

## EPIGRAL LTD., UNIT-Dahej

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**Epigral Ltd.** urges the customers receiving this Material Safety Data Sheet (MSDS) to study it carefully to become aware of hazards, if any, of the product involved. In the interest of Safety, you should notify your employee, agent & contractors about the information on this sheet, furnish a copy of each of your customers for the product, and request your customers to inform their employees and customers as well.

### SECTION 1: Identification

**Product Name** Hydrogen (99.9%)  
**CAS-No** 1333-74-0  
**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company : Epigral Limited  
Plot No. CH1.CH2, Industrial Estate  
Dahej, Taluka : Vagra  
Bharuch-392 130  
Gujarat  
INDIA

Emergency Telephone Number : 91-9099985862

### SECTION 2 : Hazards identification

#### Classification of the substance or mixture

#### Classification according to Regulation (EC) No 1272/2008

Flammable gases (Category 1), H220  
Gases under pressure (Compressed gas), H280

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### Label Elements

#### Labelling according Regulation (EC) No 1272/2008

**Signal Word**

Danger



#### Hazard Statements

H220 Extremely flammable gas.  
H280 Contains gas under pressure; may explode if heated.  
Precautionary statement(s)  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely.  
P381 Eliminate all ignition sources if safe to do so.  
P410 + P403 Protect from sunlight. Store in a well-ventilated place.  
Supplemental Hazard Statements none

#### Other hazards

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This substance/mixture contains no components considered to be persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher.

### SECTION 3: Composition/information on ingredients

#### Substances

Formula : H<sub>2</sub>  
Molecular weight : 2,01 g/mol  
CAS-No. : 1333-74-0

No components need to be disclosed according to the applicable regulations. For the full text of the H-Statements mentioned in this Section, see Section 16.

### SECTION 4: First aid measures

**General Advice** Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact** Wash off with soap and plenty of water. Consult a physician

**In case of eye contact** Flush eyes with water as a precaution

**If swallowed** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

#### Indication of any immediate medical attention and special treatment needed

No data available

### SECTION 5: Fire fighting measures

**Suitable Extinguishing Media** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Advice for firefighters** Wear self-contained breathing apparatus for firefighting if necessary.

**Further information** Use water spray to cool unopened containers.

### SECTION 6: Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

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For personal protection see section 8.

### **Environmental Precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### **Methods and materials for containment and cleaning up**

Clean up promptly by sweeping or vacuum.

### **Reference to other sections**

For disposal see section 13.

## **SECTION 7: Handling and storage**

### **Precautions for safe handling**

Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

### **Conditions for safe storage, including any incompatibilities**

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Contents under pressure.

### **Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## **SECTION 8: Exposure controls/personal protection**

### **Control parameters**

#### **Components with workplace control parameters**

### **Exposure controls**

#### **Appropriate engineering controls**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### **Personal protective equipment**

#### **Eye/face protection**

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425.

Material: butyl-rubber

Minimum layer thickness: 0,3 mm

Break through time: 120 min

#### **Body Protection**

Impervious clothing, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous

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Substance at the specific workplace.

### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards.

### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

a) Appearance	Form: Compressed gas Colour: colourless
b) Odour	No data available
c) Odour Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	-257,3 °C at 1.013 hPa
f) Initial boiling point and boiling range	-253 °C at 1.013 hPa - Tested according to Annex V of Directive 67/548/EEC.
g) Flash point	< -150 °C - closed cup
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	Upper explosion limit: 74,2 %(V) Lower explosion limit: 4 %(V)
k) Vapour pressure	No data available
l) Vapour density	0,08
m) Relative density	No data available
n) Water solubility	0,00196 g/l at 0 °C
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

### Other safety information

Relative vapour density 0,08

## SECTION 10: Stability and reactivity

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### Reactivity

No data available

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

No data available

### Conditions to avoid

Heat, flames and sparks.

### Incompatible materials

Oxidizing agents

### Hazardous decomposition products

Other decomposition products - No data available In the event of fire: see section 5

## SECTION 11: Toxicological information

### Information on toxicological effects

#### Acute toxicity

No data available

#### Skin corrosion/irritation

No data available

#### Serious eye damage/eye irritation

No data available

#### Respiratory or skin sensitisation

No data available

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

IARC: No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

#### Reproductive toxicity

Reproductive toxicity

#### Specific target organ toxicity - single exposure

No data available

#### Aspiration hazard

No data available

#### Additional Information

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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### SECTION 12: Ecological information

#### Toxicity

No data available

#### Persistence and degradability

No data available

#### Bioaccumulative potential

No data available

#### Mobility in soil

No data available

#### Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher

#### Other adverse effects

Dispose of as unused product.

### SECTION 13: Disposal considerations

#### Waste treatment methods

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

#### Contaminated packaging

Dispose of as unused product.

### SECTION 14: Transport information

#### UN number

ADR/RID: 1049

IMDG: 1049

IATA: 1049

#### UN proper shipping name

ADR/RID: HYDROGEN, COMPRESSED

IMDG: HYDROGEN, COMPRESSED

IATA: Hydrogen, compressed

Passenger Aircraft: Not permitted for transport

#### Transport hazard class

ADR/RID: 2.1

IMDG: 2.1

IATA: 2.1

#### Packaging group

ADR/RID: -

IMDG: -

IATA: -

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### Environmental hazards

ADR/RID: no      IMDG Marine pollutant: no      IATA: no

### Special precautions for user

No data available

## SECTION 15: Regulatory information

### Safety, health and environmental regulations/legislation specific for the substance or mixture

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

### Chemical safety assessment

For this product a chemical safety assessment was not carried out

## SECTION 16: Other information

### Full text of H-Statements referred to under sections 2 and 3.

H220 Extremely flammable gas.

H280 Contains gas under pressure; may explode if heated.

### MANUFACTURERS / SUPPLIERS DATA

<b>Name of the firm</b>	<b>EPIGRAL LTD.,</b>	<b>Contact Person in Emergency:</b>
<b>Mailing Address</b>	CH1/CH2,GIDC Industrial Estate, Dahej Dist.: Bharuch, Gujarat (INDIA)	<b>UNITE HEAD</b>
<b>Telephone Nos.</b>	Fact.: 91-9909995940	
		<b>Rev No : 04 (31/08/2023)</b>

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