

FOODLINE

GENERAL INFORMATION

Wheat is a cereal distributed in many food supply operations, in whole grains or as flour.

Wheat can be stored for long periods of time as whole grains, provided the storage is properly conducted.

Fumigation of stocks should be done at least every 3 months; more often if needed.

Milling should be processed only when a distribution date is known, to avoid long storage of flour.

Shelf life of flour is short because the fat content becomes rancid, and a milled product is very sensitive to micro-biological contamination. Wheat flour can be stored a few weeks or months only, depending on the climatic and storage conditions; check before milling.

Type 55 flour is the most commonly supplied. It corresponds to an extraction rate of 72% approximately. The number '55' indicates that the ash residue after burning at high temperature is between 0.5% and 0.6%, which corresponds to the mineral content of the flour. Higher grades are cruder, such as type 85 or type 125. These are whole grain types of flour, with a higher extraction rate, higher fat and higher mineral/ash content.

We recommend the type 55 for its' large availability, its' wide usage habit and a good life span under normal storage conditions.

The Hagberg test indicates the quality of the starch, and the Zeleny test indicates the quality of the proteins. If it scores less than 20 for the Zeleny test, the flour cannot make bread dough. Nevertheless, the flour remains fit for human consumption by other means than bread.

Specifications vary with national regulations. Here below, we give our most commonly used specifications:

Refer to HQ when offered specifications which are different from our standard specifications. It will need to be approved by a food specialist.

Importation of food is always subject to acceptance from the national authorities, based on their national specifications, check these specifications before purchasing.

Impact on the local, national, or regional market availability and prices should be carefully looked at before purchasing large quantities.

The specifications presented below correspond to EC and GOST specifications. There are very similar but EC specification are based on ISO test procedures and GOST specifications are based on ICC test procedures.

Specifications

Common part of specifications for all types of wheat, to include in all contracts:

For all aspects of the product, unless described otherwise here below, the standard of Codex Alimentarius last edition applies, including the packaging.

- Product must be fit for human consumption and be of sound, fair and marketable quality.
- The Cartagena Protocol (Biosafety Protocol, additional to the Convention of Biodiversity) requires that exporters/producers indicate whether the food items may contain GMOs (Genetically Modified Organisms) or not.
- If supplied in grains, the product must not contain GMO's.
- Check national specifications of recipient country.

Applicable control methods:

ISO 711 Basic reference method and ISO 712 routine reference method - Cereals and cereals products - Determination of moisture content.

ICC 105 - Determination of crude protein in cereals and cereal products for food and for feed.

ISO3093 - Cereals - Determination of falling number (Hagberg).

ISO 5529 - Wheat - Determination of sedimentation index - Zeleny test.

ISO 2171 - Cereals and milled cereals products - Determination of total ash.

ISO 7305, AOAC 14022 - Milled cereal products - Determination of fat acidity.

ICC 113, AOAC 7070 - Determination of crude fibre value.

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ISO 5530-4 - Physical characteristics of dough - Determination of rheological properties using an alveograph.

Product must be:

In accordance with the present specifications.

Free from abnormal flavour/odour and living insects/pests.

Freshly produced for flour (maximum 30days old at date of delivery).

Delivered goods to be according to approved sample.

Analysis of microbiological, chemical or radiological contaminants, toxins, heavy metals and pesticide residues (see table below) must certify the product is “**fit for human consumption**”. The supplier shall submit related Lab reports / Declarations.

WHEAT in grain

European Community specifications applicable for purchases in the European Union

Specifications as per communication 2000/C312/01

Moisture	14% max.
Protein content	11,5% min. (N x 5.7 in dry matter)
Hagberg falling number	220 min.
Zeleny index	25 min.
Specific weight	74kg/hl min.
Aflatoxin total	4 microgram/kg max.
Ochratoxin	5 microgram/kg max.
Deoxynivalenol (Vomitoxin)	1250 microgram/kg max.
Presence of Datura seeds and other toxic seeds or traces of tropane alkaloids	Nil
Matter which is not basic cereal of unimpaired quality	10%
Broken grains	Max. 3% grain pieces or grains passing through a sieve with a circular mesh 2.5 mm in diameter
Grain impurities	Max. 5% (shrivelled grains, grains of other cereals, grains damaged by pests, grains in which the germ is discoloured and grains overheated during drying)
Sprouted grains	2.5% max.
Miscellaneous impurities	Max. 1% (weed seeds, damaged grains, extraneous matter, husks, decayed grains, dead insects and insect fragments)
Ergot	0.05% max.
Toxic or harmful grains	0.1% max.
Flour quality	The flour made from the grain must be machineable, workable and not sticky

Russian Federation specifications applicable for purchases in the former USSR

Specifications as per GOST9353-90

Specific weight	76kg/hl min.
Moisture content	13.5% max. (ICC method nr 110)
Protein content	11,5% min. (N x 5.7 on dry bases) (ICC method Nr. 105)
Foreign matter	1.5% max.

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Shrunken and broken grains	3% max.
Damaged grains	2% max.
Heat damaged grains	0.5% max.
Sprouted grains	1% max.
Impurities of animal origin, incl. dead insects	0.1% max.
Inorganic extraneous matter (stones, dust...)	0.5% max.
Ergot	0.05% max.
Toxic or harmful grains	0.1% max.
Zeleny index	Min. 20 (ICC method Nr. 116 & 118)
Hagberg falling number	Min. 220, (ICC method Nr. 107)
Presence of Datura seeds and other toxic seeds or traces of tropane alkaloids	Nil
Aflatoxin total	4 microgram/kg max.
Ochratoxin	5 microgram/kg max.
Deoxynivalenol (Vomitoxin)	1250 microgram/kg max.
Flour quality	The flour made from the grain must be machineable, workable and not sticky
All other parameters	According to soft wheat of 3rd class, as per GOST 9353-90

WHEAT flour

General specifications applicable worldwide

Specifications as per communication 2000/C312/01.

Flour quality	Flour must produce a dough that does not stick during the mechanical kneading process
Type of product	Wheat flour, type 55
Physical characteristic of the dough	W 170 minimum, P/L 0.7 max.
Moisture	14% max.
Fatty acidity	0.5g KOH/g of oil max.
Zeleny index	Min. 25
Proteins	Min. 10.5% (N x 6,25 of dry matter)
Ash content	0,6% max. of dry matter
Hagberg falling number	Min. 220, including the preparation (agitation time of 60 seconds)
Aflatoxin total	4 microgram/kg max.
Ochratoxin	3 microgram/kg max.
Deoxynivalenol (Vomitoxin)	750 microgram/kg max.
Presence of Datura seeds and other toxic seeds or traces of tropane alkaloids	Nil

European Community specifications applicable for purchases in the European Union

Specifications as per communication 2000/C312/01.

Flour quality	Common wheat flour yielding dough that does not stick during the mechanical kneading process
Moisture	14% max.
Fatty acidity	0.5g KOH/g of oil max.
Zeleny index	Min. 25

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Proteins	Min. 10.5% (N x 6,25 of dry matter)
Ash content	0,6% max. of dry matter
Hagberg falling number	Min. 220, including the preparation (agitation time of 60 seconds)
Presence of Datura seeds and other toxic seeds or traces of tropane alkaloids	Nil

Packing

Net weight 50kg per bag.

All bags must be clean, dry, undamaged and firmly sewn.

Recycled bags not allowed, nor recycled plastics for making bags.

Close with double stitch both ends of the bags.

Additional 2% empty spare bags (outer bag only if multiple packaging), with same markings.

Test as per EN276 for PP bags or EN 766 for jute bags: bags should resist without any damage one drop from 1.2m high on the base and 2 drops on each side from 1.6m high.

Different types of packaging are possible. Choice of the right packaging depends on several factors, including the condition of transportation and handling.

- a) New woven-polypropylene (PP) bag, weighing 120g per bag.
- b) New woven-polypropylene (PP) bag, weighing 120g per bag, lined with the same 120g PP bag, with the top edges of the bags sewn together.
- c) New jute bag, weighing 370g per bag, lined with woven-polypropylene bag, weighing 110g per bag, with the top edges of the bags sewn together.
- d) New cotton bag, weighing 180g per bag, lined with woven-polypropylene bag, weighing 110g per bag, with the top edges of the bags sewn together.
- e) New composite jute/polypropylene bag weighing 335g per bag.
- e) New jute bag weighing 600g/bag, for grain only.
- f) In some special cases for flour only: a paper bag of 1kg net weight content.

Pallet load

Shrink wrapped pallet, without covering the top of the pallet to let it breathe. Can also be secured with straps, to be re-tensioned regularly as the flour will pack down during transport.

Shrink-wrap film must be removed at time of storing.

Fumigation

Commodities must have been fumigated maximum 30 days prior to departure date.

Fumigation products must come from licensed manufacturers and the supplier/retailer must be able to provide full certificate of analysis for the batch to be supplied.

Marking

Each bag to be marked with non-toxic ink, to remain readable after minimum 10 handlings.

Name of the product must be "Wheat grain", or "Wheat flour".

- Net weight in kg.
- Date of milling for flour.
- Date of minimum durability, declared as "best before", for flour.
- Crop year for grains.

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Minimum documentation required for quality assurance from the supplier.

To be established by an official body:

- Certificate of inspection.
 - Certificate of origin, including crop year.
 - Health Certificate or Phytosanitary Certificate.
 - Weight and Quality Certificate.
 - Non radioactivity Certificate.
 - Fumigation Certificate (when required).
 - Certificate stating whether GMOs may be included in the product.
 - Certificate stating absence of GMOs in grain.
- Other documentation needs to be provided according to the purchase agreement.

Minimum documentation required for quality assurance from the supplier.

To be established by an official body:

1. Certificate of inspection.
2. Certificate of origin, including crop year.
3. Health Certificate or Phytosanitary Certificate.
4. Weight and Quality Certificate.
5. Non radioactivity Certificate.
6. Fumigation Certificate (when required).
7. Certificate stating whether GMOs may be included in the product.
8. Certificate stating absence of GMOs in grain.

Other documentation needs to be provided according to the purchase agreement.

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