

What Is NFPA 30?



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NFPA 30 is the National Fire Protection Association's flammable and combustible liquids code. This code prescribes a national standard for the safe practices of storing flammable and combustible liquids – anything from solvents to alcohol to paints and motor oils.

How is NFPA 30 relevant to steel packagings?

NFPA 30 prescribes a national standard for storage of flammable and combustible liquids and steel packagings are ideal for these types of liquids. Guidelines for protective storage of these packaging types are presented in chapter six of NFPA 30, reflecting revisions to the code brought about by a series of Fire Tests.

Why were the Fire Tests performed?

A lack of data regarding sprinklered Fire Tests of palletized steel drums equipped with relieving style fittings containing flammable and combustible liquids prompted a consortium of manufacturers – steel container and chemical – fillers, researchers, insurance providers, engineers, and safety officials to develop a series of eight comparative tests. The goal: to lead to revised provisions for palletized steel drums in the National Fire Protection Association (NFPA) 30 - Flammable and Combustible Liquids Code.

What were the results of the Fire Tests?

When stored in a protected area, 55-gallon steel drums containing flammable and combustible liquids are capable of being safely stacked three and four high, a doubling of the previous limit of stacking steel drums two high. In the test configurations, the steel drums maintained their structural integrity and retained residual product. The success of the tests led to the modification of NFPA 30 to allow for increased stacking of steel drums.

What are the requirements for stacking steel drums three- or four-high?

To take advantage of the steel drum's superior safety and storage capabilities with regard to flammable and combustible liquids the drums must be stored in a protected area, palletized, and equipped with pressure relieving fittings.

- The protected area has a maximum height of 33ft.
- For three high, the palletized stack must not be over 10ft. high.
- For four high, the palletized stack must not be over 13ft. 9in. high.
- Steel drums are equipped with a relieving style fitting in the 2- and 3/4-in. openings.
- The stack is protected by a foam-water sprinkler system (also known as AFFF) capable of providing a discharge density of 0.45 gpm/ft.² for stacks three high; 0.60 gpm/ft.² for stacks four high.
- The sprinkler pendants are of the Extra-Large Opening (ELO) variety.

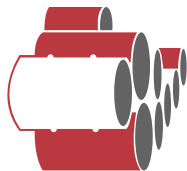
What are the relieving style-fittings constructed of?

The relieving style fittings are constructed of a variety of plastic materials. Your container manufacturer will work with you to determine the proper material for your fitting – nylon, polypropylene, or polyethylene.

Can the relieving style fittings be covered, painted, or otherwise capped?

The fittings must not be painted and cap seals, if used, must also be made of a thermoplastic material. The fire tests stacked the pallets in a random manner that would obstruct and partially-obstruct the fittings. The results showed that even with a fitting obstructed by a pallet, the drum was still capable of venting.

What Can It Do For Me?



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How Do I Determine If Our Facilities Can Take Advantage of the Benefits of NFPA 30?

The first step is to contact the facilities management personnel where you store flammable and combustible liquids. They should be aware of the local fire codes and standards that apply to their facilities. Ask them if the revised NFPA 30 allowing for the greater vertical storage of flammable or combustible liquids has been incorporated into the local fire codes. You also need to determine whether the warehouse or industrial has updated its fire suppression system in accordance with revised NFPA 30.

What If Revised NFPA 30 Has Not Been Adopted Locally?

Local fire codes and standards may fall within the purview of your municipal, county, or state government. You will need to determine who within the governmental structure that deals with them. A good starting point might be the facilities manager where you store flammable and combustible liquids. This individual should be able to provide you a point of contact within government on fire codes and standards. From there, it will be a matter of determining whether local officials are aware of the revised NFPA 30 and, if so, whether or not they intend to incorporate its provisions into the local fire code requirements. Depending on the response of local officials, it may be necessary for you to work with others of common interest in urging officials to effect adoption of the revised NFPA 30.

The SSCI's fire test video is a valuable educational tool in raising awareness of the change in NFPA 30 and promoting its adoption with municipal, county, and state fire officials as a safe and effective means of storing flammable and combustible liquids in steel drums while enhancing the safety of first responders.

Why is steel a superior packaging choice?

Steel packagings offer Improved Storage Efficiencies.

- Using steel drums with relieving style fittings allows a facility to safely increase storage capacity within the same "footprint."
- Increase in vertical storage also enhances the value of warehouse space to owners.
- Structurally strong and stackable.
- Cost less to insure during storage.

Steel packagings Reduce the Risk of Loss.

- Using steel drums minimizes leakage.
- Steel packagings are puncture resistant and highly fire-resistant with a low risk of ignition due to static electricity.
- Steel packagings have a 99.9% safety record for protecting against spills of hazardous materials.
- Steel packagings also are effective in guarding against product contamination and degradation.
- Steel packagings with relieving style fittings ensure a higher level of safety for employees, fire fighters, and property.

Steel packagings are Environmentally Sound.

- Steel packagings are recyclable – even in a fire, relieving style fittings allow a steel drum to survive, and although it may not be usable, it can be recycled.
- Steel packagings are recycled at a rate of 66% in the United States.
- All new steel packagings contain at least 20-30% scrap steel making them, unquestionably, the responsible environmental choice.

Who should I contact if I have more questions concerning NFPA 30 or steel packagings?

You can contact the Steel Shipping Container Institute in Washington, DC at (202) 408-1900 or via Fax at (202) 408-1972.