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

Name of product	Forming Gas (5% Hydrogen, 95% Helium)
Manufacturer/distributor	Pfeiffer Vacuum GmbH Berliner Str. 43, D-35614 Asslar Phone +49 6441 802-0, Fax +49-(0)6441/802-202 E-Mail info@pfeiffer-vacuum.de
Advice	Market Management
Emergency advice	+49-(0)6441/802-67222
Recommended intended purpose(s)	test gas

2. HAZARDS IDENTIFICATION

Classification according to 67/548/EEC or 1999/45/EC

F+; R12

R-phrases

12 Extremely flammable.

Information pertaining to special dangers for human and environment

In use, may form flammable/explosive vapour-air mixture.

Container under pressure. Protect from direct sunlight and temperatures above 50°C. Do not spray into flames or onto glowing objects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Description

Compressed gas mixture

Hazardous ingredients

CAS No	EC No	Name	[% weight]	Classification according to 67/548/EEC
1333-74-0	215-605-7	hydrogen	5	Xn R22; Xi R36/38
7440-59-7	231-168-5	helium	95	

4. FIRST AID MEASURES

General information

Remove contaminated soaked clothing immediately.

In case of inhalation

Remove the casualty into fresh air and keep him immobile.

In high concentrations may cause asphyxiation.

Remove aggrieved persons from danger zone

In the event of symptoms refer for medical treatment.

In case of respiratory standstill give artificial respiration by respirator and send for a doctor.

In case of skin contact

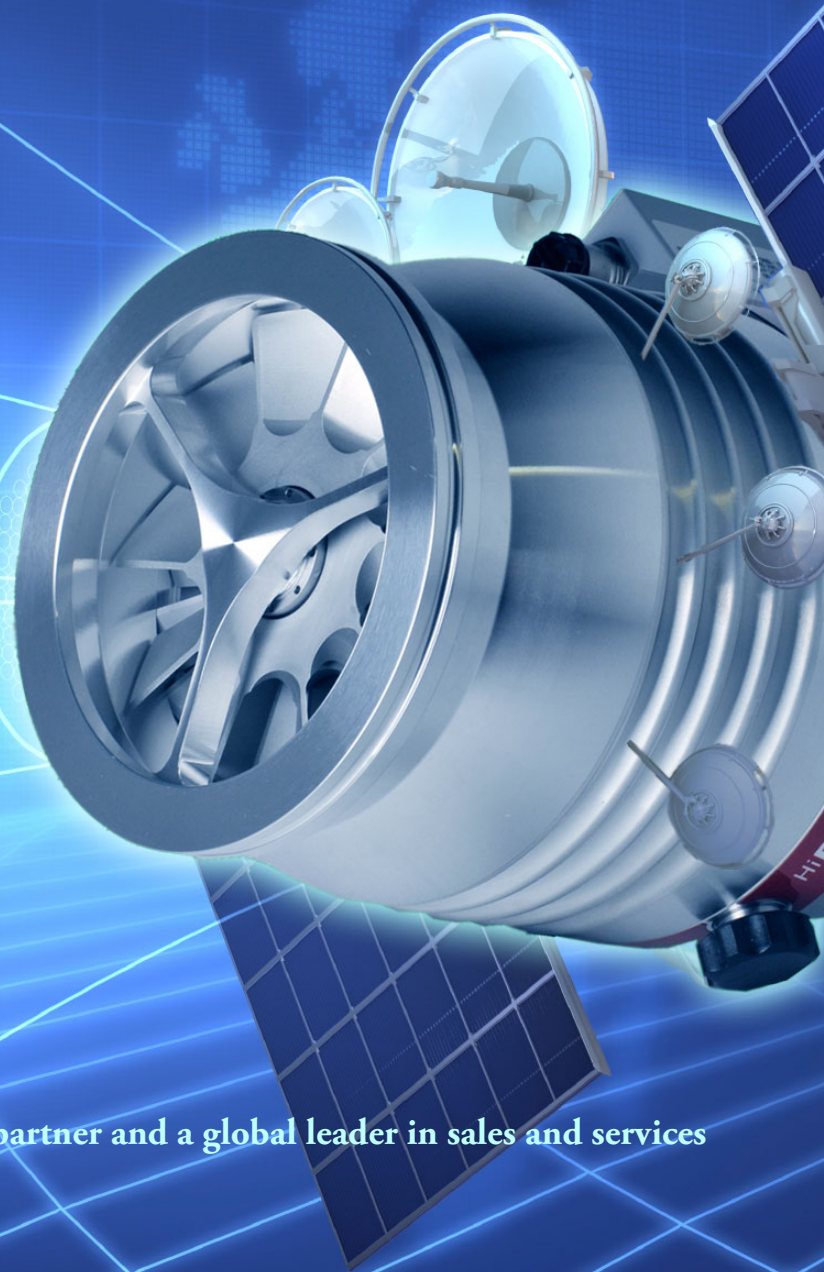
not necessary

1.855.882.2886



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In case of eye contact

not necessary

In case of ingestion

not relevant

Physician's information / possible symptoms

The following symptoms may occur:

Unconsciousness

Anaesthetic state

Headache

Confusion

Dizziness

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

All extinguishing agents are suitable.

Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases

Exposure to fire may cause containers to rupture / explode.

Special protective equipment for fire-fighters

Use breathing apparatus with independent air supply.

Do not inhale explosion and/or combustion gases.

Additional information

Heat action leads to pressure increase - risk of aerosol can bursting

If possible stop gas leakage

Remove the endangered containers or spray them with cold water

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Ensure adequate ventilation.

Keep people away and stay on the upwind side.

Keep away sources of ignition.

Environmental precautions

If possible stop gas leakage

Methods for cleaning up

Allow to vaporise.

7. HANDLING AND STORAGE

Advice on safe handling

Keep away from ignition sources - no smoking

Care for thoroughly room ventilation, if necessary use in well ventilated area with local exhaust ventilation at workplace.

Use only in well-ventilated areas.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking

Take precautionary measures against static discharges.

Further information on storage conditions

Protect from direct solar radiation.

Store container at cool and aired place.

Protect from heat/overheating.

Avoid heating to over 50 °C.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional advice on system design

For good space ventilation provide, if necessary exhaust on the job.

Hand protection

not necessary

Eye protection

safety goggles

Skin protection

Protective clothing

General protective measures

Avoid contact with eyes and skin

Do not inhale gases/vapours/aerosols.

Hygiene measures

Do not smoke when working.

Remove soaked clothing immediately.

Work in rooms with good ventilation.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form

gaseous

Colour

colourless

Odour

odourless

10. STABILITY AND REACTIVITY

Conditions to avoid

strong heating

Keep away from heat.

Evolution of highly flammable gases/vapours.

Materials to avoid

No hazardous reactions known.

11. TOXICOLOGICAL INFORMATION

Acute toxicity/Irritability/Sensitization

	Value/Validation	Species	Method	Remark
Skin sensitization	non-sensitizing			

Additional information

No toxicological data available.

12. ECOLOGICAL INFORMATION

General regulation

No risk of ecological problems if properly handled and used

13. DISPOSAL CONSIDERATIONS

Waste code No.	Name of waste
15 01 04	metallic packaging
16 05 05	gases in pressure containers other than those mentioned in 16 05 04

Recommendations for the product

Remove in accordance with local official regulations.

Recommendations for packaging

Dispose of in accordance with legal regulations.

14. TRANSPORT INFORMATION

Land and inland navigation transport ADR/RID

UN 1954 COMPRESSED GAS, FLAMMABLE, N.O.S. (Hydrogen and Helium), 2.1, (B/D), Classification code: 1F

Marine transport IMDG

UN 1954 COMPRESSED GAS, FLAMMABLE, N.O.S. (Hydrogen and Helium), 2.1

Air transport ICAO/IATA-DGR

UN 1954 Compressed gas, flammable, n.o.s. (Hydrogen and Helium), 2.1

Transport/further information

24h EMERGENCY CONTACT (TRANSPORT) +49(0)178 433 7434

ADR and IMDG: TRANSPORTED AS: UN 2037 RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES); 2.1

ICAO/IATA-DGR: TRANSPORTED AS: UN 2037 RECEPTACLES, SMALL, CONTAINING GAS; 2.1

15. REGULATORY INFORMATION

Remarks for labelling

The product is classified and labelled in accordance with EC directives.

Labelling according to 67/548/EEC or 1999/45/EC

F+ Extremely flammable

R-phrases

12 Extremely flammable.

S-phrases

16 Keep away from sources of ignition - No smoking.

33 Take precautionary measures against static discharges.

9 Keep container in a well-ventilated place.

Special labelling for certain preparations

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

16. OTHER INFORMATION

Recommend uses and restrictions

National and local regulations concerning chemicals shall be observed.

Further information

The information contained herein is based on the state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

DOCUMENT-No: IG 0021 BE_C

Sources of key data used

Data sheets of the sub-supplier.

Wording of the R-phrases specified in chapter 3 (not the classification of the formulation!)

R 22 Harmful if swallowed.

R 36/38 Irritating to eyes and skin.