

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

**Raleigh, North Carolina**

Field Information System

Standards Notice 18B

**Subject:** Approved Containers to Store Flammable and Combustible Liquids in General Industry

**A. Standard.**

**29 CFR 1910.106 (d)(2)(iii) - Size.** Flammable and combustible 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 Class IA or IB flammable liquids if..."

**B. Discussion.**

29 CFR 1910.106(d)(2)(iii) specifies the maximum container size depending upon the class of flammable or combustible liquid and the type of material from which the container is made. CSHO's consistently see flammable and combustible 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 below) and the exception in 29 CFR 1910.106 (d)(2)(iii). Additionally, the U.S. Department of Transportation (USDOT) exemptions permit the use of DOT 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 (2008 Edition) 9.4.1 states "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."

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 DOT exemption in effect for shipment in polyethylene containers and is identified as meeting the requirements of the DOT exemption.

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

D. **Effective Date.**

SN 18A 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

5/27/2011

Date of Signature

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

| <b>Container Type</b>        | <b><u>Flammable Liquids</u></b> |                        | <b><u>Combustible Liquids</u></b> |                        |                         |
|------------------------------|---------------------------------|------------------------|-----------------------------------|------------------------|-------------------------|
|                              | <b><u>Class IA</u></b>          | <b><u>Class IB</u></b> | <b><u>Class IC</u></b>            | <b><u>Class II</u></b> | <b><u>Class III</u></b> |
| Glass or approved plastic    | 1 pt                            | 1 qt                   | 1 gal                             | 1 gal                  | 1 gal                   |
| Metal (other than DOT drums) | 1 gal                           | 5 gal                  | 5 gal                             | 5 gal                  | 5 gal                   |
| Safety cans                  | 2 gal                           | 5 gal                  | 5 gal                             | 5 gal                  | 5 gal                   |
| Metal drums (DOT spec.)      | 60 gal                          | 60 gal                 | 60 gal                            | 60 gal                 | 60 gal                  |
| Approved portable tanks      | 660 gal                         | 660 gal                | 660 gal                           | 660 gal                | 660 gal                 |

**NFPA 30 (2008 Edition) Table 9.4.3\*****Maximum Allowable Size – Containers, Intermediate Bulk Containers (IBCs), and Portable Tanks**

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

\*Other categories (Metal drum, Metal portable tanks, IBCs, Non-bulk Bag-in-Box, and Fiber drums) can be referenced in NFPA 30 (2008 Edition).