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 P: (800) Keen-Gas

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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 ^{4,6}	Grade Zero ^{3,4,6}	Grade 5.0 ^{4,6}	Grade 5.5 ^{4,6}
Minimum Purity:	99.95	99.997	99.997	99.999	99.9995
Carbon Dioxide^{5:}	NT	NT	NT	≤ 1.0 ppm	≤ 1.0 ppm
Carbon Monoxide^{5:}	NT	NT	NT	≤ 1.0 ppm	≤ 1.0 ppm
Hydrogen^{2,5:}	NT	NT	NT	≤ 1.0 ppm	≤ 1.0 ppm
Nitrogen^{2:}	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^{2:}	NT	None	None	None	None
Total Hydrocarbon^{2:}	NT	≤ 1.0 ppm	≤ 0.5 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 218	RSG 217	RSG 220	RSG 221
TECHNICAL INFORMATION					
UN ID:	1046		Molecular Weight:	4 g/mol	
DOT Classification:	2.2 Non-Flammable Gas		Specific Volume:	96.7 ft ³ /lb.	
DOT Ship Name:	Helium, Compressed		CAS NO:	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, Type 1, Grade A Specification
5. Specification Based on Raw Material Conformance to CGA QVL Grades (N&P) per CGA G.9.1-2018
 - a. May Include Trace Argon Levels Not to Exceed 1 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