

# Gases in General

## T E C H S P E C S

### G L O S S A R Y O F T E R M S

**ADG:**

Australian Dangerous Goods Code.

The Australian code for the transport of dangerous goods by road and rail.

**ASU:**

Air Separation Unit for the separation of gases from air by liquefaction and distillation.

**AUTOIGNITION TEMPERATURE:**

The temperature at which active combustion accompanied by flame will spontaneously occur in a mixture of flammable gas with Air.

The mixture is said to have undergone autoignition, implying that ignition was not caused by the introduction, into the gas, of a heat source such as a spark or flame. This temperature is dependent on pressure and to a considerable degree on the conditions in which the gas is heated.

**CALIBRATION GAS:**

A gas mixture of known composition for the calibration of an instrument or a process control device.

**CAS NUMBER:**

A number assigned by the United States Chemical Abstracts Service to identify a chemical.

**CRITICAL PRESSURE:**

The vapour pressure of a liquid at the critical temperature.

**CRITICAL TEMPERATURE:**

The temperature above which a gas cannot be liquefied by pressure alone.

**CRITICAL VOLUME:**

The volume occupied by unit mass of a fluid at its critical temperature and critical pressure.

**CRYOGENIC:**

Refers to the field of low temperatures (-150°C or below).

**DEW POINT:**

The temperature at which a vapour first condenses when a gas is cooled.

**EPG:**

Emergency Procedure Guide. -Transport.

A quick reference card for retention in vehicles and by emergency services, to be used where road transport vehicles are involved in accidents, spills, leaks or fire. This card contains information on hazards, emergency procedures and first aid. To be used in conjunction with the ADG code.

**FLAMMABLE GAS:**

A gas which will burn in air at a pressure of 101.325 kPa absolute.

**FLAMMABLE RANGE:**

The concentration range over which gas will form a flammable mixture with air.

**GT.EPG:**

Group Text. Emergency Procedure Guide. Provides guidance for drivers, emergency services and others involved in the transport of dangerous goods, in dealing safely with emergency situations during the transport of gases in bulk or in cylinders. To be used in conjunction with the ADG code.

**HB76:**

Dangerous Goods Initial Emergency Response Guide. Provides guidance for drivers, emergency services and others involved in the transport of dangerous goods, in dealing safely with emergency situations during the transport of gases in bulk or in cylinders. To be used in conjunction with the ADG code.

**HYDROCARBON:**

A chemical compound containing only hydrogen and carbon.

**HYDROSTATIC TEST REQUIREMENT:**

A hydrostatic pressure test is required at prescribed intervals to prove the integrity of a cylinder or vessel for continued use.

**IDHL:**

Immediately Dangerous to Health and Life.

The maximum concentration which would not cause any escape-impairing symptoms or irreversible health effects to a person exposed for 30 minutes.

**INERT:**

A material which does not react with other materials under normal temperatures and pressures.

**kPa (KILOPASCAL):**

Unit of pressure: 100kPa = 1 Bar.

One standard atmosphere = 101.325 kPa (absolute)



**LEL:**

Lower Explosive Limit.

The minimum percent by volume of gas which, when mixed with air, will form a flammable mixture.

**MOLE:**

The weight of a substance equal numerically to its molecular weight. A gram-mole is the weight in grams equal to the molecular weight.

**MOLECULAR WEIGHT:**

The sum of the atomic weights of the atoms in a molecule of an element or a compound.

**MSDS:**

Material Safety Data Sheet.

Used internationally to provide the information required to allow the safe handling of substances used at work.

**PARTIAL PRESSURE:**

The partial pressure of a gas in a mixture is the pressure that the gas would exert if it was present alone in the volume occupied by the mixture. The sum of the partial pressure of the individual gases is equal to the total pressure.

**PPB:**

Abbreviation for parts per billion.

**PPM:**

Abbreviation for parts per million.

**RARE GAS:**

Those components of air which together comprise less than 1%. Helium, Neon, Argon, Krypton and Xenon (also Radon which is an unstable element).

**SPECIFIC GRAVITY:**

The ratio of the weight of any volume to the weight of an equal volume of some other substance taken as the standard at stated temperatures. For gases the standard is air at 15°C.

**SPECIFIC HEAT:**

The amount of heat required to raise a unit weight of substance one degree of temperature at either constant pressure or constant volume.

**STEL:**

Short Term Exposure Limit.

A 15 minute TWA exposure which should not be exceeded at any time during a working day even if the eight-hour TWA average is within the TWA exposure standard. Exposure at the STEL should not be longer than 15 minutes and should not be repeated more than four times per day. There should be at least 60 minutes between successive exposures at the STEL.

**SUBLIMATION POINT:**

The temperature at which a solid converts to gas without the appearance of liquid.

**TLV:**

Threshold Limit Value.

TLV is a proprietary name registered by the American Conference of Governmental Industrial Hygienists (ACGIH) and refers to airborne concentrations of substances or levels of physical agents to which it is believed that nearly all workers may be repeatedly exposed day after day without adverse effect. It is often referred to as an exposure standard for atmospheric contaminants.

**TWA:**

Time Weighted Average:

The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five day working week.

**UEL:**

Upper Explosive Limit.

The maximum percent by volume of gas which, when mixed with air, will form a flammable mixture.

**VAPOUR PRESSURE:**

The pressure exerted by a vapour when a state of equilibrium has been reached between a liquid or solid and its vapour.