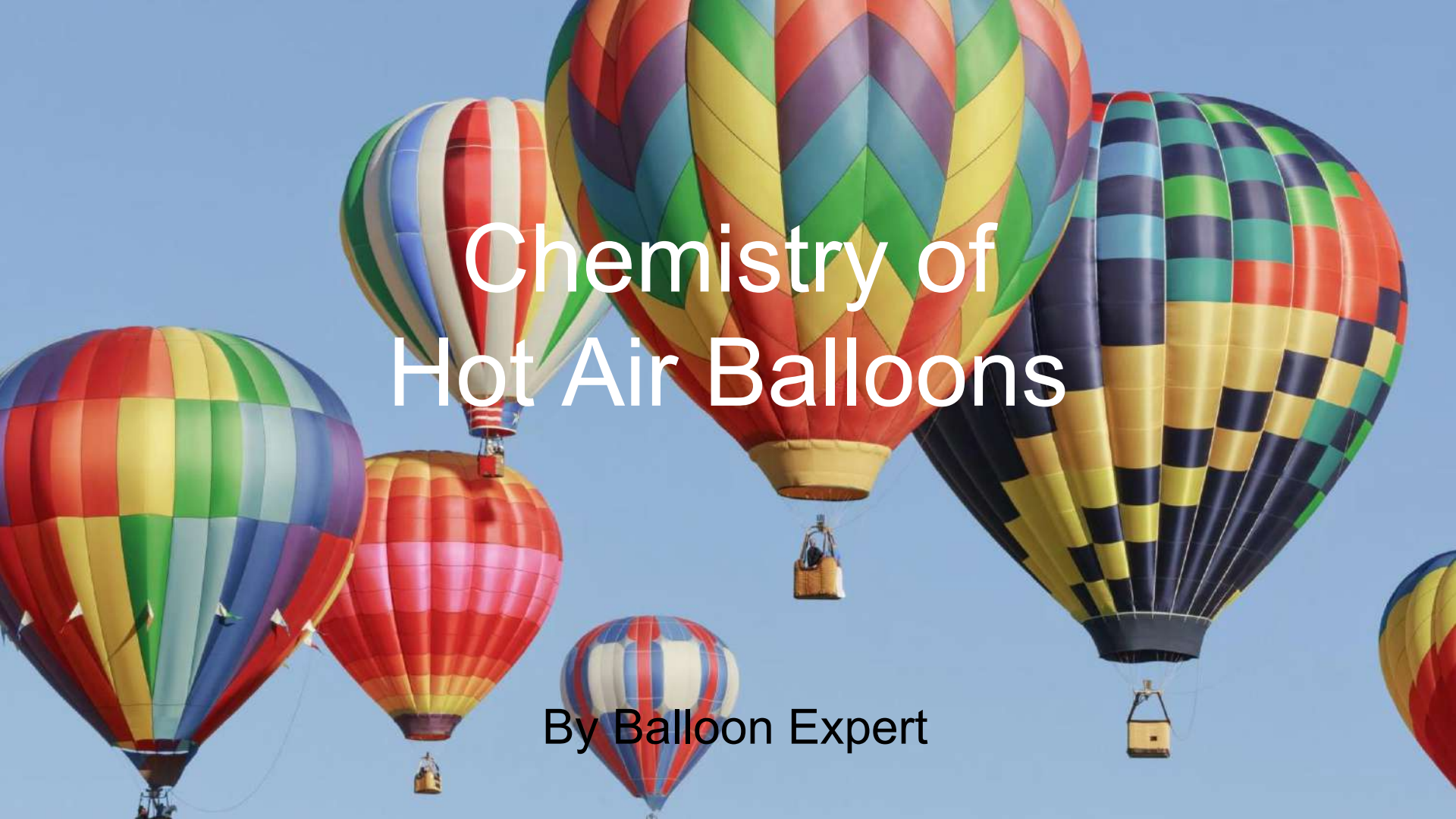
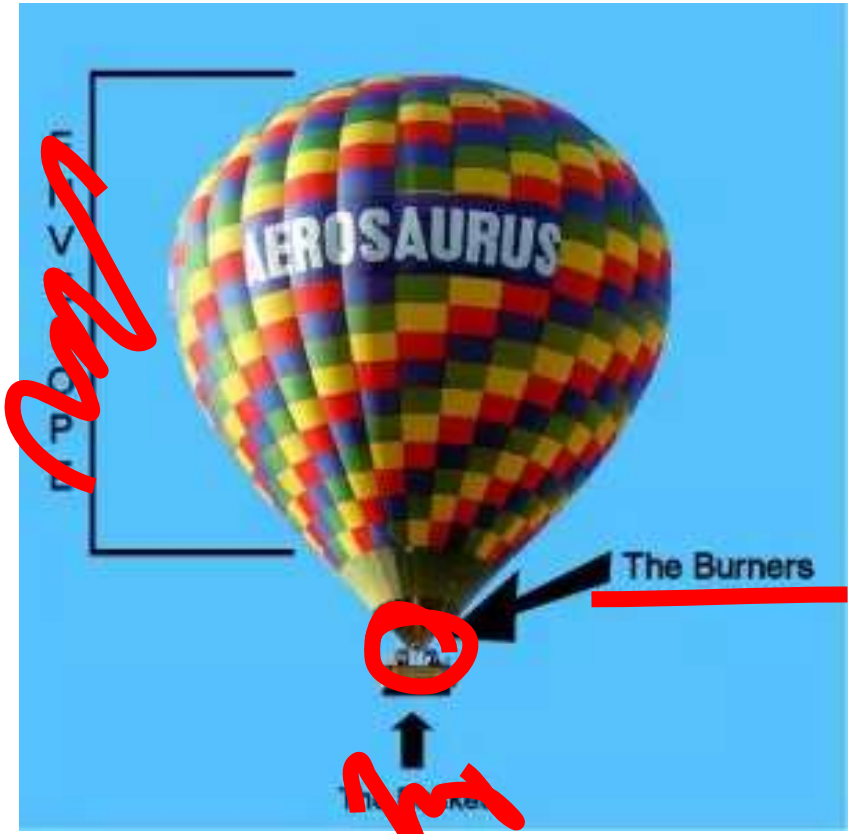


Chemistry of Hot Air Balloons

By Balloon Expert

Balloon

Basic Balloon Anatomy

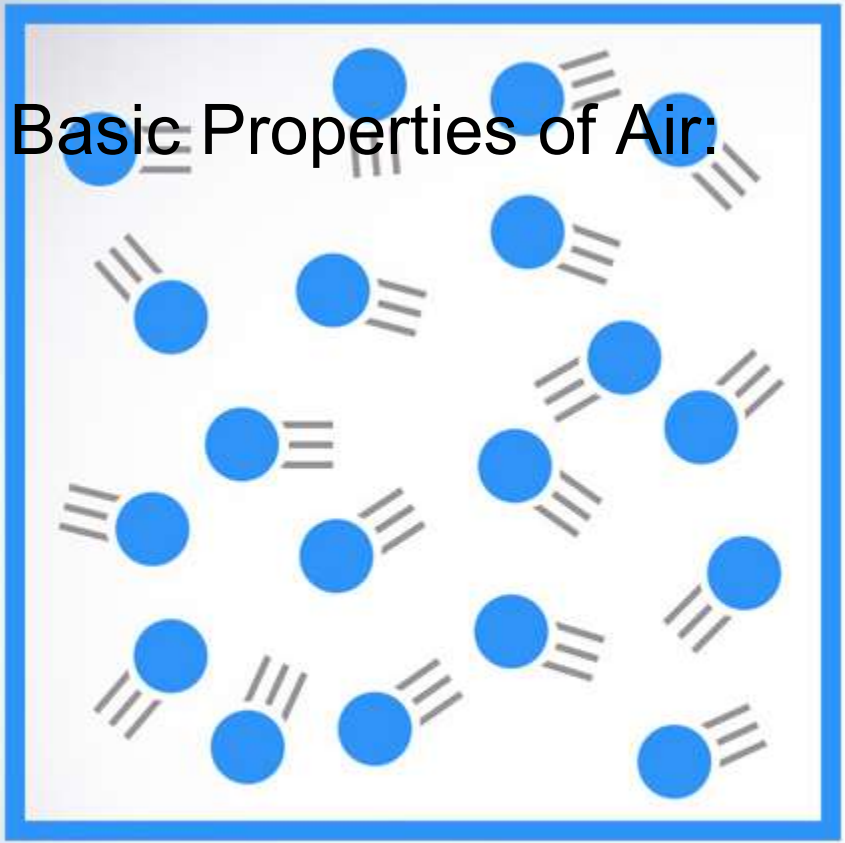


Burners

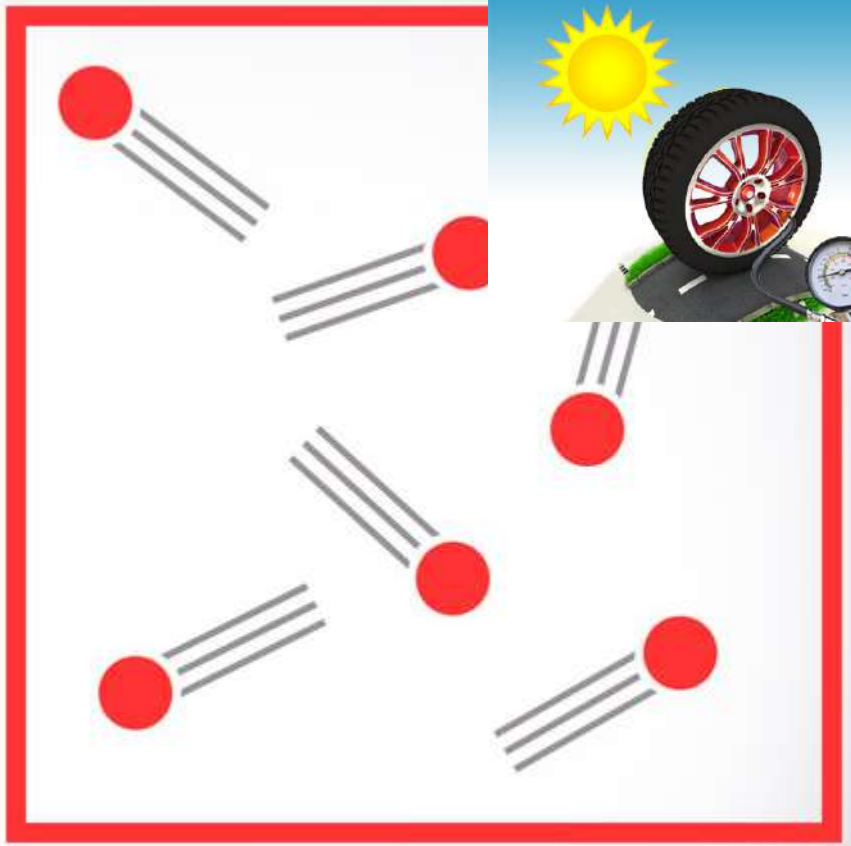
- Usually a double section, sometimes a triple or quadruple section for a more powerful burst.
- Heating coil

Air

Basic Properties of Air:



Cold Air



Hot Air

Charle's Law:

Gas substance does not matter when taking up volume, only temperature.

The amount of gas is directly proportional to its temperature.

$$V^1/T^1 = V^2/T^2$$

- Conditions being there is the same amount of gas and temperature.
- Not same gas


Hot

Propane

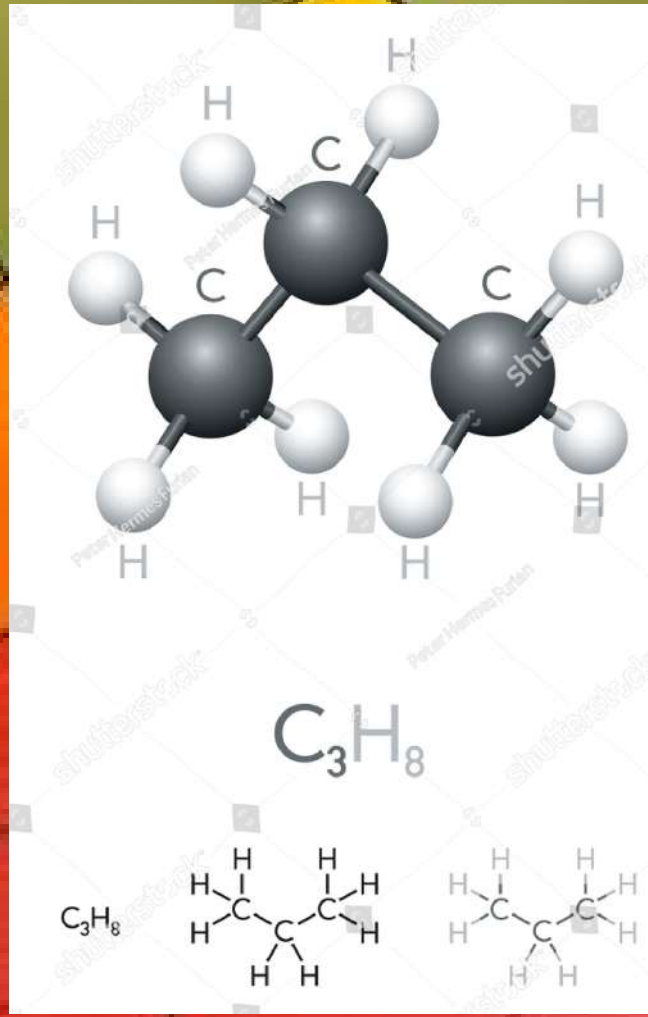
In tank is compressed and turned into a Liquid.

When released becomes a gas.

- Flammable

Balanced Equation:

$C_3H_8(g) + 5O_2(g) \rightarrow 3CO_2(g) + 4H_2O(l)$



Recap:

Hot

The propane and it's flammability (thank you burners) uses chemical reaction,

Air

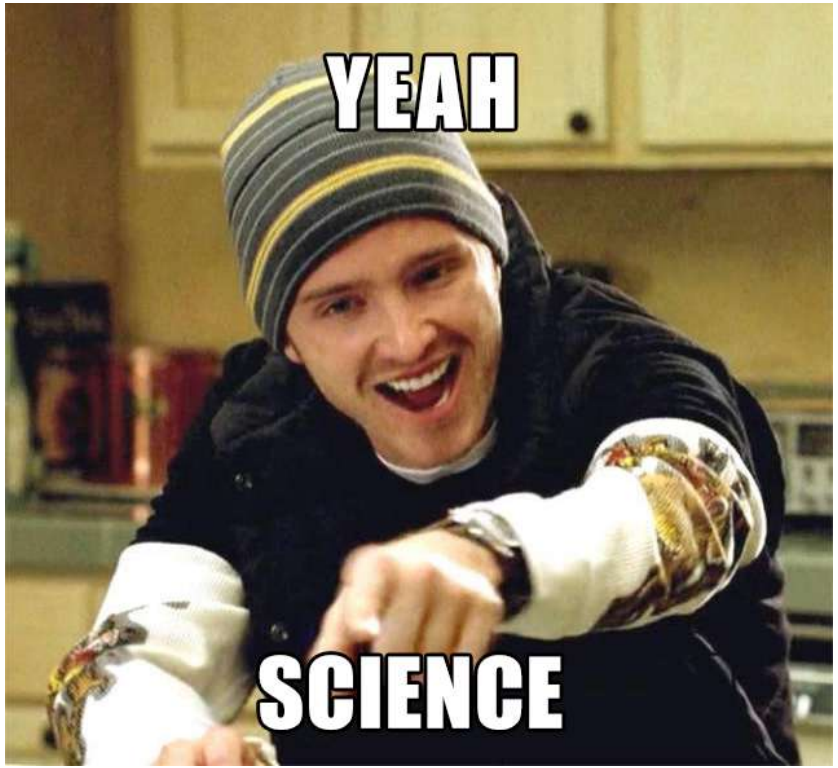
Pressure, with heat will expand taking up more volume with less molecules.

Balloon

The container, using the less dense air to be pulled upward.

Hot air balloons were first flown in over 200 years ago!
That is older than the first airplane.

End of Presentation



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