

**North Carolina Department of Labor
Occupational Safety and Health Division**

Raleigh, North Carolina

Field Information System

Standards Notice 18C

Subject: Approved Containers to Store Flammable Liquids in General Industry

A. Standard.

29 CFR 1910.106 (d)(2)(iii) - Size. Flammable liquid containers shall be in accordance with Table H-12, except that glass or plastic containers of no more than 1 gallon capacity may be used for Category 1 or 2 flammable liquids if...”

B. Discussion.

29 CFR 1910.106(d)(2)(iii) specifies the maximum container size depending upon the category of flammable liquid and the type of material from which the container is made. CSHO’s consistently see flammable liquids in plastic and glass containers that are larger than allowed by the standard. However, in many cases the chemical is in the container in which it was shipped to the employer.

Some plastic and glass containers on the market are approved by nationally recognized testing laboratories and are larger than the sizes listed in Table H-12 (see Appendix A) and the exception in 29 CFR 1910.106 (d)(2)(iii). Additionally, the U.S. Department of Transportation (USDOT) exemptions permit the use of USDOT specification and non-specification polyethylene containers and non-regulated containers for transporting specifically identified Class B poisonous liquids and combustible and flammable liquids in motor vehicles, rail freight, and cargo vessels.

NFPA 30 (2012 edition) states in paragraphs 9.4.1 - “Only the following approved containers, intermediate bulk containers, and portable tanks shall be used in Class I, Class II, and Class IIIA liquids:

9.4.1(2) - Plastic or metal containers meeting the requirements of, and used for petroleum products within the scope of one or more of the following specifications: (a) ASTM F 852, Standard Specification for Portable Gasoline Containers for Consumer Use (b) ASTM F 976, Standard Specification for Portable Kerosene and Diesel Containers for Consumer Use (c) UL 1313, Nonmetallic Safety Cans for Petroleum Products (d) UL 30, Standard for Metal Safety Cans (e) UL 1314, Standard for Special Purpose Metal Containers (f) FM Global, Approved Standard for Safety Containers and Filling, Supply, and Disposal Containers – Class Number 6051 and 6052.

9.4.1(3) - Plastic containers that meet requirements set by the USDOT Hazardous Materials Regulations in Title 49, Code of Federal Regulations (CFR), Parts 100-199, and the National Motor Freight Classification for liquids that are not classified as hazardous by the USDOT.

9.4.1(6) - Glass containers up to the capacity limits stated in Table 9.4.3 and in accordance with USDOT Hazardous Materials Regulations in 49 CFR Parts 100-199.”

SN 18C cont'd.

C. **Interpretation.**

The NCDOL OSH Division will not issue citations to employers using plastic, glass or metal containers (including safety cans) larger than the sizes allowed by Table H-12 or as excepted in 29 CFR 1910.106(d)(2)(iii) if they are constructed in accordance NFPA 30 9.4.1. Additionally, CSHO's will not issue citations if the liquid within the container has a USDOT exemption in effect for shipment in polyethylene containers and is identified as meeting the requirements of the USDOT exemption. See Appendix A for allowable container sizes and a comparison table for NFPA 30 and 29 CFR 1910.106.

Note: A container is any vessel (can, barrel, or drum) of 60 gallons or less capacity used for storing liquids.

D. **Effective Date.**

SN 18B is canceled. This SN is effective on the date of signature. It will remain in effect until revised or canceled by the director.

Signed on Original

Fleda Anderson

Health Standards Officer

Signed on Original

Allen McNeely

Director

8/13/2012

Date of Signature

Appendix A: Tables Referenced in Discussion.

Revised 29 CFR 1910.106(d)(2)(iii)
 Table H-12 – Maximum Allowable Size of Containers and Portable Tanks

	<u>Flammable Liquids</u>			
<u>Container Type</u>	<u>Category 1</u>	<u>Category 2</u>	<u>Category 3</u>	<u>Category 4</u>
Glass or approved plastic	1 pt	1 qt	1 gal	1 gal
Metal (other than DOT drums)	1 gal	5 gal	5 gal	5 gal
Safety cans	2 gal	5 gal	5 gal	5 gal
Metal drums (DOT spec.)	60 gal	60 gal	60 gal	60 gal
Approved portable tanks	660 gal	660 gal	660 gal	660 gal

NFPA 30 (2012 Edition) Table 9.4.3**
 Maximum Allowable Size – Containers, Intermediate Bulk Containers (IBCs), and Portable Tanks

	<u>Flammable Liquids</u>			<u>Combustible Liquids</u>	
<u>Container Type</u>	<u>Class IA</u>	<u>Class IB</u>	<u>Class IC</u>	<u>Class II</u>	<u>Class IIIA</u>
Glass	1 pt (0.5 L)	1 qt (1 L)	1.3 gal (5 L)	1.3 gal (5 L)	5.3 gal (20 L)
Metal (other than drums) or approved plastic	1.3 gal (5 L)	5.3 gal (20 L)	5.3 gal (20 L)	5.3 gal (20 L)	5.3 gal (20 L)
Safety cans	2.6 gal (10 L)	5.3 gal (20 L)	5.3 gal (20 L)	5.3 gal (20 L)	5.3 gal (20 L)
Polyethylene UN1H1 and UN1H2, or as authorized by DOT exemption	1.3 gal (5 L)	5.3 gal (20 L)	5.3 gal (20 L)	119 gal (450 L)	119 gal (450 L)

**Other categories (Metal drum, Metal portable tanks, IBCs, Non-bulk Bag-in-Box, and Fiber drums) can be referenced in NFPA 30 (2012 Edition).

Table Comparing New 1910.106 and Current NFPA 30

NFPA 30 has not changed their nomenclature of the “classes” of flammable liquids to “categories” and also still distinguishes between flammable liquids and combustible liquids. For clarity, this equivalency chart is included as a convenience.

Flash Point (FP)	Flammable Liquid <i>Category</i>	Flammable And Combustible Liquid <i>Class</i>
FP Below 73.4°F (23°C) / AND Boiling Point (BP) at or below 95°F (35°C)	Category 1	Class IA
FP Below 73.4°F (23°C) / AND BP above 95°F (35°C)	Category 2	Class IB
At or above 73.4°F (23°C) but below 100°F (37.8°C)	Category 3	Class IC
At or above 100°F (37.8°C) and at or below 140°F (60°C)		Class II (“Combustible Liquid”)
Above 140°F (60°C) and at or below 199.4°F (93°C)	Category 4	Class III (“Combustible Liquid”)
Above 199.4°F	Not regulated by 1910.106, UNLESS a liquid with a FP greater than 199.4°F is heated for use to within 30°F of its flashpoint, it then shall be handled in accordance with the requirements for a Category 4 flammable liquid.	Class IIIB (was not regulated by 1910.106)