Argon Encyclopedia Article

Argon

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Argon

Argon is a noble gas, one of the elements that make up Group 18 of the **periodic table**. Its **atomic number** is 18, its atomic **mass** is 39.948, and its chemical symbol is Ar.

Properties

Argon is a colorless, odorless, tasteless gas with a **density** of 1.784 grams per liter. Its melting point is -302.55°F (- 185.86°C) and its freezing point, -308.7°F (- 189.3°C). Argon is chemically inert.

Occurrence and Extraction

Argon is the third most abundant gas in the atmosphere, after **nitrogen** and **oxygen**. It makes up about 0.93% of the atmosphere. It is also found in very small amounts in the Earth's crust.

Discovery and Naming

Argon was discovered in 1894 by the English chemist John William Strutt (Lord Rayleigh) and the Scottish chemist **William Ramsay**. The element's existence had been predicted more than a century earlier by the English chemist and physicist **Henry Cavendish**. Cavendish had removed the two most abundant **gases**, nitrogen and oxygen, from air, but found that a very small amount of an unidentified gas still remained from the air. Unfortunately, he was not able to identify what that remaining portion was.

The name chosen by Rayleigh and Ramsay for the new element comes from the Greek word *argos*, meaning "lazy." They thought the name was a good one because the new element seemed too "lazy" to react with any other elements or compounds.

Uses

Argon is used to provide an inert atmosphere that will protect materials from reacting with oxygen or other gases. For example, the inside of a light bulb is often filled with argon. No **matter** how hot the filament inside the bulb gets, it will not react with argon. Argon is also used in welding to prevent the two **metals** being heated from reacting with oxygen before they join to each other.