

Proper HAZMAT Storage, Locker Use Crucial Defense



By Senior Chief Aviation Structural Mechanic Renzo Nuñez
Naval Safety Command

Aviation Safety Blog
24-12



Proper HAZMAT Storage, Locker Use Crucial Defense

In today's Navy, the secure storage and responsible handling of hazardous materials (HAZMAT) are paramount considerations. The potential fallout from HAZMAT incidents poses a significant threat to the four key outcomes of the Navy's Safety Management System: Safe Place, Safe People, Safe Property/Materials and Safe Processes/Procedures. To safeguard against mishaps and health risks, regulations and guidelines were instituted for the proper storage and use of HAZMAT lockers.

A robust HAZMAT storage system is a crucial defense against immediate dangers and minimizes potential health risks to personnel and the surrounding environment. Emphasizing safety in storing and handling hazardous materials is essential to prevent mishaps and protect lives.

Various regulatory bodies, including government agencies and Navy and Marine Corps manuals and directives, have established comprehensive guidelines for HAZMAT storage, such as labeling, segregation, ventilation, fire safety and emergency response protocols. Consult your command's Hazardous Material Control and Management program manager for specific guidance. One notable regulation is the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (HCS), which mandates clearly identifying and labeling hazardous materials for worker safety. The National Fire Protection Association also provides tailored codes and standards for HAZMAT storage, focusing on ventilation, containment and segregation of incompatible substances.

Examining historical incidents, such as the fires aboard USS George Washington (CVN 73) in 2008 and USS Bonhomme Richard (LHD 6) in 2020, serve as stark reminders of the dire consequences resulting from inadequate HAZMAT storage practices.

- On USS George Washington a fire broke out in one of the ship's air conditioning and refrigeration spaces. The fire spread via ventilation ducting to eight decks and 80 compartments, injuring 37 Sailors and causing \$70 million in damages. Firefighting efforts exceeded 12 hours to extinguish the fire. The mishap investigation determined the incident was preventable and caused by unauthorized smoking in a room where 90 gallons of flammable refrigerant compressor oil and 25 gallons of unknown liquid hazardous waste were improperly stored.
- Similarly, USS Bonhomme Richard fire broke out while docked in San Diego. The fire burned for five days, spread throughout 11 of 14 decks, and reached a temperature exceeding 1,400 F, causing extensive damage to the vessel and ultimately resulting in its decommissioning. Investigations revealed the improper storage of combustible materials played a significant role in fueling the fire and impeding firefighting efforts. These incidents highlight the preventable nature of such mishaps and emphasize the importance of strict compliance with regulations, continuous training and vigilant oversight among personnel handling hazardous materials.

To optimize HAZMAT locker use and enhance safety, it is crucial to consider factors such as proper segregation based on compatibility, adequate ventilation systems to maintain air quality, clear labeling, fire extinguisher availability and well-defined emergency response protocols. Prioritizing safety in dealing with hazardous materials is paramount, ensuring adherence to regulations, preventing accidents, safeguarding lives and protecting the environment.



Cover: Aviation Support Equipment Technician Airman Apprentice Ta'lya Randolph, distributes hazardous material to Sailors aboard USS Abraham Lincoln (CVN 72), Nov. 28, 2023. (U.S. Navy photo by Mass Communication Specialist 3rd Class Thaddeus Berry)