

ANHYDROUS MILKFAT (AMF)

GDT Premium Grade SpaceKraft –
Fonterra NZ



Anhydrous Milkfat-(GDT Premium Grade) from Fonterra gives a natural dairy flavour and creaminess to finished products and is the perfect high quality fat ingredient. Anhydrous Milkfat-(GDT Premium Grade) is pure milkfat, produced only from fresh cream. It has excellent natural keeping qualities. Anhydrous Milkfat-(GDT Premium Grade) is virtually free of moisture and contains no chemical additives, preservatives, flavours, foreign fats or other impurities.

Product Characteristics

- > 99.9% pure milkfat made from 100% pure cream.
- > Imparts good dairy flavour to product.
- > Anhydrous Milkfat-(GDT Premium Grade) is full of natural goodness – it contains no additives.
- > Is produced in a sophisticated processing plant to ensure product consistency.
- > Excellent shelf life in high quality packaging

Suggested Uses

- > Frying, grilling, roasting.
- > Sauces.
- > Recombined dairy products.
- > Ice cream.
- > Processed cheese.
- > Confectionery.
- > Bakery applications.

Packaging

A 1000kg fibreboard bin enclosing an internal plastic laminate polyethylene bag with an oxygen barrier. This unit has an integral heating element (230VAC or 110VAC), enabling the milkfat to be melted prior to use.

Net weight	1000 kg
Gross weight	1070 kg
Cubic measure – (including pallet)	1.49m ³

Storage and Handling

Anhydrous Milkfat may be transported and stored without refrigeration. However, the storage life will depend on the storage temperature. To maintain quality, it is recommended the product is stored in a cool dry area away from direct sunlight. Provided the seal is unbroken and the above storage conditions are followed, the milkfat will be suitable as a dairy ingredient for up to 12 months after the date of manufacture.

Warning: it is not recommended that product in this packaging is held frozen - the bottom discharge port membrane may become brittle and rupture.

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Typical Compositional Analysis

The analysis results listed in this product bulletin are typical. Refer to the selling specification for minimum and maximum limits by parameter.

Fat (g/100g)	99.9
Moisture (g/100g)	<0.1

Typical Mineral Analysis

Iron (mg/kg)	<0.2
Copper (mg/kg)	<0.05
Sodium (mg/100g)	<1
Potassium (mg/100g)	<1
Calcium (mg/100g)	<1

Typical Chemical Analysis

Free fatty acids as Oleic acid (%m/m)	0.2
Peroxide Value (meq O ₂ /kg)	0.2
Iodine value	29 - 39
Reichert Meissl value	22.4 – 31.8
Polenske value	1.5 – 3.4
Kirchner value	17 - 27
Saponification value	225 – 235

Typical Nutritional Analysis

Energy (kJ/100g)	3700
Calories (kcal/100g)	880
Total Fat (Milkfat) (g/100g)	99.9
Moisture (g/100g)	<0.1
Protein (g/100g)	<0.01
Carbohydrate (g/100g)	<0.01
Sugars (Lactose) (g/100g)	<0.01
Dietary Fibre (g/100g)	Nil
Cholesterol (mg/100g)	240
Fatty Acids (g/100g Product)	
Saturated fatty acids	66.2
Mono unsaturated fatty acids	20.2
Poly unsaturated fatty acids	1.3
Trans ¹ fatty acids ²	4.7

¹ Methylene interrupted *trans*

² Please refer to individual country regulations for *trans* fatty acid labelling requirements

Vitamins

Vitamin A (mg retinol/100g)	1.0
Vitamin A potency (IU/g) (retinol + β carotene)	35 - 50
Vitamin D (mg/100g)	Trace
Vitamin E (mg/100g)	3.8
Vitamin C (mg/100g)	<0.1

Density (Typical Seasonal Range)

10°C (kg/dm ³)	0.935 - 0.956
20°C (kg/dm ³)	0.922 - 0.942
30°C (kg/dm ³)	0.909 - 0.925
40°C (kg/dm ³)	0.900 - 0.912
50°C (kg/dm ³)	0.893 - 0.902
60°C (kg/dm ³)	0.888 - 0.893
70°C (kg/dm ³)	0.885 - 0.888

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Typical Fatty Acid Composition

Fatty Acid	Low ¹	High ¹
C4:0 Butyric	2.8	4.6
C6:0 Caproic	1.8	2.5
C8:0 Caprylic	1.1	1.5
C10:0 Capric	2.3	4.0
C12:0 Lauric	3.2	8.2
C14:0 Myristic	9.8	13.4
C14:1 Myristoleic	0.5	1.4
C15:0 Pentadecylic ²	0.8	1.3
C16:0 Palmitic	25.1	31.5
C16:1 Palmitoleic	1.1	2.2
C17:0 Margaric ²	0.4	0.8
C18:0 Stearic	7.8	12.1
C18:1 Oleic ²	17.8	27.3
C18:2 Linoleic ²	2.0	3.3
C18:3 Linolenic	0.4	0.9
C20:0 Arachidic	0.1	0.2

¹ % m/m of total fatty acids

² All isomers included

Typical Physical Properties

Melting Point (Mettler)	31 - 35°C
Refractive Index	1.4534 - 1.4549
Specific Heat at 40°C (kJ/kg)	2.1
Solubility of water in AMF (40°C)	0.20
Viscosity at 40°C (mPa.s)	31
Viscosity at 50°C (mPa.s)	22

Solid Fat Content

Temperature	Mean	Typical Range
0°C	66.9	58.5 - 70.5
5°C	63.3	55.0 - 67.1
10°C	56.4	48.5 - 60.9
15°C	41.0	33.5 - 46.6
20°C	22.5	17.1 - 27.8
25°C	12.4	8.4 - 14.7
30°C	5.9	3.8 - 7.8
35°C	1.0	0.0 - 1.9

Typical Microbiological Analysis

Aerobic Plate Count (cfu/g)	<100
Listeria (/125g)	Absent
Salmonella (/750g)	Absent

Quality Assurance

Strict quality control procedures are enforced during manufacture. The manufacturing environment is also subject to regular monitoring and control.

Product is Pasteurised.

Final product is sampled and tested for chemical, sensory and microbial parameters using internationally recognised procedures.

During storage and shipment, precautions are taken to ensure that the product quality is maintained. Each package is identified, enabling trace back.

Compliance

- > CODEX STAN 280
- > Meets Halal requirements.
- > Meets Kosher requirements

Suggested Labelling

Anhydrous Milkfat or Milkfat

Allergens: Contains Milk and Dairy products

Country regulations for product labelling vary. Fonterra advises customers that they need to check local regulations to determine the correct labelling of this ingredient

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Example of Product Packaging



Additional Information

Fonterra will only ship this product to countries listed on the Import Eligibility Statement and bidders Contracting Information File.

Not for use in infant formula for infants less than 12 months

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ANHYDROUS MILKFAT (AMF)

GDT Premium Grade – 1000kg bin



Chemical

	Units	Min	Max
Moisture (Karl Fischer)	% m/m		0.1
Milk fat	% m/m	99.8	
Free Fatty Acids as Oleic Acid	% m/m		0.30
Peroxide Value	mEq O ₂ /kg		0.30

Microbiological

	Units	Min	Max
Aerobic Plate Count	cfu/g		1000
Coliforms	/g		Not Detected
Escherichia coli	/g		Not Detected
Yeast & Mould	cfu/g		10
Staphylococcus Coagulase positive	/g		Not Detected
Salmonella	/750g		Not Detected
Listeria	/125g		Not Detected

Physical

	Units	Min	Max
Foreign Matter	/50g		Absent
Clarity (curd)	Score		Absent

Sensory

	Units	Min	Max
Flavour and odour	Score	Typical	

Religious Status

Halal
Kosher

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Total Shelf life

364 days

Other

- > EU Food law compliant
- > Fonterra will only ship this product to countries listed on the Import Eligibility Statement and Bidders Contracting Information file

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ANHYDROUS MILKFAT (AMF)

GDT Premium Spacecraft



Fonterra will only ship Anhydrous Milkfat (AMF), GDT Premium Grade Spacecraft, to the countries that are specifically listed below:

If you want this product shipped to a country that is not listed below, please contact a Fonterra representative. There is no "obligation" on Fonterra to ship to a country that is not listed or has not been agreed between the customer and Fonterra prior to purchase.

**Prior to contracting with Fonterra, importers or agents must ensure that they meet all registration requirements imposed by their importing government agencies.

Destination Country

Australia	Oman
Azerbaijan	Philippines
Bahrain	Qatar
Brazil	Saudi Arabia
Burkina Faso	Senegal
Cameroon	Sierra Leone
Canada	Singapore
China	Syria
Cote d'Ivoire	Togo
Egypt	Ukraine
European Union	United Arab Emirates
Gambia	United States
Ghana	Uruguay
Guinea	Vietnam
Indonesia	Yemen
Japan	Zimbabwe
Jordan	
Kuwait	
Libya	
Malaysia	
Mali	
Mauritania	
Mauritius	
Mexico	
New Zealand	

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This Eligibility Statement should be used in conjunction of Product Bulletin Number and Selling Specifications Number: PB / SS 756.