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Portable Ventilation Systems

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ANSI/AIHA Z9.9–2010

American National Standard — Portable Ventilation Systems

Secretariat

American Industrial Hygiene Association®

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FOREWORD

This Standard describes fundamental good practices related to the design, manufacture, labeling, use and application, as well as maintenance and testing of portable ventilation systems used for the control of airborne contaminants or environmental conditions. Intended users of this Standard include owners of facilities, designers and manufacturers of portable ventilation equipment, employers, industrial hygienists and safety professionals, maintenance personnel, and end users. This Standard is compatible with other recognized standards of good practice.

This Standard is new. It intends to address a long-standing need in the ventilation arena. Portable ventilation is a broad and complex subject. Much of what applies to portable ventilation systems does not apply to fixed (in-place) systems and vice versa. Use of portable ventilation equipment occurs in many applications: confined space (sewer) entries; collection of welding plumes; maintaining negative pressure in structures during asbestos, lead, and mold remediation; and controlling emissions from spray painting and abrasive blasting, to name just a few.

This equipment is usually unobtrusive, often just another piece of clutter in surroundings crowded with other portable and mobile equipment and tools.

The environment in which much of this equipment is used is rough and tumble. These units can be used in any kind of condition and unpleasant weather. They can be thrown or kicked in frustration, dropped off trucks, and accidentally run over. These types of units require solid construction. Thus, design and fabrication may require incorporation of subtle features such as abuse-tolerant bonding from the electrical box to the frame to the ground connection through the electrical cord. Safety features must provide reliable protection in situations of high abuse.

Portable equipment comes in all shapes and sizes, ranging from the home built to the shop built to the factory built, and the utilitarian to the elegant. Very little, if anything, exists in standard textbooks on ventilation about this subject. Yet, the subject is far more complicated than meets the eye of the casual observer.

The Standard is presented in a two-column format. The left column presents requirements of the Standard; the right column clarifies and explains the requirements and provides information on how to comply with them.

Appendices supplement information provided in the Standard.

This Standard presents minimum requirements adaptable to the needs of the user establishment. Demonstrably equal or better approaches are acceptable. When deviating from the Standard, the responsible agent should provide documentation.

Suggestions for improvement of this Standard are welcome. The Committee will carefully consider all comments and suggestions. Please send comments to: Scientific and Technical Initiatives, AIHA®, 2700 Prosperity Avenue, Suite 250, Fairfax, VA 22031.
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The Z9 Accredited Standards Committee on Health and Safety Standards for Ventilation Systems prepared, processed, and approved this Standard for submittal to ANSI. Committee approval of the Standard does not necessarily imply unanimity among all members of the Committee. At the time of approval, the Z9 Committee had the following members:

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