

than 10 grains of explosives composition may be packed into one cubic inch of space, and not more than 17.5 grains of the explosive composition of toy caps may be packed in any inner packaging;

- f. Inner packagings must be packed in outer packagings meeting PG II performance criteria;
- g. Toy caps may be packed with non-explosive or non-flammable articles provided the outer packagings are marked as prescribed in this paragraph;
- h. Toy paper caps of any kind must not be packed in the same packaging with fireworks;
- i. The outside of each package must be plainly marked "ARTICLES, EXPLOSIVES, N.O.S. (TOY CAPS)—HANDLE CAREFULLY" OR "TOY CAPS—HANDLE CAREFULLY"; and
- j. Explosives shipped in conformance with this paragraph must have been examined in accordance with §173.56 of this subchapter and approved by the Associate Administrator.

383 For transportation by motor vehicle, substances meeting the conditions for high viscosity flammable liquids as prescribed in §173.121(b)(1)(i), (b)(1)(ii), and (b)(1)(iv) of this subchapter, may be reassigned to Packing Group III under the following conditions:

- a. Packaging must be UN standard metal drums attached with heavy duty steel strapping to a pallet; and
- b. The capacity of each drum must not exceed 220 L (58 gallons).

384 For green graphite electrodes and shapes that are large single component solid objects not subject to shifting, transport in open rail flat cars, open bed motor vehicles, and intermodal containers is also authorized. The objects must be secured to the flat car, motor vehicle, intermodal container, or unitized by steel banding to wooden runners or pallets and the units secured to the flat car, motor vehicle, or freight container to prevent shifting and movement, including relative motion between the objects, under conditions normally incident to transportation. Stacking is permitted two or more levels high to achieve maximum allowable utilization of the designated vehicle, rail car weight, or intermodal freight container weight or vessel hold volume.

385 Notwithstanding the provisions of §177.834(l) of this subchapter, cargo heaters may be used when weather conditions are such that the freezing of a wetted explosive material is likely. Shipments must be made by private, leased or contract carrier vehicles under exclusive use of the offeror. Cargo heaters must be reverse refrigeration (heat pump) units. Shipments made in accordance with this Special provision are

excepted from the requirements of §173.60(b)(4) of this subchapter.

386 When transported by private motor carrier only, the following corrosive liquids may be packaged in polyethylene bottles with a capacity no greater than 3.785L (one gallon), further packed inside an open-top, heavy wall, high density polyethylene box (*i.e.*, crate) in a manner that the polyethylene bottles are not subjected to any superimposed weight, and the boxes must be reasonably secured against movement within the transport vehicle and loaded so as to minimize the possibility of coming in contact with other lading:

- Compounds, cleaning liquid, NA1760, PG II or III;
- Corrosive liquid, acidic, inorganic, n.o.s., UN3264, PG II;
- Corrosive liquid, acidic, organic, n.o.s., UN3265, PG III;
- Corrosive liquid, basic, inorganic, n.o.s., UN3266, PG II;
- Hypochlorite solutions, UN1791, PG III;
- Hydrochloric acid solution, UN 1789, PG II; and
- Sulfuric acid, UN2796, PG II.

- a. No more than four bottles, securely closed with threaded caps, may be packed in each box.
- b. Each empty bottle must have a minimum weight of not less than 140 grams and a minimum wall thickness of not less than 0.020 inch (0.508 mm).
- c. The completed package must meet the Packing Group II performance level, as applicable for combination packagings with a plastic box outer packaging, in accordance with subpart M of part 178 of this subchapter.
 - (i) Tests must be performed on each type and size of bottle, for each manufacturing location. Samples taken at random must withstand the prescribed tests without breakage or leakage.
 - (ii) One bottle for every two hours of production, or for every 2500 bottles produced, must be tested by dropping a bottle filled to 98% capacity with water from a height of 1.2 meters (3.9 feet) onto solid concrete directly on the closure.
 - (iii) A copy of the test results must be kept on file at each facility where packagings are offered for transportation, and must be made available to a representative of the Department upon request.
 - (iv) The name or symbol of the bottle producer, and the month and year of manufacture, must be marked by embossing, ink-jet printing of permanent ink, or other permanent means on the face or bottom of each bottle, in letters and numbers at least 6 mm (0.2 inch) high. Symbols, if used, must be registered with the Associate Administrator.