited
Add: Unit B, 10/F Lee May Building 788-790 Nathan Road, Mongkok, Kowloon, H.K.
Tel.: +852 21395855 Fax: +852 81673777
PHONE NUMBERS Product Information: +86 136 31481545
Transport Emergency: +86 136 31481545
Medical Emergency: +86 136 31481545

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name of the substance: Propane
General name: HYDROCARBON
CAS Number: 74-98-6
Einecs Number: 200-827-2

Ingredient Name	CAS No.	Typical Wt. %
Propane	74-98-6	100%

3. HAZARDS IDENTIFICATION

Labelling EC 67/548 or EC 1999/45

Symbol(s) F+: Extremely flammable.



R Phrase(s) R12: Extremely flammable.

S Safety phrase(s) S9: Keep container in a well-ventilated place.

S16: Keep away from sources of ignition.

Other hazards

Other hazards None.

4. FIRST AID MEASURES

INHALATION: Remove patient from exposure, keep warm and at rest. Administer oxygen if necessary. Apply artificial respiration if breathing has ceased or shows signs of failing. In the event of cardiac arrest apply external cardiac massage. Obtain immediate medical attention.

SKIN CONTACT: Thaw affected areas with water. Remove contaminated clothing.

Caution: clothing may adhere to the skin in the case of freeze burns.

After contact with skin, wash immediately with plenty of warm water.

If irritation or blistering occur, obtain medical attention.

EYE CONTACT: Immediately irrigate with eyewash solution or clean water, holding the eyelids apart for at least 15 minutes. Obtain immediate medical attention.

INGESTION: Unlikely route of exposure. Do not induce vomiting. Provided the patient is conscious, wash out mouth with water and give 200-300ml (half a pint) of water to drink. Obtain immediate medical attention.

5. FIRE FIGHTING MEASURES

SPECIFIC HAZARDS: Exposure to fire may cause containers to rupture/explode.

Hazardous combustion: Products Incomplete combustion may form carbon monoxide.

EXTINGUISHING MEDIA: All known extinguishants can be used.

SPECIFIC METHODS: If possible, stop flow of product.

Move away from the container and cool with water from a protected position.

Do not extinguish a leaking gas flame unless absolutely necessary.

Spontaneous/explosive re-ignition may occur. Extinguish any other fire.

PROTECTIVE EQUIPMENT FOR FIREFIGHTERS: In confined space use self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

PERSONAL PROTECTION: Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.

Evacuate area.

Ensure adequate air ventilation.

Eliminate ignition sources.

ENVIRONMENTAL PRECAUTIONS: Try to stop release.

Prevent from entering sewers, basements and work-pits or any place where its accumulation can be dangerous.

Clean up measures: Ventilate area.

7. HANDLING AND STORAGE

Handling: Take precautionary measures against static discharge.
Suck back of water into the container must be prevented.
Purge air from systems before introducing gas.
Do not allow back-feed into the container.
Use properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt.
Keep away from ignition sources (including static discharges).
Refer to suppliers container handling instructions.

Storage: Segregate from oxidant gases and other oxidants in store.
Keep container below 50°C in a well ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Wear suitable protective clothing, gloves and eye/face protection.
Wear thermal insulating gloves when handling liquefied gases. In cases of insufficient ventilation, where exposure to high concentrations of vapour is possible, suitable respiratory protective equipment with positive air supply should be used.
Do not smoke while handling product.

Occupational exposure limits Propane : TLV – TWA [ppm] : 2500

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Form: Liquefied gas

Physical state at 20°C: Gas

Colour: Colourless

Odour: Odorless.

Molecular weight: 44

Solubility in water [mg/l]: 75

Boiling point (°C): -42.1

Melting point (°C): -188.0

Relative density, gas (air=1): 1.5

Relative density, liquid (water =1): 0.58

Vapour pressure (20°C): 8.3 bar

Flammability range [vol% in air]: 1.7 to 9.5

Auto ignition temperature [°C]: 470

Other data: Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

10. STABILITY AND REACTIVITY

Conditions to Avoid: Keep away from heat, sparks, open flames, hot surfaces. No smoking.

Incompatible Material: Can form explosive mixture with air.

May react violently with oxidants.

Air, oxidiser.

Decomposition: None.

11. TOXICOLOGICAL INFORMATION

No known toxicological effects from this product.

12. ECOLOGICAL INFORMATION

No known ecological damage caused by this product.

13. DISPOSAL CONSIDERATIONS

Waste Disposal: 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 flashback arrestor.

Do not discharge into a place where its accumulation could be dangerous. Contact supplier if guidance is needed.

14. TRANSPORTATION INFORMATION

UN No. 1978

Labelling ADR, IMDG, IATA

2.1 : flammable gas

Land transport

ADR/RID

H.I.nr: 23

UN Proper shipping name: Propane

Transport hazard class(es): 2

-ADR/RID Classification code: 2 F

-Packing instruction(s) – General: P200

-Tunnel instructions B/D Tank carriage: Passage forbidden through tunnels of category B, C, D and E;

Other carriage: Passage forbidden through tunnels of category D and E.

Sea transport

-IMO-IMDG code

Proper shipping name: Propane

Class: 2.1

-IMO Packing group: P200

-Emergency schedule (EmS) – Fire: F-D

-Emergency schedule (EmS) - Spillage: S-U

-Instructions – Packing: P200

Air transport

-ICAO/IATA

-Proper shipping name: Propane

Class: 2.1

Passenger and cargo aircraft: -

Cargo aircraft only

-Packing instruction: 200

Avoid transport on vehicles where the load space is not separated from the drivers 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 emergency.

Before transporting containers:

-Ensure 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

Safety, health and environmental regulations/legislation specific for the substance or mixture: Ensure all national/local regulations are observed.

SEVESO Regulation 96/82/EC Listed.

16. OTHER INFORMATION

Ensure operators understand the flammability hazard.

Contact with liquid may cause burns/frostbite.

The hazard of asphyxiation is often overlooked and must be stressed during operator training.

List of full text of R-phrases in section 3 : R12 : Extremely flammable.

This datasheet was prepared in accordance with Regulation (EC) No. 1907/2006.

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

End of MSDS