

APPENDIX 4-A

STORAGE OF ALUMINUM OXIDE, FUSED CRUDE

1. *Description.* Aluminum oxide is an abrasive produced by fusing abrasive grade bauxite, coke, and iron at high temperature in an electric furnace. After cooling, the fused mass is crushed. The type of material stockpiled is of varying shades of dark to reddish brown, with lumps not exceeding six inches in diameter and of one grade only. Some dustlike particles will be included as well as small grains accumulated in crushing or chipped off in handling. When acquired, it shall meet Purchase Specification P- 90-R3 (Current Edition).

2. *Packaging.* All aluminum oxide, fused crude, is shipped in bulk.

3. *Marking.* Positive identification of aluminum oxide will be obtained from documents accompanying each shipment and on shipping instructions issued by the DNSC-OL. Whenever identifying documents are lacking, or are not in agreement with the shipping instructions, DNSC-OL shall be notified immediately to assure proper identification prior to piling.

4. *Storage.*

a. Aluminum oxide shall be stored on open improved space equivalent to Types C, D, E, or F described in Chapter IV of this manual. Prior to forming new piles, any special work required such as preparation of the pad, installation of curbing or barriers, will be designated by the DNSC-OL.

b. Material will be segregated into piles as indicated on shipping instructions issued by DNSC-OL at which time pile numbers will be assigned. Segregation will be by producer only.

c. In laying out the storage area, the piles will be located so that a 25 foot clearance will be maintained between the toes of finished piles of aluminum oxide and other ores. A minimum clearance of 5 feet is required between individual aluminum oxide piles regardless of producer. Commingling of material is not permissible unless specifically authorized by DNSC-OL. All piles shall be so laid out as to be accessible for outloading.

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- d. All piles will be identified with appropriate signs. Temporary signs shall be provided by the storage facility showing name of material, producer, and pile numbers. When piles are completed, DNSC-OL will furnish permanent signs.
- e. Shipments will generally be accomplished in open top railcars or trucks. Special care must be exercised to load aluminum oxide only in clean, sound cars and trucks.
- f. Weights will normally be obtained by light and heavy weighing of rail cars and trucks on approved depot scales, if available, and weight certificate DLAH Form 44 issued. If depot scales are not available, the nearest railroad or public truck scales shall be used.

5 Precautions To Be Taken

- a. *Health.* Goggles must be worn during handling operations to prevent serious eye injuries from fine and hard particles. Gloves should be worn to prevent cutting of hands.
- b. *General.* Material must be kept free from all contamination.

6. *Average Storage Factor.* 14 net cubic feet per short ton. Angle of repose about 32 - 35 degrees.

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