



CERTIFICATE OF CONFORMANCE

Keen Compressed Gas Co. Quality Control Program, Enables Keen To Meet or Exceed the Minimum Specifications Listed For The Product Grades Named Below In Compliance With Standard Operating Procedures, Industry and/or Government Guidelines. The Product Grades Below Are Eligible To Be Received With A Certificate of Batch or Individual Cylinder Analysis Upon Request.

Helium (He)

	Balloon Grade	Zero ^{2,3,4}	Grade 4.7 ^{2,4}	Grade 5.0 ^{2,4}	Grade 5.5 ^{2,4}
Minimum Purity:	99.95	99.997	99.997	99.999	99.9995
Carbon Dioxide:	NT	NT	NT	Sum ≤ 0.5 ppm	Sum ≤ 0.5 ppm
Carbon Monoxide:	NT	NT	NT		
Hydrogen^{2,5}:	NT	≤ 1.0 ppm	≤ 1.0 ppm	≤ 1.0 ppm	≤ 1.0 ppm
Nitrogen²:	NT	≤ 5.0 ppm	≤ 5.0 ppm	< 4.0 ppm	≤ 1.0 ppm
Oxygen ²:	NT	≤ 3.0 ppm	≤ 3.0 ppm	≤ 1.0 ppm	≤ 0.5 ppm
Odor:	NT	None	None	None	None
Total Hydrocarbon ²:	NT	≤ 0.5 ppm	≤ 1.0 ppm	≤ 0.5 ppm	≤ 0.2 ppm
Moisture ²:	NT	≤ 3.0 ppm	≤ 3.0 ppm	≤ 1.0 ppm	≤ 1.0 ppm
Dew Point:	-72°F	-92°F	-92°F	-101°F	-101°F
Boiling Point	-452°F	-452°F	-452°F	-452°F	-452°F
CGA Connection:	580	580	580	580	580
Lot Label Tracking:	No	Yes	Yes	Yes	Yes
Reference Item No:	HE2	RSG 217	RSG 218	RSG 220	RSG 221
TECHNICAL					
UN ID:	1046		Molecular Weight:		4 g/mol
DOT Classification:	2.2 Non-Flammable Gas		Specific Volume:		96.7 cf/lb
DOT Ship Name:	Helium, Compressed			CAS NO:	7440-59-7

Notes:

1. NT – Not Tested
2. Certificate of Analysis Specification Results Available Upon Request
3. Zero Grade Refers to Total Hydrocarbon Less Than 0.5 ppm
4. Meet MIL-PRF-27407B Specification
5. Specification Based on CGA Bulk Standards, Actual Results Excluded From Conformance Guarantee