

1.0 Scope

This procedure is to be used for shipping 1.4C cartridges as 1.4S. This procedure was established by the Explosives Bureau. See Appendix A for a sample of the Explosives Bureau letter.

2.0 Packaging I (up to 20 cartridges per box)

Each device is placed in either one bag or double bags and optionally in a small box. This is placed in a hard pressed paperboard tube (OD: 4.00", ID: 3.25", Thickness: 0.38", H: 3.60"). Up to a maximum of 20 tubes are inserted vertically in 4 rows of 5 each in a 0.50" thick Homasote board spacer with 20 holes (D: 4.06"). This is placed on top of a 1.00" thick Homasote board as the base. Another piece of 1.00" thick Homasote board is placed on top of these paperboard tubes and strapped with three metal straps (Width: 0.63") to form a unit. The unit has a minimum tube to tube separation distance of 0.50". Each unit is then overpacked in a 4G corrugated fiberboard box (ID: 23.00" x 18.50" x 5.63"). Reference Figure I.

Reference: Cartridge Packaging Kit PN 424634

3.0 Packaging II (up to 2 cartridges per box)

Each device is placed in either one bag or double bags and optionally in a small box. This is placed in a hard pressed paperboard tube (OD: 4.00", ID: 3.25", Thickness: 0.38", H: 3.60"). Up to a maximum of 2 tubes are inserted vertically in a 0.50" thick Homasote board spacer with 2 holes (D: 4.06"). This is placed on top of a 1.00" thick Homasote board as the base. Another piece of 1.00" thick Homasote board is placed on top of these paperboard tubes and strapped with three metal straps (Width: 0.63") to form a unit. The unit has a minimum tube to tube separation distance of 1.50". Each unit is then overpacked in a 4G corrugated fiberboard box (ID: 12.50" x 7.00" x 5.63"). Reference Figure II.

Reference: Cartridge Packaging Kit PN 424635

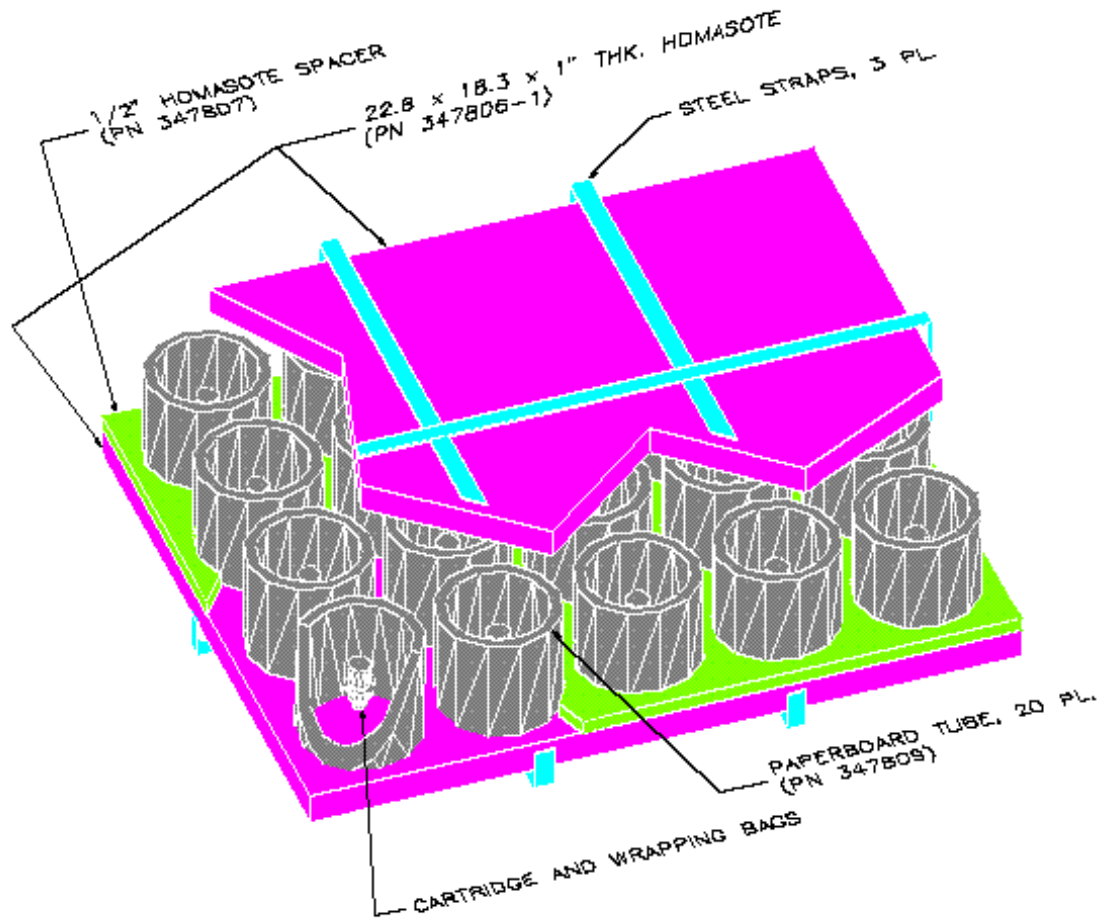


Figure I: up to 20 cartridges per box
(overpack in a 4G corrugated box after banding)

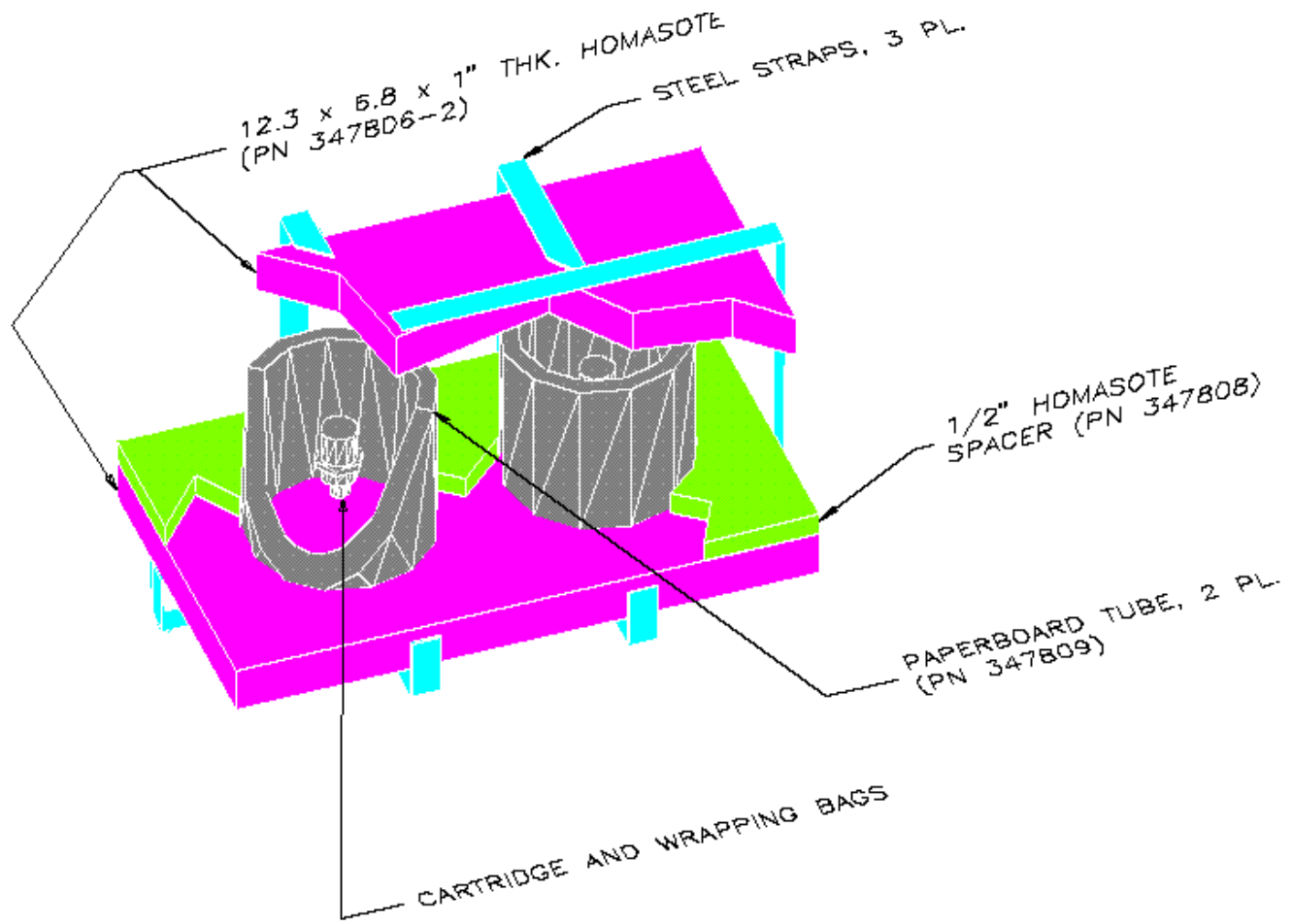


Figure II: Up to 2 Cartridges per box
(overpack in a 4G corrugated box after banding)



EXPLOSIVES BUREAU
 (FORMERLY BUREAU OF EXPLOSIVES LAB./
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8-2-1
 September 23, 2004
 WC/tc

Mr. Lee Hagelbarger
 Kidde Technologies, Inc.
 4200 Airport Dr. NW
 Wilson, NC 27896

Dear Mr. Hagelbarger:

The four devices described in your recent letter and attached drawings # Four Part Numbers * have been examined by the Explosives Bureau and we recommend that these devices be described as Cartridges, power device (UN number: 0323) and classed as Explosive 1.4S in accordance with Sections 172.101, 173.59 of the DOT Hazardous Materials Regulations.

Required packaging and labeling for surface transportation (rail & highway) may be found in sections as follows:

- A. Packaging -- Section 173.62 (Packaging Instruction: 134) **
- B. Marking -- Section 172.300
- C. Labeling -- Section 172.411, Explosive 1.4 Label

Section 173.56 requires that this recommendation accompanied by all supporting data must be submitted to the Department of Transportation for approval before any of these items are offered for shipment.

If we may be of further service, please advise.

Very truly yours,

W. S. Chang
 W. S. Chang

* **Table of Contained Explosives for Four Part Numbers (in mg)**

Part Number	Lead Azide (RD-1333)	HNS-11B	Dextrinated Lead Azide	Ignition Mix	Total Explosives
446479		100	470	120	690
446738		100	470	120	690
878492	230				230
878493	230				230

** **Proposed Packaging I:**

Each device is placed in either one bag or double bags, this is placed in a hard pressed paperboard tube (OD: 4.00", ID: 3.25", Thickness: 0.38", H: 3.60"). To a max. of 20 tubes are inserted vertically in 4 rows of 5 each in a 0.50" thick Homasote board spacer with 20 holes (D: 4.06"). This is placed on top of a 1.00" thick Homasote board as the base. An another piece of 1.00" thick Homasote board is placed on top of these paperboard tubes and strapped with three metal straps (Width: 0.63") to form an unit. The unit has a minimum tube to tube separation distance of 0.50". Each unit is then overpacked in a 4G corrugated fiberboard box (ID: 23.00" x 18.50" x 5.63").

Proposed Packaging II:

Each device is placed in either one bag or double bags, this is placed in a hard pressed paperboard tube (OD: 4.00", ID: 3.25", Thickness: 0.38", H: 3.60"). To a max. of 2 tubes are inserted vertically in a 0.50" thick Homasote board spacer with 2 holes (D: 4.06"). This is placed on top of a 1.00" thick Homasote board as the base. An another piece of 1.00" thick Homasote board is placed on top of these paperboard tubes and strapped with three metal straps (Width: 0.63") to form an unit. The unit has a minimum tube to tube separation distance of 1.50". Each unit is then overpacked in a 4G corrugated fiberboard box (ID: 12.50" x 7.00" x 5.63").