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EXPLOSIVES MOTOR VEHICLE TERMINALS 1976

NATIONAL FIRE PROTECTION ASSOCIATION
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See Inside Back Cover for Official NFPA Definitions

Standard for
Explosives Motor Vehicle Terminals

NFPA 498 – 1976

This Standard was developed by the Sectional Committee on Explosives and was tentatively adopted at the 1969 NFPA Annual Meeting. It was adopted as an Official Standard at the 1970 NFPA Annual Meeting.

The text presented here incorporates several amendments to the 1970 edition. It was officially adopted by the Association at the 1976 Annual Meeting in Houston, Texas on May 20, 1976. This edition of NFPA 498 was processed according to the Regulations Governing Technical Committees.

Interpretation Procedure of the Sectional Committee on Explosives

Those desiring an interpretation shall supply the Chairman with five identical copies of a statement in which shall appear specific reference to a single problem, paragraph, or section. Such a statement shall be on the business stationery of the inquirer and shall be duly signed.

When applications involve actual field situations they shall so state and all parties involved shall be named.

The Interpretations Committee will reserve the prerogative to refuse consideration of any application that refers specifically to proprietary items of equipment or devices. Generally inquiries should be confined to interpretation of the literal text or the intent thereof.

Requests for interpretations should be addressed to the National Fire Protection Association, 470 Atlantic Avenue, Boston, MA 02210.

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This list represents the membership at the time the Committee was balloted on the text of this edition. Since that time, changes in the membership may have occurred.

Standard for
Explosives Motor Vehicle Terminals

NFPA 498–1976

Foreword

Explosives motor vehicle terminals provide interchange and parking facilities for vehicles transporting explosives. Some explosives motor vehicle terminals may also provide temporary storage facilities for less-than-truck-load quantities of explosives. This standard is designed to prevent the occurrence of fire in or the spread of fire into such facilities, since an explosion in the terminal presents a distinct threat to the surrounding areas.

These terminals are a necessary part of over-the-road transportation of explosives, since territorial restrictions on motor carrier operations often make it necessary for a load of explosives to be hauled by more than one carrier. These terminals not only provide the facilities noted above, but may also provide vehicle maintenance and driver rest services.

Motor vehicles using explosives motor vehicle terminals operate under the Motor Carrier Safety Regulations of the U. S. Department of Transportation. These vehicles are primarily engaged in transporting explosives and ammunition on government bills of lading, although carriers of commercial explosives may also require such facilities.

Properly operated explosives motor vehicle terminals provide a safe and controlled environment for parking vehicles carrying explosives. The overall result is improved highway safety.

NOTICE: An asterisk (*) preceding the number or letter designating a subdivision indicates explanatory material on that subdivision in Appendix A.

Chapter 1 Scope and Definitions

1-1 Scope.

1-1.1 This Standard applies to the design and operating features of explosives motor vehicle terminals related to fire prevention and fire protection, and prevention of explosions.

1-1.2 This Standard does not apply to motor freight terminals for vehicles handling general freight.[1]

1-1.3 The requirements of *NFPA 513–1975, Standard for Motor Freight Terminals,* apply to explosives motor vehicle terminals where they are applicable and are not covered by this Standard.

1-2 Definitions.

1-2.1 An explosives motor vehicle terminal is a designated area where motor vehicles transporting explosives may be parked pending further movement in transportation. An explosives motor vehicle terminal may consist of interchange lots, less-than-truck-load lots, maintenance shops, driver rest facilities, or any combination of these facilities.

1-2.2 An explosives interchange lot is the specific area of an explosives motor vehicle terminal on which motor vehicles loaded with explosives are parked.

1-2.3 An explosives less-than-truck-load lot is a designated area of a motor truck facility where less than truck loads of explosives may be held for transfer from one vehicle to another for continuance in transportation.

1-2.4 A vehicle is any conveyance of any type whatsoever operated upon the highway.

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[1] For fire protection for motor freight terminals see *NFPA 513–1975, Standard for Motor Freight Terminals.*

Chapter 2 Explosives Interchange Lots

2-1 General.

2-1.1 All explosives interchange lots shall be located in a relatively isolated area.

*2-1.2 The lots shall be separated by at least 100 feet from other facilities on the explosives motor vehicle terminals such as buildings, other structures, parking lots, fuel and power facilities.

2-1.3 Weeds, underbrush, vegetation or other combustible materials shall be cleared for a distance of 25 feet from the lot.

2-1.4 The lot shall be protected from unauthorized persons or trespassers through the use of warning signs, gates, fences and intermittent patrols.

2-1.5 The watchman or personnel making intermittent patrols shall be familiar with the information in *NFPA 601A–1975, Standard for Guard Operations in Fire Loss Prevention.* The watchman or personnel making intermittent patrols shall have been made aware of the class of explosive material in each vehicle and of its inherent dangers, and shall have been instructed in the measures and procedures to be followed in order to protect the public from these dangers. A motor vehicle in good operating condition and capable of moving the trailers loaded with explosives shall be kept at the terminal at all times. The watchman or patrol personnel shall have been made familiar with the motor vehicle and shall be trained, supplied with the necessary means, and authority to use the motor vehicle to move the vehicles loaded with explosives when required. The motor vehicle shall not be parked within 25 feet of any vehicle containing explosives.

2-1.6 Fire protection equipment capable of handling incipient fires shall be provided at each interchange lot. Portable fire extinguishers having a minimum rating of 4-A:30-B:C shall be placed at a readily accessible location. Water lines with hoses connected may be installed in addition to the portable extinguishers.

*2-1.7 More than one lot within the terminal shall be provided when a large number of vehicles are to be parked.

2-1.8 If the terrain between any two lots does not provide natural barricades and there is limited space in which to provide

substantial separation between the lots, then artificial barricades shall be erected. Barricades shall be of such height that a straight line from the top of any vehicle containing explosives in one lot to the top of any vehicle containing explosives in another lot will pass through such intervening natural or artificial barricade.[1]

2-2 Vehicle Parking.

2-2.1 Before any vehicle is admitted to an explosives interchange lot, a thorough inspection shall be made of the entire unit. As a minimum, inspection shall comply with the ICC equipment interchange rules which include but are not limited to a check for hot tires, hot wheel bearings, hot brakes, fuel leakage, oil leakage, accumulations of oil or grease, the electrical system, and any apparent physical damage to the vehicle which could cause or contribute to a fire. Any defects shall be corrected before the vehicle is placed on the lot.

2-2.2 After a loaded motor vehicle is properly positioned on the explosives interchange lot, the tractor shall be immediately disconnected and removed from the lot.

2-2.3 Where possible, motor vehicles loaded with commercial explosives shall be parked on separate lots from those containing military explosives.

2-2.4 Spacing of not less than five (5) feet shall be maintained between parked vehicles, side by side, or back to back. Parking shall be maintained so as not to require the moving of one vehicle in order to move another vehicle.

2-2.5 A self-propelled vehicle loaded with explosives may be parked on an explosives interchange lot if it is parked at least 25 feet from any other vehicles containing explosives, and is in a position where it can be easily removed in case of an emergency.

*2-2.6 No vehicles transporting other hazardous materials shall be parked on an explosives interchange lot unless the materials being transported are compatible with explosives.[2]

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[1] "Natural Barricade" means natural features of the ground, such as hills, or timber of sufficient density that one lot cannot be seen from the other when the trees are bare of leaves. "Artificial Barricade" means an artificial mound or revetted wall of earth of a minimum thickness of three feet.

[2] Ammonium nitrate and nonflammable compressed gases are compatible with explosives.

2-2.7 No explosives shall be transferred from one vehicle to another on an explosives interchange lot except in a case of necessity or emergency.

2-2.8 The vehicles on the lot shall be maintained in the same condition as is required for highway transportation, including placarding.

2-3 Control of Ignition Sources.

2-3.1 Except for minor repairs, no repair work shall be performed on any vehicle parked on the lot. Any repair work involving cutting, welding, operation of the vehicle engine or electrical repairs shall be performed after the cargo has been removed and the vehicle to be repaired has been removed from the lot.

2-3.2 Smoking, matches, open flames, spark-producing devices and firearms shall be prohibited inside or within 50 feet of the lot.

2-4 Security Against Trespassers.

2-4.1 When any vehicle transporting explosives is parked on a lot at least one employee shall be assigned to patrol the lot at frequent and irregular intervals.

Exception: Patrolling is not required if the lot is enclosed by a security fence, the gates are locked, and the area surrounding the lot is posted with warning signs.

2-5 Employee Training.

2-5.1 The operator of the terminal shall maintain an active safety training program in emergency procedures for all employees stationed at the terminal. Written emergency instructions shall be posted and readily accessible to all employees.

Chapter 3 Less-Than-Truck-Load Explosives Lots

3-1 General.

3-1.1 A temporary storage facility conforming to the construction requirements of Class 1 magazines, as described in *NFPA 495–1973, Code for the Manufacture, Transportation, Storage and Use of Explosive Materials,* may be provided in the terminal area. If blasting caps or other initiators are to be temporarily stored at the same time as other explosives, then two temporary storage facilities shall be required, one for blasting caps or other initiators and the second for the other explosives.

3-1.2 The magazine facilities shall be located a minimum of 50 feet from structures on the adjoining property or from any facility that could create a fire hazard.

3-1.3 An area at the loading dock may be designated for the temporary storage of explosives in a trailer, provided it is not in proximity to a fire hazard, such as an area where smoking is permitted, or where combustible or flammable materials are present.

3-2 Operations.

3-2.1 Explosives brought into the terminal to await shipment shall be immediately placed in the temporary storage facility until such time as the explosives are loaded on the over-the-road motor vehicle.

3-2.2 Explosives delivered to the terminal by a connecting carrier may be retained in the trailer at a designated section of the loading dock, or the trailer may be parked in an isolated area of the terminal, or the explosives may be placed in the temporary storage facility.

3-2.3 The vehicles on the lot shall be maintained in the same condition as is required for highway transportation including placarding.

3-2.4 Explosives shall not be retained on the lot, either in a trailer or temporary storage facility, for a period longer than necessary, but in no case for more than 72 hours, unless the explosives are stored in a temporary storage facility located away from inhabited buildings, passenger railways and public highways and from other temporary storage facilities in conformity with the American Table of Distances for Storage of Explosives.[1]

[1] The American Table of Distances for Storage of Explosives is printed in Appendix A of NFPA 495–1973, Code for the Manufacture, Transportation, Storage and Use of Explosive Materials.

3-2.5 Smoking, matches, open flames, spark-producing devices and firearms shall be prohibited inside of and within 50 feet of the temporary storage facility or trailer containing explosives.

3-2.6 Temporary storage facilities shall be appropriately marked so that the terminal employees are aware of the location of the magazines.

3-2.7 Portable fire extinguishers, having a capacity of 4-A:30-B:C shall be placed at each temporary storage facility and readily available for immediate use.

3-2.8 No explosives shall remain on the lot either in trailers or temporary storage facilities unless authorized terminal personnel are in the vicinity or unless the temporary storage facilities are located away from inhabited buildings, passenger railways and public highways and from other temporary storage facilities in conformity with the American Table of Distances for Storage of Explosives.[1]

3-2.9 The operator of the explosives motor vehicle terminal shall maintain an active safety training program in emergency procedures for all employees stationed at the terminal. Written emergency instructions shall be posted and readily accessible to all employees.

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[1] The American Table of Distances for Storage of Explosives is printed in Appendix A of NFPA 495–1973, Code for the Manufacture, Transportation, Storage and Use of Explosive Materials.

Appendix A

This Appendix is not part of this NFPA Standard for Explosives Motor Vehicle Terminals but is included for information purposes only.

A-2-1.2 When flood light illumination is provided, overhead power lines should not be erected within the perimeter of the lot.

A-2-1.7 The lots should be separated as far as practicable to reduce the concentration of explosives in any single area of the terminal.

A-2-2.6 In case of an emergency, where vehicles loaded with other hazardous materials are brought to an explosives interchange lot, such vehicles should be parked at a location on the lot well-separated from the explosives-laden vehicles.