



Storage Practices: Part One: “Commodities”

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Learning Objective: The student shall be able to define “commodities” as they pertain to storage and fire sprinkler protection requirements.

If you were asked to define a “commodity,” how would you respond? Is it a consumer product sitting on a shelf at the neighborhood pharmacy? Is it an Airbus 320 sitting on the tarmac of the international airport? Is it tons of corn in a grain elevator waiting for a better price on the Chicago Exchange?

In fire protection, a specific definition for commodity is important because it provides the basis for applying the appropriate codes and standards for storage arrays, sprinkler protection, building construction, smoke and heat venting, fire detection, firefighter access, and a host of other issues in storage occupancies.

By definition, a “commodity” is the combination of products, packing material, and container that determines commodity classification. Commodities are assigned a Roman numeral character “Class” based on the relative fire hazard.

For example, the commodity in the photograph consists of banded and baled flattened cardboard packaging on conventional wooden pallets. This is an example of a Class III commodity.

This information is essential to the code official and fire protection system designer. To be economically efficient, fire protection systems may be designed specifically for the fire hazard presented by the commodity that is being stored. It would not be cost effective, for example, to design a sprinkler system capable of controlling a fire in a plastics factory when the only items being stored in a building might be glass products.

An accurate description of the commodity helps the designer match the fire protection features to the risk. In upcoming Coffee Breaks, we will discuss how commodities are “classed” so the code official and fire protection system designer have a reasonable expectation of the hazard they must protect.

For additional information on “commodities,” refer to *International Fire Code* Chapter 23, or NFPA 1, *Uniform Fire Code*® Chapter 34, or NFPA 13, *Standard for the Installation of Sprinkler Systems* Chapter 3.



A “commodity” is the combination of the product being stored, its packaging, and the outer container in which it is located.

