

What is Grade-D Air Quality?

Breathing air quality standards have been developed by ANSI/Compressed Gas Association (CGA) G-7.1 - 1989, and adopted by OSHA under their respiratory standard 29 CFR, 1910.134 (i) (1) (ii).

Air Quality Must Meet the Following Requirements:

- Oxygen: 19.5%-23.5% (20%-22% Canada)
- Hydrocarbon (condensed oil): 5 mg/m³ maximum (<1 mg/m³ in Canada)
- Carbon Monoxide (CO): 10 ppm maximum (5 ppm in Canada)
- Carbon Dioxide (CO₂): 1000 ppm maximum (500 ppm in Canada)
- Odor: No noticeable odors, tastes, or smells
- Water Content:
 - High pressure cylinder air** must have a dew point of at least -50°F (-45.6°C) at 1 atmosphere (14.7 psi).
 - Low pressure breathing air** must have a dew point of at least 10°F (5.56°C) below the ambient temperature at 1 atmosphere (14.7 psi)
 - Canada:** 5°C below lowest temperature, 27 ppm maximum water vapor
- Total Volatile Hydrocarbons (Canada): 5 ppm maximum



Elements of a Type-C/CE Supplied Air System

All airline respirators are Type-C or Type-CE.

CE designates an airline respirator approved for abrasive blasting.

Note: Type-C/CE is a NIOSH designation for an air supplied breathing air respirator system.



A Type-C/CE system consists of the following components:

Compressed Air Source

Electric / Gas / Diesel Compressor or Compressed Air Cylinder(s)



Filtration

Grade-D Breathing Air with Carbon Monoxide Monitoring (Portable or Fixed System)

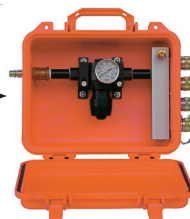


or



Air Distribution

Consists of: Air Pressure Regulator, Pressure Gauge, Safety Relief Valve, and Approved Respirator Couplings. The Assembly is Called the Point of Attachment (POA)



Respirator

From the Point of Attachment (POA), Maximum 300 Feet of NIOSH Approved Breathing Air Hose with Approved Couplings



Using Cylinder Air



Cylinder Air Must Be Grade-E Air Quality



Air Distribution