



HiQ[®] 60 Specialty Gases. Consistency you can trust.



Background With calibration gas mixtures, the most important requirement is for an accurate reported value of the relevant component at time of use. Products with a limited shelf life can have significant impact with both accuracy and long-term usability, and often result in additional cylinder change-out and expensive system recalibration procedures. HiQ[®] 60 specialty gases from Linde remove these concerns by offering accurate, stable gas products with a full 60 months performance guarantee.

Description The product dimension of a specialty gas includes a minimum gas purity, compatible cylinder selection, and pre-filling preparation. With calibration mixtures, additional attributes revolve around Stability, Traceability, Accuracy, and Relative blend tolerance. These dimensions are the cornerstone in the manufacturing of every HiQ[®] 60 specialty gas. The result is our guarantee that HiQ[®] 60 specialty gases will offer flat-line stability for 60 months from date of final production.

HiQ[®] 60 Pure gases Linde offers a variety of high purity instrument carrier and purge gases with the HiQ[®] 60 performance guarantee.

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|----------------|--------------------------|
| Argon | Purity of 5.0 and higher |
| Carbon Dioxide | Purity of 4.0 and higher |
| Helium | Purity of 4.5 and higher |
| Hydrogen | Purity of 4.5 and higher |
| Nitrogen | Purity of 5.0 and higher |
| Synthetic Air | Purity of 4.0 and higher |

HiQ[®] 60 Calibration mixtures Standard HiQ[®] 60 Calibration mixtures are available with up to 5 non reactive components in a balance gas as listed above. Component levels range from part per million to percent levels. Available reactive components include carbon monoxide, carbonyl sulphide, mercaptans, hydrogen sulphide, nitric oxide, nitrogen dioxide and sulphur dioxide. Reactive mixtures requiring component levels below 1% are available through our SPECTRA-SEAL[®] programme. The use of alternate balance gases is subject to availability. Please contact your local Linde Sales office with your inquiry.

Manufacturing All HiQ[®] 60 specialty gases are manufactured and analysed using Linde quality assured manufacturing practices. With many calibration mixtures, tighter blend and relative analytical tolerances are available, subject to component request. Please contact your local Linde Sales office with your inquiry.

Certification Every HiQ[®] 60 cylinder is supplied with an individual product certificate. HiQ[®] 60 pure gas certificates will report conformance to purity level and impurity specifications. Each HiQ[®] 60 calibration mixture certificate states reported composition and required analytical and preparation tolerances.

Benefits

- 60 month shelf life reduces cylinder change requirements
- Flat-line stability ensures consistent results for each sample
- Individual certificate of analysis or conformance supplied with each HiQ® 60 cylinder ensures products meet customer requirements.

ISO Accreditation

HiQ® 60 specialty gases are supplied to the highest standard of quality assured by ISO 9001 standards. Many dedicated Linde specialty gas facilities are accredited to ISO 17025:2005, with various facilities following additional programmes such as;

- ISO Guide 34:2000 General requirements for the competence of reference material production
- ISO 6141 Requirement for certificates for calibration gas mixtures
- ISO 6142 Preparation of calibration gas mixtures by gravimetric method
- ISO 6143 Comparison methods for determining and checking the composition of calibration gas mixtures
- ISO 6144 Preparation of calibration gas mixtures by volumetric method



BASELINE® C 106/2, two stage cylinder regulator (purity up to 5.0) REDLINE® S 202 series gas supply panel (purity up to 6.0)

HiQ® Specialty Gases Equipment

The purity and consistency of your specialty gas can only be as good as your gas distribution system. Along with our BASELINE® regulators, and REDLINE® pressure regulating equipment, Linde offers a wealth of experience in the design and installation of complete gas supply systems which ensure that the quality of your gas is not compromised. Contact your local Linde representative to discuss an equipment option right for you, or to request a copy of our Equipment and Gas distribution systems catalogue.

HiQ® Specialty Gases

The specialty gases you use in your daily operations should of course meet your specific requirements. But they should also be available in a form and frequency that matches your needs. That's why you need a supply partner who truly listens and understands your company's business concerns. HiQ® is the global benchmark for quality and convenience in the specialty gases business today. With our product range and flexibility, HiQ® specialty gases meet the precise and varied requirements of all our customers.

HiQ® 60 Guarantee

Specialty gases supplied with a HiQ® 60 label will have flat line stability for 60 months from manufactured date. Linde will replace any HiQ® 60 product free of charge if found to be outside the stated certified tolerance variance at time of use, and is within the stated shelf life period.*

For ordering, please contact your local Linde supplier. Visit us at <http://hiq.linde-gas.com> or contact us directly: hiq@linde-gas.com.

* HiQ® 60 specialty gases must be connected using approved equipment and operated in a proper manner. Minimal content pressure of >10 bar must be present in cylinders returned to Linde. (Pressure requirements will vary based on original final fill pressure).

