

§ 176.704 Requirements relating to transport indices and criticality safety indices.

- (a) The sum of the transport indices (TI's) for all packages of Class 7 (radioactive) materials on board a vessel may not exceed the limits specified in Table IIIA of this section.
- (b) For freight containers containing packages and overpacks of Class 7 (radioactive) materials, the radiation level may not exceed 2 mSv per hour (200 mrem per hour) at any point on the outside surface and 0.1 mSv per hour (10 mrem per hour) at 2 m (6.6 ft) from the outside surface of the freight container.
- (c) The limitations specified in Table IIIA of this section do not apply to consignments of LSA-I material.
- (d) The sum of the criticality safety indices (CSI's) for all packages and overpacks of fissile Class 7 (radioactive) materials on board a vessel may not exceed the limits specified in Table IIIB of this section.
- (e) Each group of fissile Class 7 (radioactive) material packages and overpacks, containing a sum of CSIs no greater than 50 for a non-exclusive use shipment, or no greater than 100 for an exclusive use shipment, must be separated from all other groups containing fissile material packages and overpacks by a distance of at least 6 m (20 ft) at all times.
- (f) The limitations specified in paragraphs (a) through (c) of this section do not apply when the entire vessel is reserved or chartered for use by a single offeror under exclusive use conditions if—
- (1) The number of packages of fissile Class 7 (radioactive) material satisfies the individual package CSI limits of §173.457 of this subchapter, except that the total sums of CSI's in the last column of Table IIIB of this section, including table note (d) apply;
 - (2) A radiation protection program for the shipment has been established and approved by the competent authority of the flag state of the vessel and, when requested, by the competent authority at each port of call;
 - (3) Stowage arrangements have been predetermined for the whole voyage, including any consignments to be loaded at ports of call;
 - (4) The loading, transport and unloading are to be supervised by persons qualified in the transport of radioactive material; and
 - (5) The entire shipment operation is approved by the Associate Administrator in advance.

(g) Table IIIA is as follows:

Table IIIA—TI Limits for Freight Containers and Conveyances

Type of freight container or conveyance	Limit on total sum of transport indices in a single freight container or aboard a conveyance	
	Not under exclusive use	Under exclusive use
I. Freight container—small	50	N/A.
II. Freight container—large	50	No limit.
III. Vessel: ^{a,b}		
1. Hold, compartment or defined deck area:		
i. Packages, overpacks, small freight containers	50	No limit.
ii. Large freight containers	200	No limit.

2. Total vessel:		
i. Packages, overpacks, small freight containers	200	No limit.
ii. Large freight containers	No limit	No limit.

Notes:

^aFor vessels, the requirements in both 1 and 2 must be fulfilled.

^bPackages or overpacks transported in or on a vehicle which are offered for transport in accordance with the provisions of §173.441 (b) of this subchapter may be transported by vessels provided that they are not removed from the vehicle at any time while on board the vessel.

(h) Table IIIB is as follows:

Table IIIB—CSI Limits for Freight Containers and Conveyances

Type of freight container or conveyance	Limit on total sum of criticality safety indices in a single freight container or aboard a conveyance	
	Not under exclusive use	Under exclusive use
I. Freight container—small	50	N/A.
II. Freight container—large	50	100.
III. Vessel: ^{a,b}		
1. Hold, compartment or defined deck area:		
i. Packages, overpacks, small freight containers	50	100.
ii. Large freight containers	50	100.
2. Total vessel:		
i. Packages, overpacks, small freight containers	200 ^c	200 ^d .
ii. Large freight containers	No limit ^c	No limit ^d .

Notes:

^aFor vessels, the requirements in both 1 and 2 must be fulfilled.

^bPackages or overpacks transported in or on a vehicle which are offered for transport in accordance with the provisions of §173.441 (b) of this subchapter may be transported by vessels provided that they are not removed from the vehicle at any time while on board the vessel. In that case, the entries under the heading “under exclusive use” apply.

^cThe consignment must be handled and stowed such that the total sum of CSIs in any group does not exceed 50, and such that each group is handled and stowed so that the groups are separated from each other by at least 6 m (20 ft).

^dThe consignment must be handled and stowed such that the total sum of CSIs in any group does not exceed 100, and such that each group is handled and stowed so that the groups are separated from each other by at least 6 m (20 ft). The intervening space between groups may be occupied by other cargo.

