




**SOUTHWEST GAS CORPORATION**  
**ENGINEERING STAFF**  
**MATERIAL SPECIFICATION**

<b>Section No.:</b>	MS O-35
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<b>Issue Date:</b>	03/01/16
<b>Superseded Date:</b>	01/20/15

Prepared By: Engineering Staff 

Approved By: Jerome T. Schmitz 

**MISCELLANEOUS**  
Compressed Breathing Air

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**1. SCOPE**

This specification covers compressed breathing air for human respiration.

**2. APPLICABLE DOCUMENTS**

- 2.1 American National Standard Institute (ANSI)/Compressed Gas Association (CGA) G-7.1, 1989, "Commodity Specifications for Air."
- 2.2 United States Department of Transportation (DOT), Code of Federal Regulations (CFR), Title 49, Part 192, "Transportation of Natural and Other Gas by Pipeline; Minimum Safety Standards."

**NOTE:** Unless otherwise specified, the editions of the above documents incorporated by SOT 49 CFR 192 are applicable. Documents not incorporated by DOT 49 CFR 192 will be the most recent edition.

**3. TERMINOLOGY**

**3.1 General**


- 3.1.1 "Southwest Gas," "Southwest" or "SWG" wherever used in this specification and other related documents will refer exclusively to Southwest Gas Corporation.
- 3.1.2 The terms "approved," "as approved," "satisfactory," "as directed," "or equal" or other similar terms wherever used in this specification and other related documents will mean "as determined by Southwest Gas," unless specifically stated otherwise.
- 3.1.3 "Product Information Package" or "PIP" wherever used in this specification and other related documents will mean the required technical product information that a manufacturer must submit to Southwest to determine if the product is suitable for use by Southwest, unless specifically stated otherwise.



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**4. MATERIALS AND MANUFACTURING**

The compressed breathing air covered by this specification shall meet the minimum requirements for Type I, Grade D Gaseous Air as described in ANSI/CGA G-7.1.

**5. PERFORMANCE REQUIREMENTS**

The supplier will assure, with appropriate testing and written documentation, the quality of the specified type and grade of air.

**6. INSPECTION**


- 6.1 Successful review of the Product Information Package (PIP), as well as any future reference by SWG to the Seller's part number or internal code number in any future contract or purchase, will mean only that no conflict with the specification was found, and will not relieve the Seller from meeting all the requirements of this specification.
- 6.2 SWG retains the option to inspect the manufacture and testing of any and all materials, products or systems referenced in this specification that are sold to SWG.
- 6.3 SWG will make appropriate inspections and tests of any and all materials, products or systems supplied to this specification. SWG will have the right, at their option, to reject any material which fails to conform to this specification. Any such rejection may take place at the manufacturer's facility; the supplier's warehouse or any subsequent delivery location, before or after SWG assumes possession. Notice of the rejection will be made promptly to the supplier by SWG. The defective product will be replaced or returned for credit at the manufacturer's expense.
- 6.4 Any changes in the manufacturing of previously-approved materials, products or systems described in this material specification for sale to SWG, must be approved by SWG's Engineering Staff. **Failure to obtain SWG's approval may be cause for rejection and disqualification as an approved supplier.**



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**7. CERTIFICATION**

The manufacturer's or supplier's certification shall be furnished to Southwest. This certification shall state that samples representing each lot have been manufactured, tested and inspected in accordance with this specification and that requirements have been met. When requested or specified in the purchase order or contract, a report of test results will be provided.

Upon the request of Southwest, the certification of an independent third party indicating conformance to the specification may be considered at Southwest's expense.

The manufacturer's or supplier's Certificate of Analysis that the breathing air meets the requirements for Grade D breathing air will be furnished to SWG. The Certificate will be furnished with each delivery or in another manner proposed by the manufacturer or supplier that has been approved by SWG.

**8. SAFETY DATA SHEETS**

In accordance with law, the Seller will supply Safety Data Sheets for all applicable items supplied under this specification to the following:


- 1) The Receiving Location
- 2) Engineering Staff
- 3) Southwest Gas Corporation  
Corporate Safety  
Mail Station LVA-120  
P.O. Box 98510  
Las Vegas, NV 89193-8510



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**9. PRODUCT MARKING**

- 9.1 All cylinders of Compressed Breathing Air, rented or purchased shall be labeled in the following manner:
- A single permanently-affixed label (usually located on the cylinder neck) with the vendor's name and the words "Compressed Breathing Air," or a combination of "Compressed Air" and "Breathing Air," or "Breathing Quality," or
  - Two labels, one with the vendor's name and the words "Compressed Air," and a small square or rectangular label with the words "Warranted for Breathing."
- 9.2 Any labeling to identify the cylinders' contents other than those listed above shall be submitted to SWG Staff Safety for approval prior to use.

**11. PACKAGING AND PACKAGE MARKING**

Cylinders containing compressed breathing air shall be predominantly yellow in color.

**12. PRODUCT TESTING AND VERIFICATION**


- 12.1 The supplier will ensure that cylinders of breathing air provided to SWG have been tested for oxygen content. Cylinders must be tested as follows:
- Testing of a representative sample of cylinders filled simultaneously on a common manifold for those filled from a breathing air compressor.
  - Testing of 100 percent of the cylinders filled by the blending of nitrogen and oxygen (e.g., manufactured gas process).



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**12. PRODUCT TESTING AND VERIFICATION (Cont'd)**

12.2 Every cylinder of compressed breathing air delivered to a SWG facility must contain a tag or label with the following information:

- The results of the oxygen analysis (% oxygen).
- The date the analysis was conducted.
- The identification of the technician who conducted the analysis.