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## CERTIFICATE OF CONFORMANCE

Keen Compressed Gas Co. Is Accredited to the ISO/IEC 17025:2017 Testing and Calibration Laboratory Standard. Keen's Quality Management System, Enables Keen to Provide the Highest Level of Testing, Calibration, and Traceability to Meet or Exceed the Minimum Specifications Listed for the Helium Grade Requested.

### Helium (He)

	Balloon Grade	Grade 4.7 <sup>4,6</sup>	Grade Zero <sup>3,4,6</sup>	Grade 5.0 <sup>4,6</sup>	Grade 5.5 <sup>4,6</sup>
<b>Minimum Purity:</b>	99.95	99.997	99.997	99.999	99.9995
<b>Carbon Dioxide<sup>5:</sup></b>	NT	≤ 1.0 ppm	≤ 1.0 ppm	≤ 1.0 ppm	≤ 1.0 ppm
<b>Carbon Monoxide<sup>5:</sup></b>	NT	≤ 1.0 ppm	≤ 1.0 ppm	≤ 1.0 ppm	≤ 1.0 ppm
<b>Hydrogen<sup>2,5:</sup></b>	NT	≤ 1.0 ppm	≤ 1.0 ppm	≤ 1.0 ppm	≤ 1.0 ppm
<b>Nitrogen<sup>2:</sup></b>	NT	≤ 5.0 ppm	≤ 5.0 ppm	< 4.0 ppm	≤ 1.0 ppm
<b>Oxygen<sup>2:</sup></b>	NT	≤ 3.0 ppm	≤ 3.0 ppm	≤ 1.0 ppm	≤ 0.5 ppm
<b>Odor<sup>2:</sup></b>	NT	None	None	None	None
<b>Total Hydrocarbon<sup>2:</sup></b>	NT	≤ 1.0 ppm	≤ 0.5 ppm	≤ 0.5 ppm	≤ 0.2 ppm
<b>Moisture<sup>2:</sup></b>	NT	≤ 3.0 ppm	≤ 3.0 ppm	≤ 1.0 ppm	≤ 1.0 ppm
<b>Dew Point:</b>	-72°F	-92°F	-92°F	-101°F	-101°F
<b>Boiling Point:</b>	-452°F	-452°F	-452°F	-452°F	-452°F
<b>CGA Connection:</b>	580	580	580	580	580
<b>Lot Label Tracking:</b>	No	Yes	Yes	Yes	Yes
<b>Reference Item No:</b>	HE2	RSG 218	RSG 217	RSG 220	RSG 221
TECHNICAL INFORMATION					
<b>UN ID:</b>	1046		<b>Molecular Weight:</b>	4 g/mol	
<b>DOT Classification:</b>	2.2 Non-Flammable Gas		<b>Specific Volume:</b>	96.7 ft <sup>3</sup> /lb.	
<b>DOT Ship Name:</b>	Helium, Compressed		<b>CAS NO:</b>	7440-59-7	

#### Notes:

1. NT – Not Tested
2. Certificate of Batch or Individual Analysis Specification Results Available Upon Request
3. Zero Grade Refers to Total Hydrocarbon Less Than 0.5 ppm
4. Meets MIL-PRF-27407D & BB-H-1168C, Type 1, Grade A and B Specification
5. Specification Based on Raw Material Conformance to CGA G9.1 Type 1, Grade L, N, P Specifications
  - a. May Include Trace Argon Levels Not to Exceed 3 ppm
  - b. May Include Trace Neon Levels Not to Exceed 23 ppm
  - c. Actual Results Excluded from Conformance Guarantee
6. Meets AWS A5.32 (ISO 14175)-I2-He