



Material Safety Data Sheets (MSDS)

A Material Safety Data Sheet (MSDS) contains information (e.g., chemical composition, associated hazards, handling precautions, personal protective equipment requirements) describing the hazardous chemical. Having a complete inventory of MSDS is essential to a successful Hazard Communication (HAZCOM) Program.

MSDS Sections

<ul style="list-style-type: none">◆ Identification◆ Hazard(s) identification◆ Composition/information on ingredients◆ First-aid measures◆ Fire-fighting measures◆ Accidental release measures◆ Handling and storage◆ Exposure controls/personal protection	<ul style="list-style-type: none">◆ Physical and chemical properties◆ Stability and reactivity◆ Toxicological information◆ Ecological information◆ Disposal considerations◆ Transport information◆ Regulatory information◆ Other information
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Chemical manufacturers and importers must prepare a MSDS for each product containing hazardous chemicals. The manufacturer is also responsible for providing a copy of the MSDS with each product. If one is not provided with the product, contact the manufacturer to obtain a copy. Employees must receive training on the location of the MSDSs in the office, on each MSDS applicable to their job and on how to effectively use the MSDS.

The Occupational Safety and Health Administration's (OSHA) HAZCOM Standard requires that employers maintain a MSDS for every hazardous chemical in the dental office. For example, if an office is using two brands of disinfectants, two separate MSDS are necessary—one for each product used. OSHA does not specifically prohibit any form of access to MSDSs as long as "no barriers to immediate employee access in each workplace" exist. Electronic access to MSDS information is acceptable; however, a back-up system is required and several items must be considered. (If considering electronic access for MSDSs, see page 3.) AFI 90-821 (Hazard Communication) states that MSDS back-up systems may include, but are not limited to, paper copies, CDs at another non-impacted location, telephone, fax, or access through a nearby HAZMART or Bioenvironmental Engineering Flight. AFI 90-821 further states that local judgment must be used to determine an adequate back-up system on a case-by-case basis in case primary computer access is disrupted. For example, if a telephone service is selected for back-up, it must meet all OSHA requirements and a paper copy of the MSDS must be provided as soon as possible after the request; verbal transfer of hazard information over the phone alone is not acceptable. In some instances local policy may be more stringent, so as always, ensure that your MSDS program is consistent with local base policy.



OSHA requires that the MSDS is readily accessible and has defined “readily accessible” as “immediate.” Furthermore, OSHA cautions users about completely relying on “paperless” systems and states that users “may want to maintain paper copies as a back up in case of system failure or an inability to readily access the data.” Therefore, if choosing an electronic system as your primary access to MSDSs, it may be prudent for USAF clinics to maintain a notebook containing paper copies of all MSDSs as a backup to ensure immediate employee access at all times (e.g., during a power outage, during computer system disruptions).

MSDS in a Nutshell

Chemical Manufacturer/Importer Responsibilities	Employer Responsibilities
<ul style="list-style-type: none"> ◆ Prepare a MSDS for each product containing hazardous chemicals ◆ Provide a copy of the MSDS with each product 	<ul style="list-style-type: none"> ◆ Maintain a MSDS for every hazardous chemical in the office ◆ If a MSDS is not provided with a product, the employer must obtain one ◆ Make MSDS readily available to all employees ◆ Provide training to employees on <ul style="list-style-type: none"> - how to find the MSDS (location in the office) - each MSDS applicable to their job - how to read/use the MSDS

Selected References and Additional Resources

Air Force Instruction 90-821: Hazard Communication (30 March 2005 with changes 28 February 2007). Available at www.e-publishing.af.mil. Accessed November 2007.

Cooley R, Cottone JA, Molinari JA. The Hazard Communication Standard and Dentistry. In Cottone JA, Terezhalmay GT, Molinari JA, eds. *Practical infection control in dentistry*, 2nd ed. Baltimore: Williams & Wilkins, 1996:330–340.

Miller CH, Palenik CJ. Managing Chemicals Safely in the Office. In: Miller CH, Palenik DJ, eds. *Infection Control and Management of Hazardous Materials for the Dental Team*, 3rd ed. St. Louis: Mosby: 2005:383–387.

US Department of Labor, Occupational Safety and Health Administration. 29 CFR 1910.1200. Hazard communication. Federal Register 1994;59:17479.

US Department of Labor, Occupational Safety and Health Administration. Recommended Format for Material Safety Data Sheets (MSDSs). Available at www.osha.gov/dsg/hazcom/msdsformat.html. Accessed November 2007.

Material Safety Data Sheets

According to OSHA if electronic access to MSDSs is chosen you must ensure that there are “no barriers to immediate employee access in each workplace.” Electronic access to MSDS information is acceptable, however a back-up system is required and several items must be considered.

Items to Consider Before Going “Paperless”

If considering electronic access for MSDSs.....	When selecting a company to provide electronic MSDS access.....
<ul style="list-style-type: none"> • ACCESS - Does everyone have immediate access to a computer? - If a CAC card is needed, is it always available and does it work on all computers in the building? - Is the MSDS information up-to-date in the electronic database—do all MSDSs match the date/lot number for all chemicals used? - Is a working printer available to print a copy of the MSDS to take when the individual goes for medical treatment/follow-up or to provide to emergency response personnel? • BACK-UP - Does the back-up system meet all OSHA HAZCOM requirements? • COMMUNICATION/TRAINING - Is everyone trained to locate the MSDS information on the computer and use it appropriately? 	<ul style="list-style-type: none"> - Does the product meet the OSHA HAZCOM requirements for MSDS format and access? - Is the MSDS program reliable? How often is the MSDS information updated? - Who is responsible for updating the information—you or the company? - Is the program easy to use? How are the MSDSs organized? - Is the computer database/program compatible with your computer system and DoD standards for installation? - Is the company reliable? - Will the program save time? - Is the system cost-effective?

Note: Electronic databases may be used to maintain MSDSs, however careful consideration must be given to the potential barriers for access both for the primary and back-up system. After reviewing USAF and OSHA regulations it may be prudent for USAF dental clinics to maintain a notebook containing paper copies of all MSDSs to ensure immediate employee access at all times.