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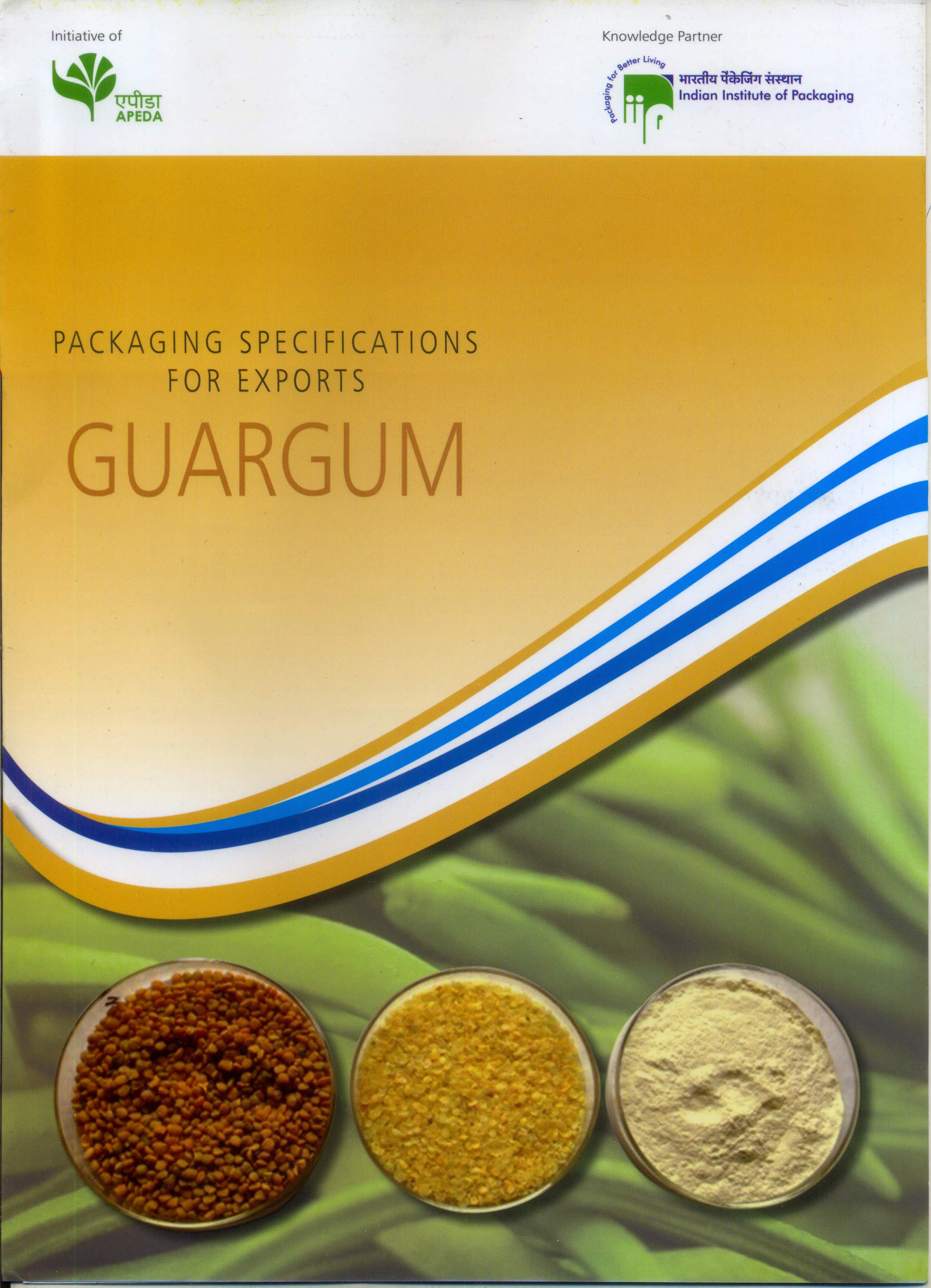
Packaging for Better Living
भारतीय पैंकेजिंग संस्थान
Indian Institute of Packaging

PACKAGING SPECIFICATIONS FOR EXPORTS

GUARGUM



GUARGUM

DIRECT BULK PACK

Multiwall Paper Sack with Loose Liner Bag — Capacity : 25 Kg

A. Multiwall Paper Sack

Material of construction of sack	Natural sack Kraft	Extensible sack Kraft
Number of plies (min)	4	4
Length of sack excluding bottom stitches (min) (mm)	780	780
Width of sack excluding gusset (min) (mm)	395	395
Width of gusset (min) (mm)	100	100
Grammage of individual ply (g/m^2) (min)	90	80
Moisture content (%)	6.0 to 7.5	6.0 to 7.5
Tensile Index of individual ply (Nm/g) (min) - MD	65	30
- CD	50	30
Elongation of individual ply (%) (min) - MD	1.9	6.0
- CD	4.0	5.0
Burst Index of individual ply (Kpa m^2/g) (min)	3.5	3.5
Tear index of individual ply (mNm^2/g) (min) - MD	12.0	12.0
- CD	12.0	12.0
Air Permeability of individual ply (secs/100ml) (max)	25	25
Tensile Energy Absorption of individual ply (J/g) (min) - MD	1.0	2.2
- CD	0.9	1.5

Note: 1) The above bag is to be used along with a loose liner bag inside which is to be closed at the top by heat sealing.

2) Dimensions of the bag are based on bulk density of 0.7g/cc. For variations in bulk densities, the dimensions of the bag can be suitably modified.

3) For each parameter minimum/maximum values have been indicated i.e. the average test reading should not be lower than/ higher than the specified value.

4) Stitching: cotton, rayon or any other suitable thread having a minimum breaking strength of 70N, when tested as per IS: 1670-1970 shall be used for stitching the sack. The sack should be stitched through folded over crape paper, at the top and at the bottom. The two rows of chain or lock stitches should be separated from each other by about 5mm after maintaining a minimum distance for 10mm from the edge of the sack to the outer row of stitching. The number of stitches should be 12 ± 2 per decimeter.

5) Printing requirements shall conform to as prescribed by the importer and exporter/ statutory requirements.

B. Loose Liner Bag (Flat)

Material of construction	HM-HDPE*
Length of liner from bottom sealing (min) (mm)	880
Width of liner (min) (mm)	550
Thickness of liner (min) (μ)	37
Tensile strength (min) (kg/cm^2) - MD	250
- CD	180
WVTR (Water Vapour Transmission Rate) (max) (g/m^2/24hrs.)	5.5

*HM-HDPE – High Molecular High Density Polyethylene

Note: 1) The liner bag material could be any other suitable material which could match the tensile strength and WVTR properties given above.

2) The loose liner bags should be heat sealed at the bottom and top. (seal width minimum 3mm)

3) The material used shall be of food grade and pass the prescribed Indian Standards, IS: 10141-1982 and IS: 10146-1982.

Paper Laminated HDPE Woven Sack with Loose Liner Bag — Capacity : 25 Kg

A. Paper Laminated HDPE Woven Sack

Material of construction of sack	Paper laminated Woven HDPE*/PP* Circular fabric
Length of sack excluding bottom stitches (min) (mm)	780
Width of sack excluding gusset (min) (mm)	390
Width of gusset (min) (mm)	100
Mesh of sack fabric (min)	10 x 10
Denier of tape used (min)	800
Seam Strength (N) (min) – Bottom	330
Breaking Load of fabric (N) (min) - Warp	750
- Weft	700

* HDPE – High Density Polyethylene *PP – Polypropylene

Note: 1) Minimum 80 gsm kraft paper to be used for lamination.

2) The above bag is to be used along with a loose liner bag inside, which is to be closed at the top by heat sealing.

3) Dimensions of the bag are based on bulk density of 0.7g/cc. For variations in bulk densities, the dimensions of the bag can be suitably modified.

4) For each parameter minimum/maximum values have been indicated i.e. the average test reading should not be lower than/ higher than the specified value.

5) Stitching: cotton, rayon or any other suitable thread having a minimum breaking strength of 70N, when tested as per IS:1670-1970 shall be used for stitching the sack. The sack shall stitched through folded over crape paper, at the top and at the bottom. The two rows of chain or lock stitches should be separated from each other by about 5mm after maintaining a minimum distance for 10mm from the edge of the sack to the outer row of stitching. The number of stitches shall be 12 ± 2 per decimeter.

6) Printing requirements shall conform to as prescribed by the importer and exporter/ statutory requirements.

B. Loose Liner Bag (Flat)

Material of construction	HM-HDPE*
Length of liner from bottom sealing (min) (mm)	880
Width of liner (min) (mm)	550
Thickness of liner (min) (μ)	37
Tensile strength (min) (kg/cm^2) - MD	250
- CD	180
WVTR (Water Vapour Transmission Rate) (max) ($g/m^2/24hrs.$)	5.5

*HM-HDPE – High Molecular High Density Polyethylene

Note: 1) The liner bag material could be any other suitable material which could match the tensile strength and WVTR properties given above.

2) The loose liner bags should be heat sealed at the bottom and top (seal width minimum 3mm)

3) The material used shall be of food grade and pass the prescribed Indian standard/standards, IS: 10141-1982 and IS: 10146-1982.

Flexible Intermediate Bulk Container (FIBC) With Liner Bag — Capacity : 1 Tonne

A. Flexible Intermediate Bulk Container (FIBC)

Material of construction	Woven *HDPE/PP*, Circular/ Flat fabric
Internal Length of FIBC (min) (mm)	900
Internal width of FIBC (min) (mm)	900
Internal height of FIBC (min) (mm)	1800
Mesh (min)	12 x 12
Denier of tape used (ave) - Warp	1800
- Weft	1800
Seam Strength (N) (ave) - Side	900
- Bottom	900
Breaking load of fabric (N) (ave) - Warp	2000
- Weft	2000

* HDPE – High Density Polyethylene *PP – Polypropylene

Note: 1) Since the product guar gum is moisture sensitive it is recommended to use a liner bag inside, which is to be spot glued to the inner walls of the FIBC.

2) Dimensions of the bag are based on bulk density of 0.7g/cc. For variations in the bulk densities, the dimensions of the bag can be suitably modified.

3) For each parameter minimum/maximum values have been indicated i.e. the average test reading should not be lower than/ higher than the specified value.

4) Printing requirements shall conform to as prescribed by the importer and exporter/ statutory requirements.

B. Loose Liner Bag

Material of construction of liner	HM-HDPE*
Length of liner (min) (mm)	4000
Width of liner (min) (mm)	2000
Thickness of liner (min) (μ)	100
Tensile strength (kg/cm^2) (min) - MD	280
- CD	200
WVTR (Water Vapour Transmission Rate) (g/m^2/24hrs.) (max)	3.5

*HM-HDPE – High Molecular High Density Polyethylene

Note: 1) The liner bag material could be any other suitable material which could match the tensile strength and WVTR properties given above.

2) The loose liner bags should be heat sealed at the bottom and top (seal width minimum 3 mm).

3) The material used shall be of food grade and pass the prescribed Indian Standards, IS: 10141-1982 and IS: 10146-1982.

4) The FIBC should be provided with 4 handling loops, one each at the top corner.

5) Since the product guargum is moisture sensitive it is recommended to use a liner bag inside which is to be spot glued to the inner walls of the FIBC.

APEDA and IIP: A Joint Initiative

Packaging is a co-ordinated system of preparing goods for transport, distribution, storage, retailing and end use.

The need for quality packaging for distribution and marketing of food products can hardly be over emphasised. With the thrust on promotion of exports, it is imperative that adequate attention be paid to packaging and logistics.

A comprehensive set of specifications for packaging of processed foods is essential to effectively market their products in a safe and cost-effective manner - in the domestic as well as export markets.

The Agricultural and Processed Food Products Export Development Authority (APEDA) and the Indian Institute of Packaging (IIP), have made efforts in the direction of developing packaging standards for **fresh fruits and vegetables** as per the international requirements.

The packaging standards drawn up by the IIP would immensely help the exporters in procuring quality packaging materials and ensuring safe delivery of the produce to the destination markets.

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कृषि और प्रसंस्कृत खाद्य उत्पाद निर्यात विकास प्राधिकरण

(वाणिज्य एवं उद्योग मंत्रालय, भारत सरकार)

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Specifications developed by IIP for APEDA

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