



## Types of gases for discharge lamps.

Any noble gas can be used to fill a lamp; even if the most known are neon and argon ESF wishes to increase the knowledge in this field providing a short list of other gases and their mixture with related peculiarities.

Neon 100%: famous as “liquid fire” in clear red units, or for coated tubing.

Argon 100%: For low-voltage fluorescent tubes and cold cathode lamps. Mercury vapour required. Not recommended for outdoor use.

Mixture 50% Argon 50% Neon: standard mixture for warmer climates; used in clear or fluorescent-coated tubing with mercury vapour.

K4 Cold Weather: The all-weather gas, from below-zero regions to the tropics: its high percentage of Neon in K4 provides the heat necessary to completely vaporize mercury under cold weather conditions. Mercury vapour requested.

Helium 100%: in clear glass tubes gives pale flesh-pink colour. Must be used at a lower pressure than normal (4-6 mm typically) as it's a high resistance gas. Recommended for preliminary bombarding, or for flushing-out repair units.

Krypton 100%: in clear glass, the colour could be described as platinum white. Should not be filled to pressures higher than 12 mm.

Xenon 100%: has a bluish colour, principally used in special effects for linear discharge, or for high-pressure flash tubes. This is a relatively high-resistance and very rare gas. Expensive.

Other mixtures:

Mixture 75% Neon 25% Argon

Mixture 80% Argon 20% Neon

Mixture 75% Krypton 25% Argon

Mixture 85% Neon 10% Argon 5% Krypton