

Day-Brite Lighting Solution

Given:

- Light fixture in single thickness cardboard box
- Boxes measure 20 x 20 x 10 inches
- 3.17 lbs. per box
- 32 boxes per pallet
- Conventional 40-lb. 4 x 4 x 4' wooden pallet

Group A Composition by Volume

- Each box measures 20 x 20 x 10 = 4,000 in³ per box
- 4,000 x 32 = 128,000 in³
- Pallet volume = 48 x 48 x 4 = 9,216 in³
- Unit load total volume = 137,216 in³

- Group A expanded plastic added by volume
- Two pieces 20 x 20 x 1/2-inch (top and bottom = 1-in total) = 400 in³
- Four pieces (sides) of 1-inch = 20 x 10 x 4 = 800 in³
- 1200 in³ per box x 32 = 38,400 in³

$$38,400 \text{ in}^3 \div 137,216 \text{ in}^3 = 27.98\% \text{ by volume}$$

Group A Composition by Weight

- Each box weighs 3.17 lbs.
- 32 boxes at 3.17 lbs. each = 118.4 lbs.
- Plus 40 lb. pallet
- Unit load total weight = 158.4 lbs.
- 38,400 in³ of Group A expanded plastic = 0.03 ounce/in³
- 252 ounces/16 ounces per pound = 15.75 lbs. per unit load

$$15.75 \div 158.4 = 9.943\% \text{ by weight}$$

IFC® 2021 Figures 3203.9 (1) and (2) Changes

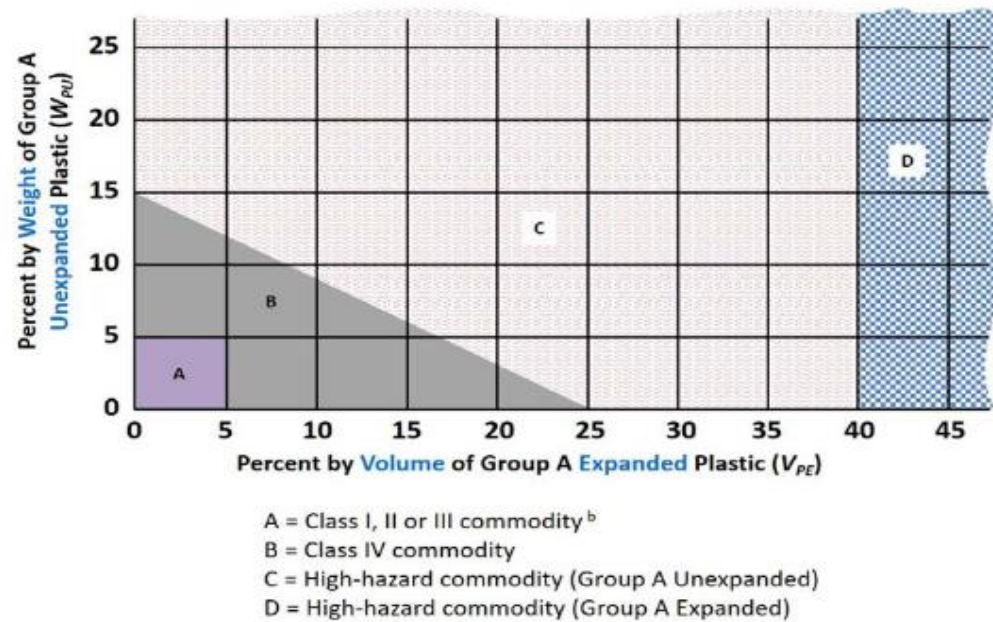


FIGURE 3203.9(1)
EVALUATION OF CARTONED COMMODITIES CONTAINING GROUP A PLASTICS^{a,c}

- a. This figure is used to determine the commodity classification of a mixed commodity with Group A plastics in a package, carton or crate.
- b. No increase in commodity classification shall be required for cartoned Class I, II or III commodities with not greater than 5 percent by volume of Group A expanded plastic and not greater than 5 percent by weight of Group A unexpanded plastic.
- c. The following is an example of how to apply Figure 3203.9(1): A pallet load consists of a Class III commodity in cardboard boxes with components of unexpanded Group A plastic and packing material of expanded Group A plastic. Using Equation 32-1, the weight of unexpanded Group A plastic is 5-percent. Using Equation 32-2, the volume of expanded Group A plastic is 15-percent. This commodity is classified as a Class IV commodity. If the volume of the expanded Group A plastic is increased to 20-percent, the classification changes to a High-hazard (Group A unexpanded) commodity. Where the load is stored on a plastic pallet, the requirements in Section 3203.10 also apply.

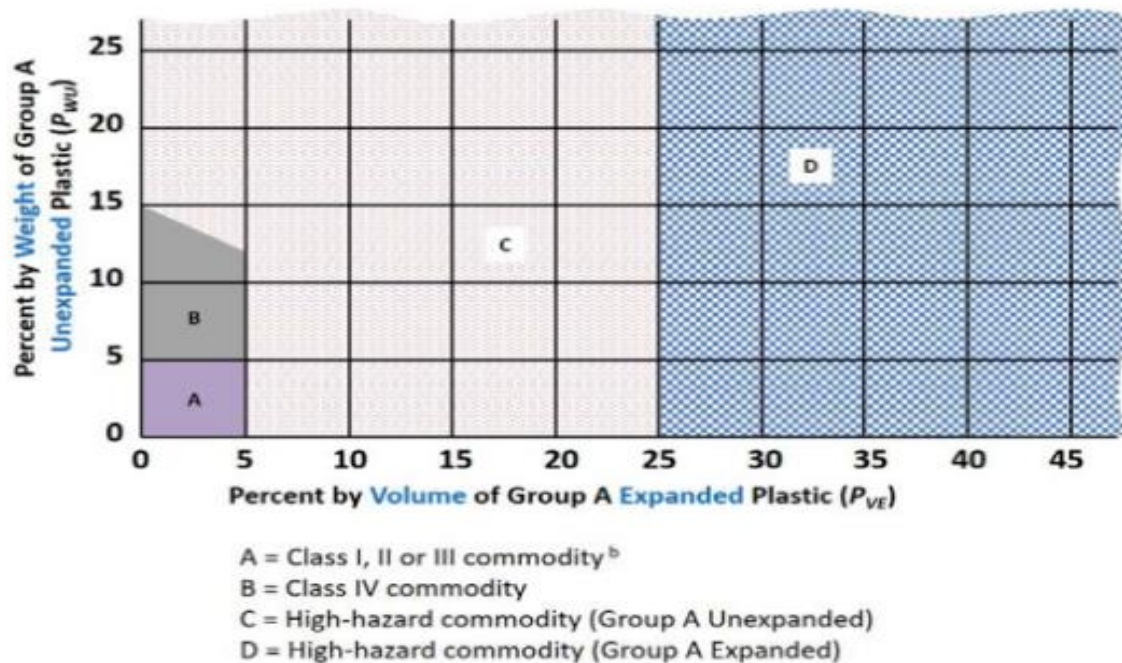


FIGURE 3203.9(2)
EVALUATION OF EXPOSED COMMODITIES CONTAINING GROUP A PLASTICS^{a,c}

- This figure is used to determine the commodity classification of a mixed commodity with Group A plastics where the products are exposed.
- No increase in commodity classification shall be required for Class I, II or III commodities with not greater than 5 percent by volume of Group A exposed expanded plastic and not greater than 5 percent by weight of Group A exposed unexpanded plastic.
- The following is an example of how to apply Figure 3203.9(2): A pallet load consists of an exposed Class III commodity with components of unexpanded Group A plastic and packing material of expanded Group A plastic. Using Equation 32-1, the weight of unexpanded Group A plastic is 5-percent. Using Equation 32-2, the volume of expanded Group A plastic is 6-percent. This commodity is classified as a High-hazard (Group A unexpanded) commodity. Where the load is stored on a plastic pallet, the requirements in Section 3203.10 also apply.