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USDA COMMODITY REQUIREMENTS

MOZZARELLA CHEESE

FOR USE IN DOMESTIC PROGRAMS

Effective Date: [August 2024](#)

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Part 1 COMMODITY SPECIFICATIONS

Section 1.1 MOZZARELLA CHEESE REQUIREMENTS

A. Product Standards

- (1) Except as otherwise required, the natural Mozzarella cheese shall comply with the appropriate definition and standard of identity, and all regulations issued pursuant to the Federal Food, Drug, and Cosmetic Act, relevant to cheese (21 Code of Federal Regulations (CFR) Parts 1-199, including Parts 133.155 through 133.158, as appropriate for the type of Mozzarella cheese specified in the solicitation.
- (2) Except as otherwise required, the Lite Mozzarella Cheese shall comply with the Commercial Item Description (CID) A-A-20248C **(or latest version)** effective on the date of the solicitation (published separately) which is available at <https://www.ams.usda.gov/grades-standards/cid/dairy-eggs>
- (3) **The delivered cheese shall comply with all applicable Federal and State mandatory requirements and regulations relating to the preparation, packaging, labeling, storage, distribution, and sale of the cheese within the commercial marketplace.**

B. Production Requirements

- (1) The Mozzarella cheese delivered to the Government shall have been manufactured from pasteurized milk that was produced in the United States and not previously owned by the Government and shall be manufactured in plants that were inspected and approved by the Dairy Grading Branch, Dairy Programs Division, Agricultural Marketing Service (AMS). **The USDA AMS Dairy Program plant approval code shall match the appropriate product or operation code(s) for the commodity being offered.**
- (2) Mixing and molding of cheese shall take place no more than 14 days after curd manufacturing.
- (3) Mozzarella cheese which deviates from the specifications contained herein will be rejected, or at the discretion of the contracting officer, accepted at discounts to be determined by the Government.
- (4) Notwithstanding the other provisions of this section, the presence of any extraneous material in the Mozzarella cheese will be the basis for rejection.

C. Product Age and Temperature Requirements

Low Moisture Part-Skim and Lite Mozzarella cheese product age and temperature requirements shall comply with the following:

Requirement	Description
Aging	Mozzarella cheese shall be aged not less than 5 days and not stored more than 30 days at 38° to 42° F (3.3° to 5.6° C) prior to conversion , unless the mozzarella is manufactured and immediately shredded and frozen. (i.e. Individual Quick Frozen [IQF])
Testing and Inspection	Immediately after the aging process is completed, the following shall be performed: <ul style="list-style-type: none"> • Product samples pulled and submitted for product testing; and • Physical and sensory analysis.
Frozen	<p>Immediately after physical analysis is completed, cheese shall be placed in a freezer and the product temperature reduced to 20° F (-6.7°C) within a 24-hour period and held at such temperature until delivered.</p> <p>Exception: If such freezer space is unavailable at the manufacturing plant, the contractor may transport the cheese to a freezer facility at another location provided that the shipment to such facility is completed within 24 hours after the physical analysis is completed. During transportation, the cheese must be maintained at temperatures not higher than 35°F (1.7°C). Contractors are cautioned to take care that the cheese is not crushed or misshaped during the transport from the plant to the freezer facility. Once the cheese is delivered to the alternate facility, it shall be placed in a freezer and the product temperature reduced to 20°F (-6.7°C) and held at such temperature until delivered.</p> <p>Mozzarella cheese may be manufactured and frozen prior to offering to the Government. All frozen cheese may not be more than 180 days old on the date of delivery based on the date of manufacture as shown.</p>
Chilled – Bulk Processor Pack	<p>Bulk cheese to be delivered chilled shall be maintained at a temperature between 32° to 40°F (0° to 4.4°C) after the physical analysis has been completed.</p> <p>All chilled bulk cheese shall be delivered within 19 days of manufacture date.</p>
Chilled – String Cheese	<p>String cheese to be delivered chilled shall be maintained at a temperature between 32° to 40°F (0° - 4.4°C). Secondary Case label shall read “DO NOT FREEZE.”</p> <p>All chilled string cheese shall be delivered within 19 days of manufacture date.</p>

Chilled – Shred Pkg 6/2 lb.	Shred-Pkg 6/2 lb. cheese to be delivered chilled shall be maintained at a temperature between 32° to 40°F (0° - 4.4°C). Secondary Case label shall read “DO NOT FREEZE.” All Shred-Pkg 6/2 lb. cheese shall be delivered within 19 days from the date of packaging.
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D. **Composition Requirements**

Low Moisture Part-skim Mozzarella and Lite Mozzarella cheese composition requirements shall comply with the following:

Composition	Low Moisture Part-skim Mozzarella	Lite Mozzarella
Milk fat %	Greater than or equal to 36% but less than 45% by weight of the solids	Not more than 10.8% (as marketed)
Moisture %	Greater than 45%, but equal to or less than 50%	Range 54.0% - 60.0%
Salt (for all mozzarella excluding string cheese)	Range 1.0% - 1.5%	Range 1.0% - 1.5%
Sodium (for all mozzarella excluding string cheese)	No more than 185 mg of Sodium per 28 g serving	No more than 185 mg of Sodium per 28 g serving
Sodium for String Cheese	No more than 200 mg of Sodium per 28 g serving	N/A
pH value ¹	Range 5.1 – 5.4	Range 5.1 – 5.4

E. **Microbiological Requirements**

Mozzarella cheese shall meet the following microbiological requirements:

Coliform	<10 cfu/g
Yeast and Mold	<100 cfu/g
E. Coli	Negative
Staphylococcus aureus	<10 cfu/g
Salmonella	Negative per 375 grams

F. Physical Analysis

The following physical attributes are required for Low Moisture Part-Skim (LMPS) and Lite Mozzarella cheese:

General Requirements	
Physical Attributes	Description for all Mozzarella Unless Specifically Noted
Flavor and Odor	<ul style="list-style-type: none">• Shall have a mild pleasing flavor and may possess a slight acid and slight feed flavors, but not possess any undesirable flavors or odors.• Vinegar flavor will not be acceptable.
Color	<ul style="list-style-type: none">• Shall have a natural white to light cream, uniform bright color, and an attractive sheen.• The loaf style may possess waviness to a very slight degree and may have a slight variation in color due to salt penetration.

¹ If a re-test of the product is required, the quinhydrone method will be used by AMS laboratories.

General Requirements	
Physical Attributes	Description for all Mozzarella Unless Specifically Noted
Body and Texture	<p>Loaf style (including bulk processor pack):</p> <ul style="list-style-type: none"> • A slice or plug drawn shall be flexible. • Shall be smooth and pliable and shall not possess sweet holes or be gassy. • Shall be free from all foreign and extraneous materials. • May possess the following defects to a slight degree: <ul style="list-style-type: none"> - open - lacking flexibility - mealy - weak <p><i>Note: Lite mozzarella may also be sticky and rubbery to a slight degree.</i></p>
Meltability	<p>When a pizza is baked in a preheated conventional oven at 425°F for 12 minutes; or, in an impinger oven at 475°F for 5 minutes; or, a convection oven, wind speed high, at 375°F for 9 minutes, the cheese must:</p> <ul style="list-style-type: none"> - melt completely; - have no excessive blistering; - have no excessive pooling of oil; - any blistering must be light brown in color; - stretch to a minimum of 3 inches of unbroken string; and - be chewy, but not gummy. <p><i>Meltability is not applicable for String cheese.</i></p>
Appearance	No visible signs of mold.

Additional Shredded Requirements	
Body and Texture	<ul style="list-style-type: none"> • May also be coarse and pasty to a slight degree. • Shall be shredded to a nominal height and width of: <ul style="list-style-type: none"> - 1/8 inch x 1/8 inch - 1/16 inch x 1/16 inch • Length of 1/8 inch to 1 1/2 inches. • Shall be loose and free from clumps except those that readily break up with slight pressure. • Shall be free flowing and shall not be matted. An approved anti-caking agent may be used as a processing aid. If an anti-caking agent is used, the amount used shall be the minimum required to produce the desired effect but shall not exceed 2.0% of the weight of the cheese.
Fines	<ul style="list-style-type: none"> • Shall contain no more than 8.0% fines. • Fines shall be tested using a U.S. Standard Test Sieve: <ul style="list-style-type: none"> - #8 for a size greater than 1/16 inch x 1/16 inch shreds. - #14 (1.4 mm) for 1/16 inch x 1/16 inch shreds or less.
Additional String Cheese Requirements	
Body and Texture	<ul style="list-style-type: none"> • Shall be an extruded product. • Protein strands shall be properly aligned lengthwise to ensure that fibrous strings can be pulled from the string. • Shall be pliable and elastic so that string can be bent without breaking upon itself. • Texture shall be firm and rubbery.
Appearance	<ul style="list-style-type: none"> • Shall be somewhat glossy, smooth, and shiny.
Size	<ul style="list-style-type: none"> • Shall be cylindrical and have a length of 3.875 to 4.752 inches and a diameter of 0.375 to 0.729 inches.

G. Liability

- (1) Frozen Cheese - The contractor shall be liable for losses due to excessive deterioration, mold development, and/or spoilage which are discovered **within 180 days of the date of delivery to the Government.**
- (2) Chilled Bulk Processor Pack Cheese - The contractor shall be liable for losses due to excessive deterioration, mold development, and/or spoilage which are discovered **within 30 days of the date of delivery to the Government.**
- (3) Chilled String Cheese - The contractor shall be liable for losses due to excessive deterioration, mold development, and/or spoilage which are

discovered **within 120 days of the date of delivery to the Government.**

- (4) Chilled Shred-Pkg 6/2 lb. Cheese - The contractor shall be liable for losses due to excessive deterioration, mold development, and/or spoilage which are discovered within 120 days of the date of delivery to the Government.**

Section 1.2 QUALITY ASSURANCE

- (1) The contractor or AMS shall perform the product testing and quality analysis to ensure that the product meets the commodity specifications. *The contractor shall only tender for acceptance those items that conform to the requirements of this contract.* The quality, date(s) of manufacture, weight of the cheese, and percent of anticaking agent shall be evidenced by a Certificate of Analysis (COA) maintained by the contractor. The COAs shall be issued by AMS, an independent commercial laboratory using AOAC International approved methodology, or the contractor's laboratory that complies with the inspection clause of this contract. The contracting officer may require submission of COAs representing contract performance. The manufacturer/distributor shall also certify that the cheese provided conforms to their own specifications, standards, and quality assurance practices, and be the same cheese offered for sale in the commercial market.
- (2) Contractors shall notify the Government immediately of lots that fail to meet contract requirements.
- (3) In the event of quality, performance, or processing concerns, AMS Dairy Grading and/or Commodity Procurement Program reserves the right to perform quality assurance at source. Source includes, but is not limited to: contractor's manufacturing facility; packaging facility; warehouse; in-house laboratory; subcontractor's facilities; etc. (for additional information, refer to the AMS Master Solicitation for Commodity Procurements for Domestic Food Distribution Program Purchases available at <https://www.ams.usda.gov/selling-food/solicitations>).
- (4) All COAs, whether issued by AMS, the contractor, or a third party, shall be retained by the contractor. USDA requires the contractor to retain all COAs for a minimum of seven years from the date of issuance.**
- (5) Examination and certification of the cheese by AMS does not relieve the contractor of their responsibility to deliver cheese which complies with all contractual and specification requirements.**

Section 1.3 WEIGHT REQUIREMENTS

The mozzarella cheese delivered shall be packaged as indicated in the table below:

Type of Mozzarella	Shredded, Frozen or Chilled	Examples of Net Weight Packaging Options & Associated Material Codes
Low Moisture Part Skim (LMPS)	Shredded, Frozen	30 pound box (100021)
	Frozen	8/6 pound loaves (100022)

	Chilled, Processor Packs	200/5 pound tote 120/6 pound tote 96/10 pound tote 96/12 pound tote 60/20 pound tote 48/20 pound tote 72/20 pound tote (110244)
	Chilled, <u>“Wrapped”</u> Processor Packs	60/20 pound tote 48/20 pound tote 72/20 pound tote (111791)
	Chilled, String Cheese	360/1 oz (110396)
Lite	Shredded, Frozen	30 pound box (100034)
Low Moisture Part Skim (LMPS)	Shredded, Chilled	6/2-pound package (111271)

Section 1.4 BULK MATERIALS FOR FURTHER PROCESSING

- A. Material Code 110244 – LMPS Chilled, Bulk Processor Pack must be packaged in totes (master bag). Cheese packaged in totes CANNOT be individually wrapped. Totes must consist of commercially acceptable packaging configurations. Please see table above for examples.**
- B. Material Code 111791 – LMPS Chilled, “Wrapped” Bulk Processor Pack must be packaged in totes (master bag). Cheese packaged in totes MUST consist of commercially acceptable packaging configurations comprised of 20-pound blocks, individually wrapped. Please see table above for examples.**

Part 2 CONTAINER AND PACKAGING REQUIREMENTS

Section 2.1 COMMERCIAL PACKAGING REQUIREMENTS

- A. Contractors shall supply commercial brand products only and shall certify at the time of submission of an offer that the commercial product being delivered has a history of successful distribution and use in domestic commercial channels and is sold on the commercial market with an established level of consumer acceptance.
- B. Container and packaging requirements are those used in the current commercial shipping practices and shall comply with:
- (1) Unitization requirements in [Master Solicitation](#).
 - (2) At contractor’s option, a statement such as “Not for Retail Sale” may be printed on the principal display panel of the food label.
 - (3) The manufacturer’s lot code/lot identification number shall be shown on

- the commercial bill of lading.
- (4) 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.
 - (5) For identification upon receipt at delivery warehouses, all commercial labeled product shipping documents shall specify "FOR USDA FOOD DISTRIBUTION PROGRAMS."
- C. A company name or brand name shall be shown on all shipping containers.
- D. String cheese shall be individually wrapped, peel open packs.

Section 2.2 CONTAINERS AND MATERIALS

- A. All containers and packaging shall be constructed to meet the requirements of the Food and Drug Administration (FDA) for safe contact with the packaged product. 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 regulatory requirements for safe contact with food products as required below:
- 1. Regulatory Requirements for Commodities and Packaging.
 - 2. The commodity shall conform to the applicable provisions of the "Federal Food, Drug, and Cosmetic Act" (21 U.S.C. 301 et. seq.), as amended, and the relevant regulations. The contractor shall comply with all applicable Federal, State and local laws, executive orders, rules and regulations related to its performance under this contract.
 - 3. All containers and packaging materials shall be constructed to meet the requirements of the Food and Drug Administration for safe contact with the packaged product.
 - 4. In addition, all containers and packaging materials shall be constructed to comply with the sum concentration levels of lead, cadmium, mercury, and hexavalent chromium addressed by the Coalition of Northeast Governors (CONEG) model legislation. The sum of the concentration levels of lead, cadmium, mercury, and/or hexavalent chromium present in any package or packaging component shall not exceed 100 parts per million. Concentration levels shall be determined using American Standard of Testing Materials test methods, as revised, or U.S. Environmental Protection Agency test methods for evaluating solid waste, S-W 846, as revised.
- B. If the contractor purchases packaging and container ingredients from a foreign country and/or the package and container is manufactured

in a foreign country, the package and container SHALL NOT display country of origin labeling. Phrases including, but not limited to, “Made in [Name of Foreign Country.]” or “Product of [Name of Foreign Country.]” are strictly prohibited.

Section 2.3 PACKAGING AND LABELING

- A. The production date (month/day/year) shall be labeled as such and be shown on all primary packaging (immediate containers) and secondary shipping containers. Commonly used abbreviations for the production date may be used.
- B. For individual primary containers 6 pounds and smaller (net weight), labels must also meet the following criteria:
- Must include, at a minimum, two (2) colors, in addition to black and white.
 - Must incorporate a graphic (photo or illustration) depicting the product/contents on the principal display panel OR contain a clear viewing window so product/contents are visible.
- C. The statement “DO NOT FREEZE” shall be placed on all outer shipping containers for the String Cheese, and Shredded products.

Section 2.4 LOT CODE/CERTIFICATE NUMBER

A lot code or official inspection certificate number shall be legibly marked on all primary shipping materials. Contractors may use any type of lot coding system, provided a unique code is used to identify each lot under a contract. When requested contractors shall provide to the Government an explanation of the lot coding system utilized.

Section 2.5 MATERIALS

Material Code	Product Description	Cases Per Truck	Net Weight Per Truck
100034	Shredded, Frozen (Lite) 30 lb. box	1,344	40,320 lbs.
110396	Chilled String Cheese (LMPS) 360/1oz case	1,680	37,800 lbs.
111271	Chilled Shred Package 6/2 lb. (LMPS)	2,800	33,600 lbs.

110244	Chilled Bulk Processor Pack (LMPS)	N/A	41,125 lbs.
111791	Chilled Bulk Wrapped Processor Pack (LMPS)	N/A	41,125 lbs.
100022	LMPS Frozen 8/6 lb. loaves	840	40,320 lbs.
100021	LMPS Shredded, Frozen 30lb. box	1,344	40,320 lbs.