



Westlake Petrochemicals Corporation

WLG-0129

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Manufacture's Name	Address	Telephone Number
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Product Name: HYDROGEN, GAS
Date of Issue: FEBRUARY 1991

SECTION I. PRODUCT IDENTIFICATION

Chemical Family: Chemical Formula: H₂ CAS Number: 133-74-0

Chemical Names/Synonyms:

SECTION II. HAZARDOUS INGREDIENTS AND EXPOSURE LIMITS

Component	CAS. No.	Amount	Exposure Limits
	1333-74-0	99.9%	(Reference)

SECTION III. CHEMICAL AND PHYSICAL PROPERTIES

Boiling Point: 760 mm Hg...-423.2°F (-252.7°C)
Melting Point: -434.5°F (-259.2°C)

Specific Gravity:
(Air=1) 0.069

Solubility In Water:
@ 60°F, 1 atm, vol/vol
H₂O...0.019

% Volatility By Weight: 100%

Evaporation Rate:
_____ = 1

Vapor Density:
(Air=1)

Molecular Weight: 2.02

pH:

Appearance And Odor: Colorless, tasteless, odorless gas.

SECTION IV. FIRE AND EXPLOSION HAZARD DATA

Flash Point: NA (Gaseous Mat'l)

Auto Ignition Temperature: 1075°F (580°C)

Flammable Limits In Air:
(% By Volume) Lower 4, Upper 75

National Fire Protection Association Hazard Identification Code
Health: 0 Flammability: 4 Reactivity: 0 Other:

Fire Extinguishing Media: Small fires can be extinguished with carbon dioxide, dry chemical, or halogenated gas. However, don't extinguish a hydrogen fire until surroundings have been cooled and the hydrogen (flow) has been controlled or shut off in order to eliminate the danger of reignition and/or possible explosion.

Special Fire Fighting Procedures:

Unusual Fire Or Explosion Hazards: Hydrogen is extremely flammable. It forms explosive mixtures with air. In case of a pipeline fire, when possible, gradually reduce the H₂ flow to a small jet. Do not stop the flow completely before an inert gas or steam system has been activated to control flashback. Fires at cylinders or storage tanks should be allowed to burn until nearly empty before they are closed off, keeping the containers and surroundings as cool as possible by using water spray.

SECTION V. HEALTH HAZARDS

Acute Health Effects: Simple asphyxiation by displacement of oxygen.

Eyes:

Skin:

Inhalation:

Ingestion:

Chronic Health Effects:

Medical Conditions Aggravated By Exposure:

Primary Routes of Entry:

Carcinogenicity Status: Hydrogen is not listed as a carcinogen by the NTP, IARC, or OSHA. It is nontoxic. It can act as a simple asphyxiant by displacing the oxygen in the air. Symptoms of exposure depend on the degree and duration of oxygen deficiency. Persons exposed to an oxygen-deficient atmosphere can become experience diminished mental alertness, impaired muscular coordination, and breathing impairment, followed by collapse and even death if exposure is prolonged at low oxygen levels.

Occupational Safety and Health Administration:
National Toxicity Program:
International Agency for Research on Cancer:

Mutagenicity/Teratogenic Activity:

Hazard Recognition:

SECTION VI. FIRST AID PROCEDURES

Eyes: Get medical help*

Skin: Get medical help*

Inhalation: (CAUTION! Would-be rescuer must be concerned for their own safety in oxygen-deficient atmospheres and use approved breathing apparatus.)

Remove victim to fresh air. Quickly proceed to restore and/or support his breathing as required (mouth-to-mouth resuscitation should probably be used initially). Have a trained person administer oxygen if it is available. Get medical help.

Ingestion: Get medical help.*

* GET MEDICAL ASSISTANCE = In plant, paramedic, community. Get medical help for further treatment, observation, and support after first aid.

SECTION VII. PERSONAL PROTECTION

Respirator: Provide air-supplied or self-contained breathing equipment for emergency or nonroutine situations where the hydrogen level is excessive.

Skin:

Eyes: