KINGDOM OF SAUDI ARABIA

SAUDI STANDARDS, METROLOGY AND QULITY ORGANIZATION

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SAUDI STANDARD
DRAFT No. 24122/2011

SACKS FOR THE TRANSPORT OF FOOD AID— PAPER SACKS

SAUDI STANDARDS, METROLOGY AND QULITY ORGANIZATION

KR-2377

SACKS FOR THE TRANSPORT OF FOOD AID— PAPER SACKS

1. SCOPE

This standard specifies the general characteristics, requirements and methods of test of paper sacks.

This standard is applicable to paper sacks, having a filling mass up to 50 kg, intended for the transport of food aid.

2. NORMATIVE REFERENCES

2.1 European Standard 765/1994 "Sacks for the transport of food aid – Sacks made of woven polyolefin fabric other than polypropylene only".

2.2 European Standard 1086/1993 "Sacks for the transport of food aid – Recommendations on the selection of type of sack and the liner in relation to the product to be packed".

2.3 European Standard 22206/1992 "Packaging – Complete, filled transport packages – Identification of parts when testing". (ISO 2206/1987).

2.4 European Standard 22233/1992 "Packaging – Complete, filled transport packages – conditioning testing".

2.5 European Standard 265901-1/1992 "Packaging – Sacks vocabulary and types – Part 1: Paper sacks. (ISO 6590-1/1983)".

2.6 European Standard 26591-1/1992, "Packaging – Sacks – Description and method of measurement – Part 1: Empty paper sacks". (ISO 6591-1:1984)

2.7 European Standard 27023/1992 "Packaging — Sacks — Method of sampling empty sacks for testing". (ISO 7023:1983)

2.8 European Standard 27965-1/1984 "Packaging — Sacks — Drop test — Part 1: Paper sacks". (ISO 7965-1:1984)

2.9 European Standard 1924-2/1985 "Paper and board — Determination of tensile properties — Part 2: Constant rate of elongation method".

2.10 European Standard 3676/1983 "Packaging — Unit load sizes —Dimensions".

3. DEFINITIONS

For the purpose of this standard, the definitions of in section No. (2.5) apply.

Note: Hereafter where the word "sack" is used in the text of this standard, a paper sack is to be understood.

4. GENERAL CHARACTERISTICS

4.1 Construction

4.1.1 The sack shall be made of sackpaper.

4.1.2 The sack shall be made of one ply or more plies and may be equipped with a liner in accordance with in section No. (2.2).

4.1.3 All types of in section No. (2.5) may be used.

4.1.4 The closure of the filled sack shall be designed to prevent leakage of the product during transport.

4.1.5 Materials other than natural materials used in the manufacture and closure of the sack (inner liner excluded) shall have a UV-resistance in accordance with 5.7.3 of in section No. (2.1). These materials can be tested in the construction in which they are used in the sack.

4.2 Dimensions

4.2.1 The dimensions of the empty sack shall be chosen so that, if necessary, after filling the dimensions of the filled sack comply with the dimensions of the unit load as specified in in section No. (2.10).

4.2.2 The dimensional tolerances of the sack should be agreed upon between the purchaser and the supplier.

4.2.3 The dimensions and the dimensional tolerances of the sack shall be recorded in the ordering documents.

4.2.4 The description of the dimensions, the method of measuring the dimensions and the dimensional designation of the sack shall be in accordance with in section No. (2.6).

5. TEST METHODS AND TEST REQUIREMENTS

5.1 Sampling

5.1.1 The sampling shall be done in accordance with in section No. (2.7).

Note: Table 1 of in section No. (2.7) refers to the selection of units. Table 2 of in section No. (2.7) refers to the selection of sacks out of each selected unit.

5.1.2 The sampling shall be done on the date the empty sacks are ready for dispatch by the supplier.

5.1.3 If re-sampling is necessary it shall be done in accordance with in section No. (2.7).

If, as a result of an accident during sampling or testing, re-sampling is necessary, a new sample shall be taken following the procedure specified in section No. (2.7).

If, for any other reason, re-sampling is necessary, the procedure followed shall follow the specifications of in section No. (2.7) as closely as possible.

5.2 Conditioning

5.2.1 Before testing all samples shall be conditioned in accordance with in section No. (2.4) condition G (temperature + 23°C ± 2°C, relative humidity 50 % ± 5 %).

5.2.2 The period of conditioning of the samples shall be not less than 8 h.

5.2.3 The various tests as described shall be carried out in the same atmospheric conditions as used for conditioning, see 5.2.1, or, if not possible, the tests, shall commence within 10 min after removing the samples from the conditioning atmosphere.

5.3 Surface identification

If necessary the identification of the various surfaces of the filled sacks when testing shall be as given in section No. (2.3).

5.4 Date of completion of the tests

All tests shall be completed within four weeks after the date the empty sacks are ready for dispatch by the supplier.

5.5 Determination of the quality of sack paper

The quality of the paper is expressed in the Tensile Energy Absorption (TEA) which is to be calculated with the formula:

$TEA_{Average} = (TEA_{MD} * TEA_{CD})^{1/2}$

Where

TEA_{MD} is the TEA in machine direction

TEA_{CD}, is the TEA in cross direction

TEA_{MD} and TEA_{CD}, are measured and calculated in accordance with in section No. (2.9), where the measurement shall be made electronically.

5.6 Drop test

5.6.1 Test method

The drop test shall be carried out in accordance with in section No. (2.8) using the constant drop height method.

5.6.2 Filling of the sacks

The sacks shall be filled with the intended commodity or, if this is not possible, with similar material, taking into account type and size of granules etc., to give the same degree of filling. The mass of the filling material shall be within ± 0,2 % of that of the nominal mass of the intended contents of the sack.

5.6.3 Test procedure

5.6.3.1 Drop test sequence

The drop test shall be carried out on three sacks and shall comprise the following sequence:

1) Butt dropping
2) flat dropping.

5.6.3.2 **Butt dropping**

The sack shall be dropped from a height of 1,20 m on the bottom of the sack.

5.6.3.3 **Flat dropping**

The sack shall be dropped from a height of 1,60 m, twice on one flat face and twice on the opposite flat face.

5.6.4 **Criteria for passing the drop test**

After each drop there shall be no rupture or loss of contents.

A slight discharge e.g. from closures or stitch holes, upon impact shall not be considered a failure of the sack provided that no further leakage occurs after the sack has been raised clear of the ground.

6. METHODS OF TESTING

6.1 Sampling according to Standard section 2.7.

6.2 Methods of measuring dimensions and Edges to Standard section 2.10.

6.3 Conditioning of the test according to the standard in item No. 2.4.

6.4 Determination of tensile properties to the Standard in item No. 2.9

6.5 Unit load sizes dimensions to the Standard in item No 2.10.

6.6 UV-resistance in accordance with 5.7.3 of Standard in item No. 2.1.

6.7 Surface identification to the Standard in item No. 2.3.

6.8 Drop test to the Standard in item No. 2.8.

7. MARKING

1) The number of this Standard.
2) The name or identification mark of the manufacturer.
3) The country of origin.
4) The production date.
5) The product description, using where appropriate.
6) The sum of the $TEA_{AVERAGE}$ values of all paper plies.
7) Description of the sacks in accordance with 4.2.4 of this European standard.
8) Description of the filling material used for testing.
9) Intended net mass in kg.
10) Results of and comments on the drop test.