

§ 178.812 Top lift test.

(a) *General.* The top lift test must be conducted for the qualification of all IBC design types designed to be lifted from the top or, for flexible IBCs, from the side.

(b) *Special preparation for the top lift test.* (1) Metal, rigid plastic, and composite IBC design types must be loaded to twice the maximum permissible gross mass with the load being evenly distributed.

(2) Flexible IBC design types must be filled to six times the maximum net mass, the load being evenly distributed.

(c) *Test method.* (1) A metal or flexible IBC must be lifted in the manner for which it is designed until clear of the floor and maintained in that position for a period of five minutes.

(2) Rigid plastic and composite IBC design types must be:

(i) Lifted by each pair of diagonally opposite lifting devices, so that the hoisting forces are applied vertically, for a period of five minutes; and

(ii) Lifted by each pair of diagonally opposite lifting devices, so that the hoisting forces are applied towards the center at 45° to the vertical, for a period of five minutes.

(3) If not tested as indicated in paragraph (c)(1) of this section, a flexible IBC design type must be tested as follows:

(i) Fill the flexible IBC to 95% full with a material representative of the product to be shipped.

(ii) Suspend the flexible IBC by its lifting devices.

(iii) Apply a constant downward force through a specially designed platen. The platen will be a minimum of 60% and a maximum of 80% of the cross sectional surface area of the flexible IBC.

(iv) The combination of the mass of the filled flexible IBC and the force applied through the platen must be a minimum of six times the maximum net mass of the flexible IBC. The test must be conducted for a period of five minutes.

(v) Other equally effective methods of top lift testing and preparation may be used with approval of the Associate Administrator.

(d) *Criteria for passing the test.* For all IBC design types designed to be lifted from the top, there may be no permanent deformation which renders the IBC, including the base pallets when applicable, unsafe for transportation, and no loss of contents.

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