

# **USDA COMMODITY REQUIREMENTS**

## **DMD1 NONFORTIFIED NONFAT DRY MILK FOR USE IN DOMESTIC PROGRAMS**

Effective Date: 11/22/05

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DMD1  
NONFORTIFIED NONFAT DRY MILK  
FOR USE IN DOMESTIC PROGRAMS**

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**Part 1 COMMODITY SPECIFICATIONS**

**Section 1.1 COMMODITIES**

A. Quality of Product

- (1) The nonfortified nonfat dry milk purchased shall be Type I, Class A-low heat, Salmonella negative, in accordance with Commercial Item Description (CID) A-A-20085C (February 13, 2001). CID A-A-20072B is available at <http://www.ams.usda.gov/fqa/aa20085c.htm>.
- (2) Whey Protein Nitrogen (WPN) classification: The nonfat dry milk shall be low-heat, medium heat, or high heat as specified in the Invitation for Bid. The nonfat dry milk shall be tested for WPN in accordance with the 17<sup>th</sup> Edition, “Standard Methods for the Examination of Dairy Products”, to determine the heat treatment classification listed in the table below:

<b>WPN</b>	<b>Description</b>
Low Heat	The finished product shall show not less than 6.0 mg. undenatured WPN per gram.
Medium-Heat	The finished product shall show not less than 1.55 mg. and not more than 5.99 mg. undenatured WPN per gram.
High-Heat	The finished product shall show not more than 1.5 mg. undenatured WPN per gram.

B. Production Requirements

- (1) The product delivered to the Government shall have been processed in the United States from fluid milk which was produced in the United States, and shall not have been owned by the Government.
- (2) The plants in which the product is to be processed shall be inspected and approved by the Dairy Grading Branch, Dairy Division, Agricultural Marketing Service (AMS).
- (3) The nonfat dry milk shall be nonfortified spray process and shall be U.S. Extra Grade. The nonfat dry milk shall be subject to penicillin and coliform tests to be performed by AMS at the time of grading. The penicillin test shall be negative, and the coliform counts shall not be more than 10 per gram. Moisture content shall not exceed 3.5%.
- (4) As specified in the Invitation for Bid, the nonfat dry milk may be made from Grade A milk, which is received, processed, and dried in plants that comply with all applicable requirements of the current version of the “Grade A Pasteurized Milk Ordinance.” Additionally, the milk processing plants shall have a compliance rating of 90 or more at the time of contract award and while the product is made for delivery under the contract. The United States Public Health Service Publication, “Sanitation Compliance

and Enforcement Ratings of Interstate Milk Shippers,” shows compliance ratings at the time of quarterly issuance.

## **Section 1.2 WARRANTY**

The product shall have a shelf life of at least one year from date of delivery to the Government. Product shall not be manufactured more than 60 days prior to delivery.

## **Section 1.3 QUALITY ASSURANCE**

- A. The quality, weight, and packaging of the nonfat dry milk will be evidenced by grading certificates issued by AMS. However, this does not relieve the contractor of its responsibility to deliver nonfat dry milk which complies with all contractual and specification requirements. Procedures and a schedule of fees for these services may be obtained by contacting AMS.
- B. Nonfat dry milk produced in a plant found during inspection to be using unsatisfactory manufacturing practices, equipment, facilities, or to be operating under unsanitary conditions shall not be offered.
- C. The contractor shall not ship the commodity unless the contractor is informed by AMS that the containers, labels, and markings meet the Acceptable Quality Level (AQL) of the United States Standard for Condition of Food Containers. Notice by AMS that a lot scheduled for shipment does not meet the AQL standard shall constitute rejection.
- D. If the nonfat dry milk fails to meet contract specifications on one or more factors on the first inspection, the contractor may arrange with AMS for subsequent inspections of the nonfat dry milk. The inspections may be conducted at origin or a subsequent point of delivery if the provisions of 7 CFR 58.22 through 58.32 issued under the Agricultural Marketing Act of 1946, as amended, with respect to retest, appeal, and new inspections can be met. At the option of the contractor, rejected lots may be reworked including correcting packaging deficiencies and removing unsatisfactory containers, and such reworked lots may be resubmitted for AMS inspection. When subsequent inspections of the nonfat dry milk are made, the results of the last inspection will be used as the basis of payment under the contract.

## **Section 1.4 QUALITY DISCOUNTS**

If the product to be delivered by the contractor does not meet the quality specification, but falls within the discounts listed, the product may be delivered to the Government, but the purchase price shall be reduced in accordance with the following schedules of discounts for each 100 pounds of commodity delivered:

<b>Excess Moisture Content</b>	
3.6%	\$0.08
3.7%	\$1.20
3.8%	\$1.60
3.9%	\$2.00
4.0%	\$2.40

## **Part 2 CONTAINER AND PACKAGING REQUIREMENTS**

### **Section 2.1 GENERAL**

This part provides the container specifications and packaging materials requirements used under this contract.

### **Section 2.2 CONTAINERS AND MATERIALS**

- A. All containers and packaging materials shall be manufactured and assembled in the United States. The components that make up the fabricating materials of the containers and packaging materials shall be of U.S. origin to the extent that they are commercially available. Questions concerning the availability of a material should be directed to:

USDA/FSA/DACO  
Room 5755 – South Bldg, STOP 0551  
1400 Independence Avenue SW  
Washington, DC 20250-0551  
ATTN: Packaging

- B. Constructed to meet the requirements of the Food and Drug Administration (FDA) for safe contact with the packaged product.
- C. The contractor shall obtain and maintain documentation from the container or packaging material manufacturer to verify that the containers and packaging materials used in this contract were in compliance with the Government's requirements.

### **Section 2.3 COMMERCIAL PACKAGING REQUIREMENTS**

- A. Container and packaging requirements are those used in the current commercial shipping practices and shall comply with:
- (1) U.S. domestic origin of containers and packaging materials in Section 2.3.
  - (2) Unitization requirements in Section 2.4.
  - (3) At contractor's option, a statement such as "Not for Retail Sale" may be printed on the principal display panel of the food label.
  - (4) The manufacturer's lot code/lot identification number shall be shown on the commercial bill of lading.
  - (5) Shipping containers shall be marked to show the maximum safe stacking height. It is the responsibility of the contractor in cooperation with the shipping container manufacturers to determine the safe stacking height.

(6) For identification upon receipt at delivery warehouses, all commercial-labeled product shipping documents shall specify “FOR USDA FOOD DISTRIBUTION PROGRAMS.”

B. A company name or brand name shall be shown on all shipping containers.

**Section 2.4 25-KILOGRAM MULTIWALL PAPER BAGS**

A. Twenty-five kilograms of product shall be packed in multiwall paper bags meeting the requirements of Federal Specification UU-S-48, as amended, Type VI, Style B. The use of recycled materials is not required if performance or food safety is jeopardized.

B. Twenty-five kilograms shall be constructed of a minimum of three (3) walls of flat or extensible kraft paper and an inner polyethylene liner. Total basis of weight of the walls for paper shall be a minimum of 180 pounds when flat kraft paper is used, and 160 pounds when extensible paper is used.

C. In accordance with Uniform Freight Classification, Rule 40, as amended the bag shall meet the following requirements:

- (1) Closed by expelling as much excess air as practical;
- (2) Maximum average water-vapor transmission of the film at 90% to 95% relative humidity at 100°F (37.8°C) plus or minus 5°F (-15°C) shall be 0.45 gram per 100 square inches in 24 hours.
- (3) Longitudinal seams of the outer wall of the bag shall be glued so that there is no more than 3/16-inch of unglued edge on the outer surface of the bag. The adhesives used in the longitudinal seams shall be water proof and applied in accordance with Federal Specification UU-S-8, as amended.
- (4) Inner polyethylene film facing the product shall be loose inserted minimum of 3.0 mil (guaranteed) low-density food grade liner.

**Section 2.5 BAG CLOSURES FOR 25-KILOGRAM MULTIWALL PAPER BAGS**

A. Bottom and top of the bag shall be closed to provide a tight seal using hot-melt or thermoplastic adhesive applied along the top edge of the long side of the bag extending downward at least 1-3/8 inches. The fold line of the field closure shall be 1-5/8 inches plus or minus 3/8 inch below the top edge of the long side of the bag (see Exhibit A).

B. The outer wall of the bag shall be stepped at bottom and top foldover flap beyond all inner walls in order to provide a positive seal over the ends of the inner walls.

C. The Bag Closure Guide Location (BCGL) bars shall be plainly visible, approximately one inch in length, printed in two (2) parallel rows evenly spaced over the entire width of the bag. The BCGL bars are to be used as visual quality control verification once the bag is filled and sealed. Visually identifying two (2) bars or no bars on the bag would indicate a bag closure failure. Visually

identifying one bar would indicate a proper bag closure. This does not relieve the bag supplier from meeting all other closure requirements.

**Section 2.6 ALTERNATIVE TO 3-PLY MULTIWALL 25 KILOGRAM BAG**

- A. Any bag construction consisting of one or more plies of material including, but not limited to paper, synthetics, plastic films, woven and non-woven fabrics, etc.
- B. The bag shall be capable of being printed with the information required and capable of retaining a minimal 3.0 mil (guaranteed) low-density food grade polyethylene liner as specified for 3-ply multiwall paper 25 kilogram bag.
- C. Closure of the liner after filling shall be as specified for 3-ply multiwall paper 25 kilogram bag.

**Section 2.7 PERFORMANCE TEST PROCEDURES**

- A. All bags shall be capable of withstanding the following performance test for impact resistance:
  - (1) Ten filled and sealed bags shall each survive a single drop test on the butt and side on a shock machine that produces for each test a velocity change of 195 inches per second using a shock duration of .002 seconds without loss of product.
  - (2) Testing shall be conducted under standard temperature (73.4°F plus or minus 1.8°F) and relative humidity (50% plus or minus 2%) conditions.
  - (3) Filled bags shall be placed in the conditioned atmosphere for sufficient time before the tests are conducted for the bag materials to reach equilibrium.
  - (4) Bags submitted under this performance specification shall conform to all other applicable material, construction, and performance specifications.
- B. Test Laboratories  
Independent or private laboratories known to be capable of conducting the shock machine test described above are as follows:

Michigan State University School of Packaging East Lansing, MI 48824-1223 (517) 355-9580 <a href="http://packaging.msu.edu/">http://packaging.msu.edu/</a>	Lansmont Corporation 1287 Reamwood Sunnyvale, CA 94089 (408) 734-9724  Lansmont Corporation 6539 Westland Way, Suite 24 Lansing, MI 48917 (888) 526-7666 <a href="http://www.lansmont.com">www.lansmont.com</a>
Rutgers University Packaging Science and Engineering Dept. P.O. Box 909 Piscataway, NJ 08854 (201) 932-3679	Ten-E Packaging Services, Inc. 1666 County Road 74 Newport, MN 55055 (651) 459-0671 <a href="http://www.ten-e.com">www.ten-e.com</a>

**Section 2.8 UNITIZATION REQUIREMENTS**

Shipments shall comply with the following unitization requirements:

- A. Unless otherwise specified by the Government, all shipments of packaged products shall be unitized (palletized and stretch wrapped).
- B. Pallets shall be:
  - (1) Constructed to facilitate the safe handling and transportation of the packaged product, as a unit, without loss or damage.
  - (2) A Number 2, four-way, reversible flush stringer with no broken runners or slats.
  - (3) Suitable for use in the shipment of food products.
- C. Plastic stretch wrap shall be:
  - (1) Constructed of a plastic film which is to be stretched a minimum of 50 percent beyond its original length when stretched around the pallet load.
  - (2) Applied as tightly as possible around all tiers of the palletized shipping containers. The shipping containers shall be held firmly in place by the stretch wrap.
- C. Pallet loads shall be:
  - (1) Stacked in such a way as to minimize the amount that shipping containers overhang the edges of pallets.
  - (2) Blocked and braced or otherwise loaded into the conveyance in a manner that prevents shifting during transit.



## **Part 3 MARKING REQUIREMENTS**

### **Section 3.1 MARKING SPECIFICATIONS**

- A. The following information shall be clearly marked on each container by print, lithograph, stamp, or stencil with permanent waterproof blue ink.
- (1) Product name;
  - (2) Heat treatment classification (NOTE: heat treatment classification markings shall be applied at the time of shipment to be in accordance with Whey Protein Nitrogen test result by AMS);
  - (3) Name and location of manufacturing plant or assigned State and plant number as reported for the plant by AMS in "Dairy Plants Surveyed and Approved for USDA Grading Service;"
  - (4) Month and year of manufacture;
  - (5) Manufacturer's lot and subplot number;
  - (6) Bag serial number in order of production;
  - (7) Marked metric net weight in kilograms and marked net weight in pounds;
  - (8) Bag Closure Guide Location (BCGL) Bars shall be printed on the front panel of all multiwall paper bags. The bag manufacturer is responsible for proper placement of the BGCL bars. (see Exhibit A)
  - (9) AMS grading certificate number
  - (10) Nonfortified nonfat dry milk made from Grade A milk in a plant certified under the National Conference of Interstate Milk Shippers as a Grade A plant shall be labeled "Grade A" with markings of sufficient size to stand out prominently.

### **Section 3.2 CONTAINERS WITH INCORRECT MARKINGS**

- A. Any labels, bags, cans, can lids, cases, or any other type of packaging (hereinafter referred to as "containers") displaying incorrect markings may be used under a Government contract provided that the incorrect markings are obliterated and correct markings are applied in a permanent manner with approval of the contracting officer.
- B. The appearance of containers in commercial or other channels either filled or unfilled bearing markings identifying the containers as part of a Government contract may cause the Government expense in determining whether commodities have been diverted from authorized use and in answering inquiries. The contractor shall take all necessary action to prevent the appearance in commercial or other channels of containers and container materials bearing any markings required under a Government contract, including those held by the contractor or others; e.g., overruns, misprints, etc. The contractor shall ensure that any container from a Government contract that appears in commercial or other channels shall have all markings required under this contract permanently obliterated.

## Bag Closure Guide Location

