

Mixed Gases & Custom Blends

You can depend on LINWELD with complete confidence for all specialty gas mixtures. Our “Precision Blending System” is the latest in technology and guarantees a perfect mixture in every cylinder. At LINWELD Laboratories, our state-of-the-art gas analysis insures the highest quality specifications.

In addition to a complete line of EPA Protocol and NIST Traceable Mixtures, LINWELD offers four types of preparation tolerances: Primary Standards, Certified Standards, Unanalyzed Mixtures and Custom Blends.

Primary Standards

Primary Standards offer the highest accuracy and reliability available. These mixtures are recommended for critical calibrations and testing. Each mixture component is prepared gravimetrically on electronic, high-precision balances. All weights used on these balances are traceable to NIST. The accuracy obtained from this method exceeds the accuracy of most analytical instruments.

All source materials used in blending Primary Standards are stringently analyzed for purity. Typically, UHP or research purity materials are used. A signed certificate of analysis is supplied with each Primary Standard. Primary Standards are used as primary calibration standards in areas where the highest possible accuracy is required.

Certified Mixtures

Certified Mixtures are used for less demanding calibration requirements, as well as in industrial processes where the certified accuracy and tolerances are best suited to the operation. These mixtures are prepared, using qualified source materials, through a variety of methods including partial pressure and gravimetric filling on high load balances.

Tighter blend tolerances and analytical accuracies, as well as a certificate of analysis, are available upon request.

Unanalyzed Mixtures

Unanalyzed Mixtures are prepared through partial pressure or dynamic blending techniques and are guaranteed to be within the specified blend tolerance. These mixtures are used in applications which do not require analytical verification of component concentrations.

Linweld Mixture Specifications

Mixture Type	Concentration Range	Preparation Tolerance	Analytical Accuracy	Traceability
Primary Standard	10ppm - 999ppm	±5% Relative	±2% Relative*	NIST
	0.1% - 4.9%	±2% Relative	±1% Relative*	
	5.0% - 50%	±1% Relative	or 0.02% absolute whichever is smaller	
Certified Mixture	0.1ppm - 9.9ppm	±20% Relative	±5% Relative	NIST
	10ppm - 9.9%	±10% Relative	±2% Relative	
	10% - 50%	±5% Relative**	±2% Relative	
Unanalyzed Mixture	0.1% - 50%	±10% Relative	Not Analyzed	Not Applicable

* Certification accuracies for Hydrogen and Helium may vary because of their low molecular weight.

** Preparation tolerances may vary depending upon mixture components.

Custom Blends

LINWELD can “tailor” a gas blend to uniquely accommodate your special requirements. Whether it be a single cylinder or a high volume application, we can design a product just for you. By developing your product, we can eliminate unnecessary and costly analysis and define gas mixture specifications that will provide you with a quality product at optimum cost.

LINWELD is eager to discuss your individual Specialty Gas Needs!