

APPENDIX 4-A

STORAGE OF LEAD

1. *Description*

a. Lead now in storage is in the form of pigs or ingots. The shape and weight of a pig or ingot is determined by the producer. Domestically produced pigs weigh 80 to 110 pounds. Foreign produced pigs weigh slightly less. Ingots weigh approximately 2,000 pounds.

b. New receipts of lead will be in pig form and shall be in the following grades:

Grade	Grade Designation
Corroding Chemical	A B
Acid-Copper	J
Common Desilverized	K

c. In addition to the above listed grades, quantities of common desilverized lead A (grade designation E) and common lead (grade designation H) are now in storage.

2. *Packaging.* Although some lead may be received in wired or strapped unit loads of approximately 20 pigs, ordinarily the material will be received loose.

3. *Marking.* Identification of material will be obtained from information shown on shipping documents. New receipts of lead shall have a brand cast or die-stamped on each unit by which the producer can be identified. DNSC-OL shall be contacted for further instructions if shipments are received prior to receipt of identifying documents, if shipments are received without grade symbol or grade name cast or die stamped into the metal, or if grade marking is different from that shown on shipping documents.

4. *Storage*

a. Lead shall be stored on open improved space equivalent to Type B (stabilized aggregate) or better as described in Chapter 4 of this Manual, capable of sustaining a load of not less than 3,000 pounds per square foot.

b. As lead, except one-ton ingots, is produced in pigs of variable shapes and sizes, it is impossible to prescribe a precise manner for forming lifts of a uniform count. Generally, the make-up of lifts will be left to the discretion of the Depot Manager. However, all lifts of a specific shape and size must contain a uniform number of pigs. Where base and spacer pieces are used to provide stack stability and ease of handling, all stacks must contain the same number of base and spacer pieces. All rows in a block must contain the same number of stacks. This method of storage permits the taking of an inventory at any time by count and computation.

c. Residual pigs remaining after uniform stacks are formed shall be placed in a separate stack as part of the same block. The residual lift shall be banded with galvanized wire or strapping as necessary to maintain the integrity of the residual lift.

APPENDIX 4-A

STORAGE OF LEAD

d. The maximum height of stacks of 100 pound or smaller pigs, including base and spacer pigs, shall be five feet (generally 4 lifts) for interior stacks and three and one-half to four feet (generally 3 lifts) for the perimeter stacks.

e. A base comprised of the appropriate number of pigs shall be placed, wide side down, edge to edge, on the storage surface under each stack. In forming lifts, all pieces shall be arranged so as to provide the greatest stack stability.

f. In forming the outer rows, or perimeter of each block, lifts shall be set up in step fashion with the base pigs and bottom lift set out approximately 12 inches, the second lift 6 inches, and the third lift against the block. If the reach of the forklift does not permit forming “step stacks” by using the distances indicated, such distances may be adjusted, but in no case shall the bottom lift be less than 8 inches from the block.

g. In the storage of one-ton ingots, interior stacks shall be limited to three ingots in each. Stacks comprising the outer rows, or perimeter, shall also be comprised of three ingots each; however, they shall be set up in step fashion with the first ingot set out approximately 12 inches, the second ingot 6 inches and the third ingot against the block. If the reach of the forklift does not permit forming “step stacks” by using the distances indicated, such distances may be adjusted, but in no case shall the bottom lift be less than 8 inches from the block.

h. Since lead adapts itself to self-palletizing, wooden pallets or dunnage will not be used in the stacks.

i. Segregation by grade and brand is required. Aisles separating grades shall be held to a minimum width necessary for operating equipment to construct the perimeter stacks as specified.

j. A 3” x 5” aluminium tag shall be wired to the main aisle stack of each storage row with Aluminium wire. The tag shall show the name of the material, grade, storage location, number of stacks in a row (involving the residual stack, if any), the number of pieces in each stack, and the total number of pieces in the row. For example:

(Name and Grade)	Lead - Corroding
(Storage Location - Block 4, Area A, Row 3)	4 - A - 3
(Number of Stacks in Row and Pieces in Stack)	14/85/2/69/1/31
(Total Pieces in Row)	1359

k. It is not necessary to replace existing tags until normal replacement is needed.

5. Precautions To Be Taken

APPENDIX 4-A

STORAGE OF LEAD

- a. *Health.* When restacking , banding and/or handling is required, refer to the DNSC Occupational Safety and Health Guide for Lead.
- b. *General.* Important: Under no circumstances shall the material be moved from its original place of storage without authority from DNSC-O. If relocation of material is properly authorized, refer to guidance on die stamping requirements contained in Chapter IV of this Manual.
6. *Average Storage Factor.* The average storage factor for the storage of lead pigs and ingots is approximately 2.0 gross square feet per short ton.

FOR ADDITIONAL INFORMATION ON THIS COMMODITY REFER TO THE MATERIAL SAFETY DATA SHEET OR THE MOST RECENT PURCHASE SPECIFICATION.