

Linde Green Argon Produced with 100% Carbon-Free Energy



Energy generation from certified carbon-free energy sources like wind, solar, and hydro-electric provides electricity for the manufacturing process.

Striving to meet sustainability targets, seeking to reduce atmospheric pollutants, or being a steward for future generations are goals of most responsible companies today. Linde can help address those challenges.

Current Production Requirements

Argon makes up approximately 1% of the air you breathe. It requires a significant amount of energy to separate that argon from the other constituents that make up air and liquefy the gas needed to allow cost effective delivery. Production of a standard molecule of liquid argon results in carbon emissions from the energy producer.

How it Works

We can provide liquid argon certified as being produced from carbon free energy providing you with the knowledge that you are doing your part to help our environment

- → Linde purchases carbon-free power from certified sources
- → That carbon-free power is allocated to the production of specific products
- → The carbon footprint of those products is essentially carbon-free
- → An audited program tracks power sources and production allowing Linde to certify the liquid oxygen was produced with 100% carbon-free power

Traditional Industrial Gas Supply Chain



Traditional production of industrial gases utilizes energy from the grid to produce the product you need. Linde can ensure that energy is purchased from a non-carbon based source such as wind, hydro-electric or solar. Same argon, same quality specifications, same reliability just without the carbon footprint in the production process.

Supply Chain With Carbon-free Energy



^{*} no change to delivery mechanism using diesel- based fuels

Linde Green Argon Specifications

Purity Specification	Specification
Minimum Purity	<u>></u> 99.998%
Oxygen	<u><</u> 5 ppm
Nitrogen	<u><</u> 15 ppm
Moisture	<u><</u> 4 ppm
Hydrocarbon	<u><</u> 1 ppm
Hydrocarbons plus CO ₂	<u><</u> 2 ppm
CO ₂ e (in production)	<1kg/Mcf

Features

- → The same quality argon that you expect from Linde
- → The source of the energy used to produce the product is carbon-free
- → Audited process to ensure low carbon gas production

Standard Argon Specifications

Purity Specification	Specification
Minimum Purity	<u>></u> 99.998%
Oxygen	<u><</u> 5 ppm
Nitrogen	
Moisture	<u><</u> 4 ppm
Hydrocarbon	<u><</u> 1 ppm
Hydrocarbons plus CO ₂	<u><</u> 2 ppm

Benefits

- → Supports reduced carbon footprint strategies
- → Options for low carbon energy industrial gas sourcing
- → Meet low carbon demands of your customers
- → Same product reliability as standard argon

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