

# Standard Commodity Specification

<b>TITLE</b>	<b>SUPERFINE SEMOLINA</b>	<b>PRODUCT No</b>	<b>47101</b>	47102	47103
<b>STATUS</b>	<b>APPROVED</b>	<b>DATE OF ISSUE</b>	20 April 2010	<b>ISSUE</b>	29/10

## SECTION 1

**DESCRIPTION:**

- A free flowing pale cream coloured granular powder milled from 100% durum wheat in the UK.
- Wheat countries of origin: potentially sourced from France, UK, Canada & Spain (other countries may be used according to availability). Semolina manufactured in UK.
- Available in bulk tankers, 1 tonne flexible IBC's and **25 kg paper sack units**.

## SECTION 2

**GENERAL QUALITY REQUIREMENTS:**

1. All preparation, processing, packaging and handling must be carried out according to Good Manufacturing Practice.
2. To be free from foreign matter and substantially free from black specks.
3. To comply with all current UK and EU Food Regulations and appropriate European Food Directives.
4. To be free from materials produced by irradiation, genetic modification or recombinant DNA technology.

## SECTION 3

**SPECIFIC QUALITY REQUIREMENTS:**

**Chemical:**

Moisture:	Target 14.5% Range 14 - 15%	(See method 1)
<b>(CCP Check)</b>		
Protein (n x 5.7):	12.0% minimum (Dry weight basis)	
Falling number:	250 seconds minimum.	(Standard Test)
Gluten:	Wet 25 g minimum	(See method 3)
	Dry 9.2 g minimum	
Ash:	1.10% (Dry weight basis)	(See method 2)

**Physical:**

Particle size distribution: (See method 4)

Superfine semolina is milled to produce a particle size range between 425 µ and 150 µ. Particles outside this range are permissible to the limits shown below:

>500 micron	Trace
>425 micron	0 - 8%
<150 micron	5 - 30%

Speck count:	10 maximum	(See method 5)
Colour:	L* 78 - 90	(See method 6)
	B* 20 minimum	

## SECTION 4

**MICROBIOLOGICAL:**

Regular microbiological testing is carried out to a defined audit regime and records exist to

demonstrate our compliance.

Individual loads will therefore not be checked. Semolina produced at Waveney Mills complies with the following microbiological standards:-

TEST	FREQUENCY OF TESTING	Target	Reject
Total Viable Count	Once per week	<50,000 cfu/g	>100,000 cfu/g
Coliform ( <i>Presumptive</i> )	Once per week	<10 cfu/g	>100 cfu/g
Escherichia coli	Once per week	<10 cfu/g	>10 cfu/g
Staphylococcus aureus	Once per week	<20 cfu/g	>200 cfu/g
Clostridium perfringens ( <i>Presumptive</i> )	Once per week	<20 cfu/g	>30 cfu/g
Bacillus cereus ( <i>Presumptive</i> )	Once per week	<20 cfu/g	>100 cfu/g
Salmonella ( <i>Test contracted out to Premier Analytical Services</i> )	Once per week	Negative in 250g	Positive in 250g
Yeasts & Moulds	Daily	<2000 cfu/g	>5000 cfu/g

## SECTION 5

### NUTRITION INFORMATION:

100g of this product typically contains:

Parameter		
<b>Energy</b>	kJ / 100g	1446
	kcal / 100g	341
<b>Protein g/100g (nx6.25)</b>		13.4
<b>Available Carbohydrate g/100g</b>		68.3
of which sugars g/100g		2.3
of which starch g/100g		66.0
<b>Fat g/100g</b>		1.5
of which saturates g/100g		0.4
of which monounsaturates g/100g		0.2
of which polyunsaturates g/100g		0.8
of which trans fatty acids g/100g		0.0
<b>Dietary Fibre g/100g (AOAC)</b>		2.8
<b>Sodium g/ 100g</b>		<0.01

The minerals and vitamins are typically below 5% RDA

### FOOD INTOLERANCE DATA:

Free From	YES/NO	Free From	YES/NO
Celery	YES	BHA / BHT	YES

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<b>Cereals – Wheat and Wheat Derivatives</b>	<b>NO</b>	Colours – Artificial (Azo/Coal Tar)	YES
<b>Gluten</b>	<b>NO</b>	Colours - Natural	YES
Cereals (other) – oats, rye, barley	YES	Fruit and Fruit Derivatives	YES
Crustaceans and their Derivatives	YES	Glutamates	YES
Fish Excluding Shellfish	YES	GM derivatives	YES
Eggs	YES	GM materials/ingredients	YES
Lupin	YES	HVP/TVP	YES
Milk	YES	Irradiated food materials	YES
Molluscs and their Derivatives	YES	Maize and maize Derivatives	YES
Mustard	YES	Meat - Beef and Derivatives	YES
Nuts and Nut Derivatives	YES	Meat - Pork and Derivatives	YES
Peanuts and Peanut Derivatives	YES	Meat - Lamb/Mutton and Derivatives	YES
Sesame Seeds and Derivatives	YES	MSG	YES
Seeds (other) or their derivatives	YES	Preservatives	YES
Soybeans and Soya Derivatives	YES	Salt (added)	YES
Sulphur Dioxide & Sulphites - <10mg/kg	YES	Sugar (added)	YES
Additives	YES	Vegetables or their Derivatives	YES
Aspartame	YES	Yeast and Yeast Derivatives	YES
Benzoates	YES		

#### Specific Allergen Data Statement

<b>This product contains</b>	<b>Wheat and wheat gluten</b>
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#### Specific Dietary Information

	Suitable	Qualifying Comments
<b>Vegetarians</b>	YES	
<b>Vegans</b>	YES	
<b>Coeliacs</b>	NO	Contains wheat protein
<b>Lactose Intolerants</b>	YES	
<b>Nut Allergy Sufferers</b>	YES	
<b>Sesame Allergy Sufferers</b>	YES	
<b>Kosher Diet</b>	YES	Suitable but not Kosher certified
<b>Muslim Diet</b>	YES	Halal Certified

#### SECTION 6

#### FOOD SAFETY MEASURES:

#### Metal Detection (CCP CHECK):

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<b>Metal Detection Equipment</b>	Safeline Metal Detector					
<b>Sensitivity</b>	Fe	1.0mm	Non-Fe	1.1mm	S/Steel	1.5mm
<b>Frequency of system checks</b>	Minimum one check every 6-hours					
<b>Position in process</b>	In-line – prior to packing/out-loading bins					

<b>Metal Detection Equipment</b>	Safeline Metal Detector					
<b>Sensitivity</b>	Fe	2.0mm	Non-Fe	2.5mm	S/Steel	3.0mm
<b>Frequency of system checks</b>	Ferrous every pallet – Non-Ferrous & Stainless Steel every alternate pallet					
<b>Position in process</b>	Post bag sealing					

**POTENTIAL FOOD CONTAMINANTS:**

CONTAMINANT TYPE	SPECIFIC CONTAMINANT	EU Maximum Residue Level
<b>MYCOTOXIN RESIDUES:</b>	Ochratoxin A	3.0 µ/kg
	Aflatoxin B <sub>1</sub>	2.0 µ/kg
	Aflatoxin B <sub>1</sub> + B <sub>2</sub> + G <sub>1</sub> + G <sub>2</sub> Total	4.0 µ/kg
	Deoxynivalenol (DON)	750 µ/kg
	Zearalenone	75 µ/kg
	T2 Toxin (T2)	No EU MRL – Target ≤200 µ/kg
	HT2 Toxin (HT2)	No EU MRL – Target ≤200 µ/kg
<b>PESTICIDE RESIDUES:</b>	Multi-Residue Pesticide Screen (Details on request)	Individual EU MRLs
<b>HEAVY METALS RESIDUES:</b>	Arsenic	1.0 mg/kg
	Cadmium	0.2 mg/kg
	Lead	0.2 mg/kg

All of the above potential contaminants are surveillance tested on every imported wheat load or grist change or quarterly, whichever is the greater. All testing is completed by an approved UKAS accredited external laboratory.

**SECTION 7**

**PACKAGING AND STORAGE**

**Bulk:** 47103 - Delivered in clean tankers which are only used for durum semolina or durum flour.

**Flexible Intermediate Bulk containers (Big Bags):**

47102 - Coated woven polypropylene 180gsm bulk bag with 4 polyester lifting loop straps and both infill and discharge spouts with a polypropylene inner skin 150gsm. SWL – 1000 Kgs. Length - 96cm; Depth – 96cm; Height – 140cm. IBC to contain 1tonne, on GKN pallets with pallet liners.

**Sacks:** 47101 - Natural Kraft two-ply, food grade paper sacks with LUDOX anti-slip finish - Grade 1/95NK + 1/80NK – Size 420x75x770mm –closed by blue stitching cotton – to contain not less than 25 Kg. of product – 40 sacks (8 layers of 5) per pallet.

**Markings:** Each bag unit to be ink-jet printed with PRODUCT NAME, PACKING DATE, BEST BEFORE END DATE and UNIQUE BAG NUMBER.

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**Storage:** Pallets should be stored in a cool, dry, infestation free place.

**Storage Life:** If kept under the correct storage conditions semolina should not deteriorate for 12 months but every effort should be made to use the product within 6 months.

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## SECTION 8

### 1. Moisture Content

Method:

1. Grind sample (all particles to pass through 500µm sieve).
2. Accurately weigh approximately 10g of the ground sample in a suitable oven dish.
3. Place sample in a fan stirred oven pre-set to 105°C and leave for 4 hours.
4. Remove sample from oven and place in a desiccator until cool.
5. Re-weigh the sample and calculate moisture content.

N.B. Rapid moisture testers can be used but they must be regularly calibrated to achieve compatible results to the air oven method.

### 2. Ash Content

**Method**

ICC Standard No. 104/1 Approved 1960 revised 1990

### 3. Gluten

Equipment:

- 1 Falling Number Glutomatic
- 2 Falling Number Centrifuge and Sieve
- 3 Falling Number Glutork
- 4 Falling Number Hammer Mill
- 5 Fine Sieve and Sieve Holder
- 6 Coarse Sieve and Sieve Holder
- 7 Buffered Salt Solution & Dispenser
- 8 Balance

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Method:

1. Place fine sieve in sieve holder and pre-wet with water.
2. Weigh out 10g of material and place in sieve holder. Shake gently to level.
3. Add 4.8ml buffered salt solution from dispenser, holding sieve at an angle and directing solution against side of sieve holder. Gently shake to distribute solution.
4. Fit sieve holder into position in Glutomatic.
5. Press green start button.
6. When cycle is complete, remove all gluten from wash chamber, rinse gently and shake dry.
7. Place gluten in centrifuge sieve and start centrifuge.
8. When programme is complete, take out centrifuge sieve, ensuring all gluten is removed from centrifuge.
9. Weigh the gluten which passed through the sieve, following by the total amount.
10. Record total amount of gluten (wet weight) as weight x 10.
11. Calculate and record gluten index.

$$\text{Gluten index} = \frac{(\text{total gluten} - \text{passed through})}{\text{total gluten}} \times 100$$

12. Place all gluten in pre-heated Glutork and switch on.
13. When buzzer sounds, take out dried gluten and weigh. Record dry weight as weight x 10.

**4. Particle size distribution**

Equipment:

- 1 Balance
- 2 Simon Rotary Sifter
- 3 Pan Sieves, Sieve Pan and Lid
- 4 Rubber Balls

Method:

1. Ensure there are 3 rubber balls in each sieve.
2. Weigh out 100g material and place in top (coarsest) sieve.
3. Place sieves, coarsest at the top, with sieve pan on the bottom, on rotary sifter and screw down lid.
4. Set timer on sifter for 3 minutes and start cycle.

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- When sieving is complete, weigh contents retained on each sieve and in pan, and record as percentages.

## 5. Speck count

### Equipment

- 55mm Diameter Contact Plates with Counting Grid.

### Method

- Overfill base of contact plate
- Compact semolina by covering with lid and pressing down.
- Invert dish and place the grid from a second contact plate over the dish and count the dominant specks within a 20 \* 20mm square.

## 6. Colour determination

### Equipment:

- Minolta Chroma Meter CR310
- White Calibration Plate
- Granular - Materials Attachment CR-A50
- 425 & 300 Micron Sieves
- Endecott Test Sieve Shaker

### Method:

### Sample Preparation

- Sieve 100g semolina for 5 minutes using the 425 and 300 micron sieves.
- Take product retained on the 300 micron sieve and carefully blend to ensure even particle distribution.

### Analysis using the Minolta Chroma Meter

- Calibrate the Minolta taking care to position the optical glass of the CR-A50 attachment centrally on top of the white calibration plate.
- Fill granular attachment with sample, ensuring that the surface is level, and replace cap.
- Carry out colour analysis.
- Empty granular attachment and repeat analysis.
- Calculate the average Lab. indices and record results as necessary.

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