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**Agricultural Marketing Service**  
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## **USDA COMMODITY REQUIREMENTS**

### **MOZZARELLA CHEESE**

#### **DMOZ7**

### **FOR USE IN DOMESTIC PROGRAMS**

**Effective Date: September 2019**



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## USDA COMMODITY REQUIREMENTS

### MOZZARELLA CHEESE

#### FOR USE IN DOMESTIC PROGRAMS

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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-20248 effective on the date of the solicitation (published separately) which is available at <https://www.ams.usda.gov/grades-standards/cid/dairy-eggs>

#### 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 more than 15 days at 38° to 42° F (3.3° to 5.6° C), unless the mozzarella is manufactured and immediately shredded and frozen. (i.e. Individual Quick Frozen [IQF])

Requirement	Description
Testing and Inspection	<p>Immediately after the aging process is completed, the following shall be performed:</p> <ul style="list-style-type: none"> <li>• Product samples pulled and submitted for product testing; and</li> <li>• Physical and sensory analysis.</li> </ul>
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><b>Exception:</b> 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 <b>bulk</b> 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).</p> <p>All chilled <b>string</b> cheese shall be delivered within 15 days of manufacture date.</p>

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

<b>Composition</b>	<b>Low Moisture Part-skim Mozzarella</b>	<b>Lite Mozzarella</b>
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 <sup>1</sup>	Range 5.1 – 5.4	Range 5.1 – 5.4

E. Physical Analysis

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

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

<sup>1</sup> If a re-test of the product is required, the quinhydrone method will be used by AMS laboratories.  
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<b>General Requirements</b>	
<b>Physical Attributes</b>	<b>Description for all Mozzarella Unless Specifically Noted</b>
Body and Texture	<p>Loaf style (including bulk processor pack):</p> <ul style="list-style-type: none"> <li>• A slice or plug drawn shall be flexible.</li> <li>• Shall be smooth and pliable and shall not possess sweet holes or be gassy.</li> <li>• Shall be free from all foreign and extraneous materials</li> <li>• May possess the following defects to a slight degree: <ul style="list-style-type: none"> <li>- open</li> <li>- lacking flexibility</li> <li>- mealy</li> <li>- weak</li> </ul> </li> </ul> <p><i>Note: Lite mozzarella may also be sticky and rubbery to a slight degree.</i></p>
Meltability	<p>When a pizza 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"> <li>- melt completely;</li> <li>- have no excessive blistering;</li> <li>- have no excessive pooling of oil;</li> <li>- any blistering must be light brown in color</li> <li>- stretch to a minimum of 3 inches of unbroken string; and</li> <li>- be chewy, but not gummy.</li> </ul> <p><i>Meltability not applicable for string cheese.</i></p>
Appearance	No visible signs of mold.

<b>Additional Shredded Requirements</b>	
Body and Texture	<ul style="list-style-type: none"> <li>• May also be coarse and pasty to a slight degree.</li> <li>• Shall be shredded to a nominal height and width of:               <ul style="list-style-type: none"> <li>- 1/8 inch x 1/8 inch</li> <li>- 1/16 inch x 1/16 inch</li> </ul> </li> <li>• Length of 1/8 inch to 1 1/2 inches.</li> <li>• Shall be loose and free from clumps except those that readily break up with slight pressure.</li> <li>• 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.</li> </ul>
Fines	<ul style="list-style-type: none"> <li>• Shall contain not more than 8.0% fines.</li> <li>• Fines shall be tested using a U.S. Standard Test Sieve:               <ul style="list-style-type: none"> <li>- #8 for a size greater than 1/16 inch x 1/16 inch shreds.</li> <li>- #14 (1.4 mm) for 1/16 inch x 1/16 inch shreds or less.</li> </ul> </li> </ul>
<b>Additional String Cheese Requirements</b>	
Body and Texture	<ul style="list-style-type: none"> <li>• Shall be an extruded product.</li> <li>• Protein strands shall be properly aligned lengthwise to ensure that fibrous strings can be pulled from the string.</li> <li>• Shall be pliable and elastic so that string can be bent without breaking upon itself.</li> <li>• Texture shall be firm and rubbery.</li> </ul>
Appearance	<ul style="list-style-type: none"> <li>• Shall be somewhat glossy, smooth and shiny.</li> </ul>
Size	<ul style="list-style-type: none"> <li>• Shall be cylindrical and have a length of 3.875 to 4.752 inches and a diameter of 0.375 to 0.729 inch.</li> </ul>

F. 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 90 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>).

**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
Low Moisture Part Skim (LMPS)	Shredded, Frozen	30 pound box
	Frozen	8/6 pound loaves
	Chilled, Processor Packs <sup>2</sup>	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
	Chilled, String Cheese	360/1 oz
Lite	Shredded, Frozen	30 pound box

<sup>2</sup> Chilled LMPS Mozzarella shall be packaged in totes (master bag). Cheese packaged in totes CANNOT be individually wrapped.



## **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 Section 2.4.
  - (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 UNITIZATION REQUIREMENT**

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.
- D. 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.

**Section 2.4 MONTH/YEAR OF PACK**

- A. The month/year of pack or actual pack date shall be shown on all primary packaging (immediate containers) and shipping containers.
- B. A date fill code may be applied in addition to, but not in lieu of, the month/year of pack.

**Section 2.5 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.