



Standard Practice for Confined Area Entry¹

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1. Scope

1.1 This practice covers recognized procedures necessary to protect the health and safety of workers required to enter confined spaces. These procedures are particularly applicable to entry into the confined areas associated with the use of halogenated organic solvents.

1.2 Confined areas addressed in this practice include, but are not limited to: vapor degreasers, cold cleaning tanks, storage vessels, tank cars and trucks, van trailers, ships or barges, pits or sumps, and unventilated rooms.

1.3 This practice does not necessarily address entry into all confined spaces nor does it address the decision strategy involved in requiring such entry.

1.4 Although this practice describes specific safety steps to be taken for entry into confined spaces, it is not intended to preclude the use of any additional measures that may be deemed necessary for a particular situation.

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

CFR 1910.146 U.S. Department of Labor, Occupational Safety and Health Standards, Permit-Required Confined Spaces

3. Summary of Practice

3.1 Confined area entry refers to the entering of any tank, vessel, sump, pit, duct, tank car, tank truck, van trailer, or enclosed space in which there has been, or may have been chemicals, chemical vapors, or a lack of ventilation.

4. Significance and Use

4.1 Vapor inhalation is the primary hazard encountered in the use of chlorinated solvents. The greatest potential for over exposure to these solvent vapors occurs where the employee is

exposed to the high concentrations of vapor that may be found in enclosed areas. The seriousness of this hazard is often underestimated by those performing this type of work.

4.2 This practice is designed for use by employers in developing their own specific standards for vessel or enclosed area entry.

4.3 Many of these areas are considered as permit-required confined spaces as defined by OSHA (29 CFR 1910.146). The determination of the applicability of these requirements is the responsibility of the user.

4.4 This practice represents the minimum requirements for entry into any confined spaces containing halogenated solvents.

4.5 This practice does not address all of the requirements contained in the OSHA confined spaces standard. Development and implementation of training programs, recordkeeping, and other additional requirements of the OSHA standard are the responsibility of the user.

5. Procedure

5.1 All personnel working in confined areas should be properly trained in safe entry and rescue procedures. They should have a working knowledge and understanding of the hazards that may exist.

5.2 *Entry Permit*—Entry into confined spaces should be by written entry permit, issued by the responsible supervisor or other qualified person. The purpose of the entry permit is to ensure that a checklist of precautions has been reviewed prior to entry. This permit is an authorization, and approval in writing certifying that all existing hazards have been evaluated and necessary protective measures have been taken to ensure the safety of the worker. The permit should be valid for a limited time only, (usually an 8 or 10-h shift) and issuance of a new permit required in the event of any job interruption or any indication of changes in job conditions. Issuance of the entry permit should address all of the following considerations.

5.3 *Vessel Preparation:*

5.3.1 *Isolation*—All process lines exiting or entering the confined space should be disconnected, capped off, and blinded. Closing of valves alone is *not* adequate protection.

5.3.2 *Lockout*—Pumps, connected to the enclosed area, or any other mechanical or electrical equipment (particularly conveyors) are to be locked out by locking the main electrical switch in the “OFF” position.

5.3.3 *Cleaning*—The space should be cleared, flushed, or

¹ This practice is under the jurisdiction of ASTM Committee D-26 on Halogenated Organic Solvents and Fire Extinguishing Agents and is the direct responsibility of Subcommittee D26.05 on Industrial Hygiene.

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