Naval Ammunition Depot, Oahu

Classifications of Hazards in Shipping and Storage of Ammunition and Explosives

Preken op de zon- en feestdagen

Can We Better Address the Siting of Hazard Division 1.3 Systems

The War Reserve


Explosive Hazard Reduction

Comments and Position Regarding the Joint Technical Bulletin "Department of Defense Ammunition and Explosives Hazard Classification Procedures"

Hazard Classification of MTSQ Fuze M582A1 in Ammunition Box

Hazard Classification of United States Military Explosives and Hazardous Munitions

Hazard of Chemical Rockets and Propellants: Solid propellants and ingredients

DOD ammunition and explosives safety standards

Rules and Regulations for Military Explosives and Hazardous Munitions


Coordination with Department of Defense Explosives Safety Board

Rules and Regulations for Military Explosives and Hazardous Munitions

DoD 5154.4S, DoD Ammunition and Explosives Safety Standards. Chapter 13. Personnel Protection

Transportation by Water of Explosives and Hazardous Cargo

Manuals Combined: EOD, UXO, IED, DEMOLITION MATERIALS, LAND MINE WARFARE, MINE/COUNTERMINE OPERATIONS AND PHYSICAL SECURITY OF ARMS, AMMUNITION, AND EXPLOSIVES

Guide for All-Hazard Emergency Operations

Department of Defense Explosives Hazard Classification Procedures


Ammunition Handbook: Tactics, Techniques, and Procedures for Munitions Handlers (FM 4-30. 13)

Department of Defense Manual - DoD Ammunition and Explosives Safety Standards: General Quantity-Distance Criteria for Accidental Detonations

Explosive Effects and Applications

Analysis of Heat-activated Explosions in Storage of HD 1.2 Munitions

Military Explosives

Manual of Tests and Criteria

Behavior of Large Quantities of Hazard Division 1. 2 Ammunition in Fires

2004 emergency response guidebook


Marine Corps Ammunition and Explosives Safety Program

DOD Contractors’ Safety Manual for Ammunition, Explosives and Related Dangerous Material

Alternatives for the Demilitarization of Conventional Munitions

Hazard Classification of United States Military Explosives and Hazardous Munitions

Army Terminal Operations

Potential Health Risks to DOD Firing-Range Personnel from Recurrent Lead Exposure

Rules and Regulations for Military Explosives and Hazardous Munitions

Excerpts from Title 46, C.F.R. Part 146

Rules and Regulations for Military Explosives and Hazardous Munitions

DoD Contractors' Safety Manual for Ammunition and Explosives
be used for classification of dangerous goods according to the provisions of Parts 2 and 3 of the United Nations Recommendations on the Transport of Dangerous Goods, Model Regulations, as well as of chemicals presenting physical hazards according to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). As a consequence, it supplements also national or international regulations which are derived from the United Nations Recommendations on the Transport of Dangerous Goods or the GHS. At its ninth session (7 December 2018), the Committee adopted a set of amendments to the sixth revised edition of the Manual as amended by Amendment 1. This seventh revised edition takes account of these amendments. In addition, noting that the work to facilitate the use of the Manual in the context of the GHS had been completed, the Committee considered that the reference to the "Recommendations on the Transport of Dangerous Goods" in the title of the Manual was no longer appropriate, and decided that from now on, the Manual should be entitled "Manual of Tests and Criteria".

**Classifications of Hazards in Shipping and Storage of Ammunition and Explosives**

The United States (U.S.) Department of Defense Explosives Safety Board (DDESBB) is responsible for siting ammunition and explosives (AE) for Department of Defense (DoD) storage and transport worldwide in times of peace and war. All siting requirements are outlined in DoD 6055.09-STD, "DoD Ammunition and Explosives Safety Standards" (Reference 1). Current methodologies for siting AE allow mixed storage of Hazard Division (HD) 1.1, 1.2.X, 1.3, 1.4, and 1.6 and follow the equation: \( D = k(Net \text{ Explosive Weight})^{1/3} \) Generally, if a storage site or an operating building is sited for HD1.1, the only limitation for HD1.3 AE storage is the physical capacity of the facility. However, HD1.3 systems pose a mass fire hazard and are uniquely different when compared to detonable systems (HD1.1). This paper discusses the following: Many of the recorded accidents have been caused by fire. The false impression that HD1.3 materials are safer than HD1.1. For example, HD1.3 material is much easier to ignite than HD1.1. In addition, HD1.3 readily burns at atmospheric pressure, whereas HD1.1 material generally does not. Mixed storage of HD1.3 with HD1.1 may increase the probability of accident. While HD1.3 materials do not project hazardous fragments, burning HD1.3 materials in buildings with heavy confinement can cause catastrophic failure of the structure with projection of lethal fragments. Why \( D = kW^{1/3} \) is inappropriate for determining safe separation distances for mass burning events and may result in excessive safe separation distance requirements. This paper presents a recommendation for an alternate method for determining safe separation distances from mass fire accidents based on human response to fires and radiation from the fires. It is based on preventing second-degree burns caused by heat flux and exposure time.

**Preken op de zon- en feestdagen**

This FM deals with Army terminal operations in a TO. It contains procedures and techniques to plan, use, and control Army water, motor, rail, and air terminal operations. It explains the transportation doctrine and organizational structures needed to deploy Army terminal operations in a TO. It covers roles, missions, and
Online Library Dod Ammunition And Explosives Hazard Classification Procedures

concepts of employment for terminal operation units. This manual is mainly for unit commanders, key personnel, higher HQ staffs, theater planners, and commanders of operational allied units. Terminals are key nodes in the total distribution system that support the commander's concept of operation at all levels of war and through the range of military operations. They provide loading, unloading, and handling of cargo and personnel between various transportation modes. When linked by modes of transport, they define the transportation structure for the operation. Force projection missions require early identification and establishment of terminals. A well-conceived plan assures that terminals can support the deployment, reception, and onward movement of the force and its sustainment. Crucial to the execution of the operation is the assignment of the right personnel, cargo, and material handling equipment at each terminal. ITV of material moving through the transportation system also provides the CINC with information pertaining to location and final destination of all cargo. The Army is required to function across a range of operation from peacetime through conflict to war (see FM 100-5). Terminal operators must be able to operate in every TO. Terminals will be vulnerable to air and missile attacks, especially if US and allied forces have not established air superiority and sea control. They may also be subject to attacks by unconventional forces and to sabotage, terrorism, mining, espionage, and chemical or biological attacks. Whatever the level of the Army operation, terminals will remain a critical piece to ensure continuous movement of personnel and cargo.

**Can We Better Address the Siting of Hazard Division 1.3 Systems**

**The War Reserve**

When the Department of Defense (DoD) revised its hazard classification guidelines in Technical Bulletin (TB) 700-2, NAVSEAINST 8020.8B, TO 1 1A-1-47, DLAR 8220, dated 5 January 1998, it significantly changed the procedures used to determine the explosive classification of rocket motors, to be shipped or placed in DoD storage facilities. The revised test protocols outlined in this document, (hereafter referred to as TB 700-2) are far more conservative and costly to implement than the previous ones.


**Explosive Hazard Reduction**

**Comments and Position Regarding the Joint Technical Bulletin "Department of Defense Ammunition and Explosives Hazard Classification Procedures"**
Hazards Classification of MTSQ Fuze M582A1 in Ammunition Box

Hazard Classification of United States Military Explosives and Hazardous Munitions

The Department of Defense Explosives Safety Board by DoD Directive 5154.4 is charged with protecting personnel from the hazards associated with DoD ammunition and explosives. Chapter 13 of the subject standards establishes blast, fragments, and thermal hazards protection principles and applies to all operations/facilities where personnel are exposed to ammunition/explosives hazards during industrial, processing, manufacturing, and more routine operations.

Hazards of Chemical Rockets and Propellants: Solid propellants and ingredients

This is a broad-based text on the fundamentals of explosive behavior and the application of explosives in civil engineering, industrial processes, aerospace applications, and military uses.

DOD ammunition and explosives safety standards

Rules and Regulations for Military Explosives and Hazardous Munitions

The Marine Corps continuously trains and deploys with military munitions. The storage, handling, transportation, and employment of these items are inherently hazardous. Therefore, it is imperative that a safety program designed to minimize the potential hazards be aggressively pursued at all levels.


Coordination with Department of Defense Explosives Safety Board

Rules and Regulations for Military Explosives and Hazardous Munitions

DoD 5154.4S, DoD Ammunition and Explosives Safety Standards. Chapter 13. Personnel Protection
Transportation by Water of Explosives and Hazardous Cargo

This work has been selected by scholars as being culturally important, and is part of the knowledge base of civilization as we know it. This work was reproduced from the original artifact, and remains as true to the original work as possible. Therefore, you will see the original copyright references, library stamps (as most of these works have been housed in our most important libraries around the world), and other notations in the work. This work is in the public domain in the United States of America, and possibly other nations. Within the United States, you may freely copy and distribute this work, as no entity (individual or corporate) has a copyright on the body of the work. As a reproduction of a historical artifact, this work may contain missing or blurred pages, poor pictures, errant marks, etc. Scholars believe, and we concur, that this work is important enough to be preserved, reproduced, and made generally available to the public. We appreciate your support of the preservation process, and thank you for being an important part of keeping this knowledge alive and relevant.

Manuals Combined: EOD, UXO, IED, DEMOLITION MATERIALS, LAND MINE WARFARE, MINE/COUNTERMINE OPERATIONS AND PHYSICAL SECURITY OF ARMS, AMMUNITION, AND EXPLOSIVES


Department of Defense Explosives Hazard Classification Procedures

Lead is a ubiquitous metal in the environment, and its adverse effects on human health are well documented. Lead interacts at multiple cellular sites and can alter protein function in part through binding to amino acid sulfhydryl and carboxyl groups on a wide variety of structural and functional proteins. In addition, lead mimics calcium and other divalent cations, and it induces the increased production of cytotoxic reactive oxygen species. Adverse effects associated with lead exposure can be observed in multiple body systems, including the nervous, cardiovascular, renal, hematologic, immunologic, and reproductive systems. Lead exposure is also known to induce adverse developmental effects in utero and in the developing neonate. Lead poses an occupational health hazard, and the Occupational Safety and Health Administration (OSHA) developed a lead standard for general industry that regulates many workplace exposures to this metal. The standard was promulgated in 1978 and encompasses several approaches for reducing exposure to lead, including the establishment of a permissible exposure limit (PEL) of 50 μg/m³ in air (an 8-hour time-weighted average [TWA]), exposure guidelines for instituting medical surveillance, guidelines for removal from and return to work, and other risk-management strategies. An action level of 30 μg/m³ (an 8-hour TWA) for lead was established to trigger medical surveillance in employees exposed above that level for more than 30 days per year. Another
provision is that any employee who has a blood lead level (BLL) of 60 μg/dL or higher or three consecutive BLLs averaging 50 μg/dL or higher must be removed from work involving lead exposure. An employee may resume work associated with lead exposure only after two BLLs are lower than 40 μg/dL. Thus, maintaining BLLs lower than 40 μg/dL was judged by OSHA to protect workers from adverse health effects. The OSHA standard also includes a recommendation that BLLs of workers who are planning a pregnancy be under 30μg/dL. In light of knowledge about the hazards posed by occupational lead exposure, the Department of Defense (DOD) asked the National Research Council to evaluate potential health risks from recurrent lead exposure of firing-range personnel. Specifically, DOD asked the National Research Council to determine whether current exposure standards for lead on DOD firing ranges protect its workers adequately. The committee also considered measures of cumulative lead dose. Potential Health Risks to DOD Firing-Range Personnel from Recurrent Lead Exposure will help to inform decisions about setting new air exposure limits for lead on firing ranges, about whether to implement limits for surface contamination, and about how to design lead-surveillance programs for range personnel appropriately.


The Air Force System Safety Handbook was prepared as a resource document for program office system safety managers and system safety engineers. It is not designed to answer every question on the topic of system safety nor is it a cookbook that guarantees success. The handbook provides considerable insight to the general principles, objectives, and requirements of applying system safety concepts to the Air Force system acquisition and logistical support processes. Programs vary greatly in their scope and complexity, requiring a tailored system safety effort. Assigned to this difficult task are military and government personnel with varied education and experience backgrounds. These system safety practitioners need a comprehensive understanding of the system safety process and the complexities of applying it to a given program. This handbook will assist in providing much of the necessary information but additional, more detailed guidance will be required from the program office and their higher headquarters system safety experts. The ultimate objective of any organization within the Air Force is maximizing combat capability. One element in this maximizing process is protecting and conserving combat weapon systems and their support equipment. Preventing mishaps and reducing system losses is one important aspect of conserving these resources. System safety contributes to mishap prevention by minimizing system risks due to hazards consistent with other cost, schedule, and design requirements. The fundamental objective of system safety is to identify, eliminate or control, and document system hazards. 1.0 Introduction To System Safety * 2.0 System Safety Policy And Process * 3.0 Risk Assessment * 4.0 System Safety Program * 5.0 System Safety Program Plan (Sspp) * 6.0 Other Management Tasks (Ref 30) * 7.0 Design And Integration Tasks * 8.0 Design Evaluation, Compliance, And Verification * 9.0 Analysis Techniques * 10.0 System Safety Life-Cycle Activities * 11.0 Program Office System Safety * 12.0 Contracting For System...

Page 6/11
Ammunition Handbook: Tactics, Techniques, and Procedures for Munitions Handlers (FM 4-30. 13)

This Manual is composed of several volumes, each containing its own purpose, and administratively reissues DoD 6055.09-STD. The purpose of the overall Manual, is to establish explosives safety standards for the Department of Defense. These standards are designed to manage risks associated with DoD-titles ammunition and explosives (AE) by providing protection criteria to minimize serious injury, loss of life and damage to property. This volume provides criteria for unexploded ordnance (UXO), munitions response, waste military munitions, and material potentially presenting an explosive hazard (MPPEH).

Department of Defense Manual - DoD Ammunition and Explosives Safety Standards: General Quantity-Distance Criteria for Accidental Detonations

At present, the quantity-distance (Q-D) requirements for open storage of Hazard Division (HD) 1.2 ammunition are different in the U.S., the United Kingdom (UK), and NATO. In 1989, NATO AC/258 (Group of Experts on the Safety Aspects of Transportation and Storage of Military Ammunition and Explosives) began an effort to review HD 1.2 Q-D requirements with the objective of reconciling the different approaches. However, test data to support the effort were very limited at that time. Therefore, it was recommended that a series of bonfire tests be conducted to characterize the hazards produced by fires involving large stacks of HD 1.2 items. In order to support this effort, the U. S. Department of Defense Explosives Safety Board (DDESB) and the UK Explosives Storage and Transport Committee (ESTC) jointly sponsored a series of bonfire tests using 105mm artillery cartridges and 81mm mortar cartridges. A total of twelve tests were conducted during the period May 1991 through September 1995. This report describes the test program, test and analysis methodologies, and summarizes the results of the tests.

Explosive Effects and Applications

The presentation deals with the hazard classification of ammunition and explosives and unique military related dangerous materials. Although the discussions involve numerous government agencies, the emphasis is placed on how the matter is addressed at the US Army Armament Research and Development Center, Dover, NJ (ARDC). Hazard classification is presented as a system of policies and procedures that establish the requirements, specify the items, provide the test procedures and assign responsibilities. At ARDC, the policies and procedures are applied to items of ammunition and explosives to determine their dangerous characteristics and assign those that pose similar hazards to uniform categories. The classifications are used to regulate the handling, storage and shipping to acceptable levels of risk.
Analysis of Heat-activated Explosions in Storage of HD 1.2 Munitions

Military Explosives

Manual of Tests and Criteria

Behavior of Large Quantities of Hazard Division 1. 2 Ammunition in Fires

This Manual is composed of several volumes, each containing its own purpose, and administratively reissues DoD 6055.09-STD. The purpose of the overall Manual, is to establish explosives safety standards for the Department of Defense. These standards are designed to manage risks associated with DoD-titles ammunition and explosives (AE) by providing protection criteria to minimize serious injury, loss of life and damage to property. This volume provides general quantity-distance (QD) criteria for the accidental detonation of hazard division (HD) 1.1 through 1.6 and HD 7.1 items containing toxic chemical agents.

2004 emergency response guidebook


Munitions Response Site Prioritization Protocol (US Department of Defense Regulation) (DOD) (2018 Edition) The Law Library presents the complete text of the Munitions Response Site Prioritization Protocol (US Department of Defense Regulation) (DOD) (2018 Edition). Updated as of May 29, 2018 The Department of Defense (hereinafter the Department) is promulgating the Munitions Response Site (MRS) Prioritization Protocol (MRSPP) (hereinafter referred to as the rule) as a rule. This rule implements the requirement established in section 311(b) of the National Defense Authorization Act for Fiscal Year 2002 for the Department to assign a relative priority for munitions responses to each location (hereinafter MRS) in the Department's inventory of defense sites known or suspected of containing unexploded ordnance (UXO), discarded military munitions (DMM), or munitions constituents (MC). This book contains: - The complete text of the Munitions Response Site Prioritization Protocol (US Department of Defense Regulation) (DOD) (2018 Edition) - A table of contents with the page number of each section

Marine Corps Ammunition and Explosives Safety Program

The objective of Explosive Hazard Reduction (EHR) is to reduce the Maximum Credible Event (MCE) should an inadvertent detonation with munitions occur. MCE is defined by the DOD as the worst single event likely to occur from a given
quantity of munitions or explosives. This is being achieved by development of
technologies and procedures, and by applying both new and existing technologies
and procedures through site/explosives hazard reduction planning practices. The
result will be improved survivability, sustainability, and operability of US air bases
and Contingency Operating Locations (COLs).

**DOD Contractors' Safety Manual for Ammunition, Explosives
and Related Dangerous Material**

This field manual, “Ammunition Handbook: Tactics, Techniques, and Procedures for
Munitions Handlers,” provides ready reference and guidance for units and soldiers
that handle munitions items. It provides useful data on important points of
munitions service support. Also, it is a training tool for munitions units and soldiers.
Focus is on tactics, techniques, and procedures used by soldiers handling
munitions. The information and guidance contained herein will help them to safely
receive, ship, store, handle, maintain, and issue munitions. The manual provides
information on processing unit turn-ins, destroying unserviceable munitions, and
transporting munitions in new, maturing, or mature theaters of operations in
support of the force projection Army. The information in this manual conforms to
the procedures of MOADS, MOADS-PLS, and modularity, and will take munitions
units well into the twenty-first century.

**Alternatives for the Demilitarization of Conventional Munitions**

Meant to aid State & local emergency managers in their efforts to develop &
maintain a viable all-hazard emergency operations plan. This guide clarifies the
preparedness, response, & short-term recovery planning elements that warrant
inclusion in emergency operations plans. It offers the best judgment &
recommendations on how to deal with the entire planning process -- from forming
a planning team to writing the plan. Specific topics of discussion include:
preliminary considerations, the planning process, emergency operations plan
format, basic plan content, functional annex content, hazard-unique planning, &
linking Federal & State operations.

**Hazard Classification of United States Military Explosives and
Hazardous Munitions**

**Army Terminal Operations**

Over 3,700 total pages The Manuals and Publications included: IMPROVED
EXPLOSIVE DEVICE (IED) W3H0005XQ STUDENT HANDOUT IMPROVED EXPLOSIVE
DEVICE (IED) B3L0487XQ-DM STUDENT HANDOUT MOTORIZED CONVOY
OPERATIONS B4P0573XQ-DM STUDENT HANDOUT TECHNICAL MANUAL ARMY
AMMUNITION DATA SHEETS FOR DEMOLITION MATERIALS TECHNICAL MANUAL
OPERATORS AND ORGANIZATIONAL MAINTENANCE MANUAL (INCLUDING REPAIR
PARTS AND SPECIAL TOOLS LIST) DEMOLITION MATERIALS IMPROVED EXPLOSIVE
DEVICE (IED) DEFEAT LAND-MINE WARFARE OPERATOR'S AND UNIT MAINTENANCE
MANUAL FOR LAND MINES TECHNICAL MANUAL DIRECT SUPPORT AND GENERAL
The MTSQ fuze M582A1 in a non-propagating shipping container was tested in accordance with the DoD Explosive Hazard Classification Procedures. In the single package test, there was no detonation of total contents. There was no propagation between fuzes in the container. In the external fire stack test, there was no mass explosion. Based on interpretation of results, a probable Division (1.4) (DOT Class C) classification was indicated for the fuze in a non-propagating shipping container.

**Rules and Regulations for Military Explosives and Hazardous Munitions**

The U.S. military has a stockpile of approximately 400,000 tons of excess, obsolete, or unserviceable munitions. About 60,000 tons are added to the stockpile each year. Munitions include projectiles, bombs, rockets, landmines, and missiles. Open burning/open detonation (OB/OD) of these munitions has been a common disposal practice for decades, although it has decreased significantly since 2011. OB/OD is relatively quick, procedurally straightforward, and inexpensive. However, the downside of OB and OD is that they release contaminants from the operation directly into the environment. Over time, a number of technology alternatives to OB/OD have become available and more are in research and development. Alternative technologies generally involve some type of contained destruction of the energetic materials, including contained burning or contained detonation as well as contained methods that forego combustion or detonation. Alternatives for the Demilitarization of Conventional Munitions reviews the current conventional
munitions demilitarization stockpile and analyzes existing and emerging disposal, treatment, and reuse technologies. This report identifies and evaluates any barriers to full-scale deployment of alternatives to OB/OD or non-closed loop incineration/combustion, and provides recommendations to overcome such barriers.

Copyright code: 344b9999082000d7d282ac7dd44d0c2d