Technical Brief



Selecting gas that is optimized and tested for your detector and sensors is key to performance.

Portable instrument calibration and testing requires use of a known concentration or mixture of gas that can reliably achieve calibration performance accuracy and consistency. These criteria are necessary not only for the life of your sensors but also for the duration of your gas cylinders. Many options are available to users for evaluation and use of test gases to perform successful calibration and bump testing. When choosing a test gas, it is important that the gas or mixture is certified to contain the desired mixture, and possesses the stability to perform consistently throughout the calibration cylinder's life.

Use of correct and consistent gas mixtures supports an effective instrument program; although MSA manufacturer's instructions do not preclude use of non-MSA calibration gas, several considerations comprise selection and implementation of calibration gases.

### MIXTURE RELIABILITY

All gases should be manufactured and mixed to a National Institute of Standards and Technology or **NIST**traceable standard to ensure precise gravimetric methodology and purity analysis.\* MSA's broad selection of calibration gas and accessories is manufactured and tested to this highest of industry standards. All MSA calibration gas cylinders are supplied with individual Certificate of Analysis and MSDS (Material Safety Data Sheet).

# CERTIFICATE

We certify that the gas mixture in this cylinder was prepared gravimetrically using N.I.S.T. traceableweights. The lotnum ber and nominal value of the gas constituents in percent by volume, percent by mass, PPM mass or volume are specified on the cylinder. The uncertainty statement of the specified nominal value is also listed. MSA Quality Assurance

### EASIER DIAGNOSTICS

Many sensor or calibration errors can be traced to use of incorrect or unreliable calibration gas, potentially resulting in an incorrect assumption of fault with your detector or sensors. Although many potential causes for failed calibration exist such as sensor drift, atmospheric inhibitors, poisons, or possible detector or sensor issues, use of a known, quality calibration gas can eliminate certain variables when evaluating instrument concerns.

## WARRANTY

All MSA calibration gas is covered by manufacturer's warranty. Although the inherent instability of certain mixtures dictates a shorter warranty period, all MSA calibration gas cylinders offer warranties ranging from six months to two years.





#### **RFID (RADIO FREQUENCY IDENTIFICATION**)

Nearly all MSA portable instrument gas cylinders are equipped with an RFID tag that is identified by MSA's GALAXY<sup>®</sup> GX2 Automated Test System's electronic cylinder holder. RFID technology identifies cylinder part number, gas mixture, lot number, and expiration date for the GALAXY GX2 Test System, eliminating the need for programming the test stand with gas or cylinder information. RFID wireless technology is an invaluable tool for gas detector fleet management. When used with calibration cylinders for gas detector fleets, RFID technology and software offer convenient setup, record-keeping, automatic cylinder recognition, and expiration warnings, as the system can monitor status of multiple cylinders simultaneously.



#### ENVIRONMENTALLY AND COMMUNITY FRIENDLY

MSA's calibration gas recycling program helps a non-profit organization; MSA and non-profit Association of Retarded Citizens (ARC) of Butler County (Pennsylvania) have established a Cylinder Recycling Center. Empty MSA

calibration cylinders can be de-valved, shipped in a custom package supplied by MSA and salvaged by the ARC for proper disposal in accordance with local regulations. Proceeds generated are managed by and benefit the ARC. \*\*

\*\* http://www.arcbutler.org/#/Home

For more information concerning MSA calibration gas cylinders, accessories and calibration test systems, visit www.msasafety.com.

Note: This bulletin contains only a general description of the products shown. While uses and performance capabilities are described, under no circumstances shall the products be used by untrained or unqualified individuals and not until the product instructions including any warnings or cautions provided have been thoroughly read and understood. Only they contain the complete and detailed information concerning proper use and



ID 0800-89-MC / March 2014 © MSA 2014 Printed in U.S.A.

care of these products.

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