

**Division of Adult Institutions (DAI)**  
**HOW TO READ MATERIAL SAFETY DATA SHEETS (MSDS)**  
**Attachment C to DAI Policy 500.40.25 – Dental Exposure Control Plan and Hazard**  
**Communication**  
**Effective: 04/20/14**

<http://blink.ucsd.edu/safety/resources/MSDS/sources/index.html>

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A Material Safety Data Sheet (MSDS) provides information about the hazards of a specific chemical or product. MSDSs vary in style and content, but all contain certain required information.

- I. The material's identity, including its chemical and common names. Example:
  - A. Brand name: Clorox (TM).
  - B. Chemical name: Sodium hypochlorite.
  - C. Common name: bleach.
  
- II. Hazardous ingredients or any chemical which poses a health or physical hazard, even in parts as small as 1%. Example:
  - A. Ingredients exposure: Sodium hypochlorite.
  - B. Formula: NaOCl
  - C. Percentage by weight: 5.25%.
  
- III. Physical and chemical hazards and characteristics, such as stability, reactivity, flammability, explosiveness, corrosiveness, compatibility with other materials and hazardous combustion or decomposition. Example:
  - A. Stability: stable.
  - B. Incompatibilities: strong acids, organic materials, finely powdered metals.
  - C. Hazardous combustion or decomposition products: Chlorine.
  - D. Hazardous polymerization: Will not occur.
  
- IV. Health hazards, or any potential physical injuries that handling the material without proper protective equipment may cause, including:
  - A. Acute effects: Injuries which occur immediately, such as burns or unconsciousness.
  - B. Chronic effects: Injuries which occur from exposure over a period of time, such as allergic sensitization, skin problems or respiratory disease.
  
- V. Recognition of a material as a carcinogen or an agent capable of producing cancer, as listed by Occupational Safety and Health Administration (OSHA), International Agency for Research in Cancer (IARC), or National Toxicology Program (NTP). A cancer review may include both animal and human summaries.
  
- VI. Exposure: Limits, primary routes of entry into the body, specific target organs likely to sustain damage and medical problems that can be aggravated by exposure.  
Examples:
  - A. Airborne exposure limit: 8-hour time-weighted average.
  - B. Route: Ocular.
  - C. Symptoms of overexposure: Headaches and pressure sensation, nausea, vomiting, anxiety and difficulty thinking.

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- VII.** Precautions for handling and storing and safety equipment such as protective gloves, eye protection, and monitoring equipment or detectors.
- VIII.** Emergency and first aid procedures dealing with topics such as inhalation, ingestion, and eye or skin contact. Example:
  - A. Skin contact: Wear respiratory protective mask and remove contaminated clothing. Immediately wash contaminated skin with copious amounts of soap and water.
  - B. Ingestion: Do not induce vomiting. First symptoms are likely to be gastrointestinal. Immediately administer Nerve Agent Antidote Kit.
  - C. Inhalation: Hold breath until respiratory protective mask is donned. If severe signs of agent exposure appear, immediately administer all three Nerve Agent Antidote Kits.
- IX.** Specific fire-fighting information such as flammability limits, lower and upper explosive limits, and fire fighting procedures.
- X.** Procedures for cleanup of spills and leaks in both field and laboratory procedures.
- XI.** Precautions for safe handling and use, including emergency showers and eyewash stations.
- XII.** Identity of the organization responsible for creating the MSDS, date of issue and emergency phone number.