

## **Explosive Materials Code**

# 2018



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#### NFPA® 495

#### **Explosive Materials Code**

#### 2018 Edition

This edition of NFPA 495, *Explosive Materials Code*, was prepared by the Technical Committee on Explosives. It was issued by the Standards Council on November 10, 2017, with an effective date of November 30, 2017, and supersedes all previous editions.

This edition of NFPA 495 was approved as an American National Standard on November 30, 2017.

#### **Origin and Development of NFPA 495**

This code was originally issued in 1912 under the title *Suggested State Law to Regulate the Manufacture, Storage, Sale, and Use of Explosives.* The second edition was issued in 1941 by the Committee on Laws and Ordinances and retitled Suggested Explosives Ordinance for Cities. Later, the document was designated as NFPA 495L.

After being assigned to the Committee on Chemicals and Explosives, a new edition was issued in 1959. This was retitled as the *Code for the Manufacture, Transportation, Storage, and Use of Explosives and Blasting Agents* and redesignated as NFPA 495.

Following the reorganization of the committee in 1960, the responsibility for amendments to NFPA 495 was assigned to the Sectional Committee on Explosives. This committee reported to the Correlating Committee of the Committee on Chemicals and Explosives. Revised editions were issued in 1962, 1965, 1967, 1968, 1969, and 1970. A new edition was issued in 1972, with the document title revised to *Code for the Manufacture, Transportation, Storage, and Use of Explosive Materials*. A subsequent edition followed in 1973.

Following the issuance of the 1973 edition, the Sectional Committee on Explosives was redesignated as a Technical Committee. In 1976, the committee began a detailed review intended to amend requirements to eliminate conflicts with the regulations promulgated by the various federal agencies concerned with explosive materials (e.g., U.S. Bureau of Alcohol, Tobacco, and Firearms; U.S. Mine Safety and Health Administration; and U.S. Department of Transportation [DOT]). This effort resulted in the 1982 edition, which was followed by a new edition in 1985. In 1990, the document was again revised and the title changed to *Explosive Materials Code*. The 1992 edition incorporated various technical and editorial amendments.

The 1996 edition incorporated changes in the classification of explosives to conform with DOT's "Hazardous Materials Regulations," which in turn was based on United Nations Recommendations on the Transport of Dangerous Goods. The 1996 edition also included technical and editorial amendments.

The 2001 edition of NFPA 495 included technical and editorial amendments highlighted by an increase in the amount of smokeless propellants permitted to be stored on the shelves of retail establishments. The change was needed due to the reclassification of certain explosive materials by DOT.

In the 2006 edition, a new chapter on Manufacturing and Testing was added. The code added updated tables based on the most current IME industry practices. The committee also prepared technical and editorial amendments to comply with the *Manual of Style for NFPA Technical Committee Documents*.

The 2010 edition updated definitions reflecting changes in federal regulatory provisions. A security plan was required as part of the permitting process for explosive materials, and new requirements for site control were included. The 2010 code allowed quantitative risk assessment (QRA) to be used where the quantity–distance (Q–D) requirements cannot be met. With the introduction of QRA, the siting requirements recognized the QRA method in addition to the traditional American Table of Distances. The committee also modified quantity limits for display or storage of certain small arms primers.

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The 2013 edition contained updates to the ground vibration limitations in Chapter 11, Ground Vibration, Air Overpressure, Flyrock, and Gases to reflect the advancement and availability of blasting seismograph equipment. The code presented two options for limiting ground vibrations: monitoring with a blasting seismograph or using the scaled distance equations. The committee also made several editorial and reference updates to the code.

The 2018 edition contains updates to Chapter 5 requirements on the Electrical Wiring and Equipment section, providing better guidance on where to design and install watertight and dusttight equipment when in proximity of explosive materials. Chapter 10, Use of Explosive Materials for Blasting, added responsibilities for the blaster-in-charge to prevent potential conflict with project manager responsibilities. Additionally, Chapter 10 adopted requirements for recording blast records to better align with federal and state regulations. The committee also has made several editorial and reference updates to the code.

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NOTE: Membership on a committee shall not in and of itself constitute an endorsement of the Association or any document developed by the committee on which the member serves.

Committee Scope: This Committee shall have primary responsibility for documents on the manufacture, transportation, storage and use of explosives and related materials. This Committee does not have responsibility for documents on consumer and display fireworks, model and high power rockets and motors, and pyrotechnic special effects.

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