



Quality and Packaging Requirements for Virgin PET (vPET)

Property	Value	Test method
Intrinsic Viscosity (IV)		ASTM 4603 Capillary visc.
For still water	0.76 +/- 0.02	
For non-carbonated drinks	0.80 +/- 0.02	
For CSD (Carbonated Soft Drink)	0.82-0.84 +/- 0.02	
Melting Temperature (Tm)	248 +/- 4 °C	Stuart TM SMP3
Acetaldehyde content (AA)	Max 1 ppm	LAB AT689N Gas chromatography
Contamination (non-PET material)	0 ppm	
Humidity	<0.2 %	Hydro Tracer FLV AO 0815 1415
Metal contaminations (Ferrum, stain steel, Aluminum)	0 ppm	
Other non-PET contaminations	0 ppm	

Critical defects AQL 0.015% - delivered material will not be accepted

- 1. Color variation** – color variation in the same delivered lot among the Big Bags exceeds $\Delta E 5$
- 2. Intrinsic Viscosity (IV)** – deviation in the same delivered truck exceeds 0.02 dl/g between big bags
- 3. Pellet size** – inconsistent pellet size
- 4. Stuck pellets** – pellets that are stuck together
- 5. Contamination** – contamination of the Big Bag and the presence of foreign materials inside
- 6. Missing delivery information** - delivered material without labels or a quality certificate of analysis.



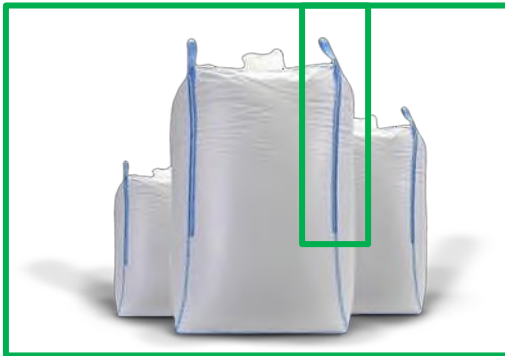
Requirements for Packaging

The PET (Polyethylene Terephthalate) material must be packed in dry, clean big bags. Each bag must have an inner plastic layer and be placed on pallets that are dry, clean, free of mold and not chemically treated. All big bags must be covered with an external plastic bag.

Each big bag must be labeled. The label must include batch number, big bag number, production date, grade name, supplier name.

Only material packed in big bags complying with **Annex 1. Polymers Trading International AG requirements for packaging - big bags - Flexible intermediate bulk containers (FIBCs) for non-dangerous goods (rev. 2025.10.08)**, accompanied by signed declaration of conformity on Supplier's company letterhead and as shown in the green-framed example below will be accepted with particular attention to the condition of the big bag handles.

Material packed in big bags as shown in the red-framed example will be refused.



YES



NO

Material big bags must have specification labels that include information about storage conditions. The Safe Working Load (SWL) indicated on the label must not be less than the actual weight of the raw material contained in the bag. SWL test report must be provided on request.

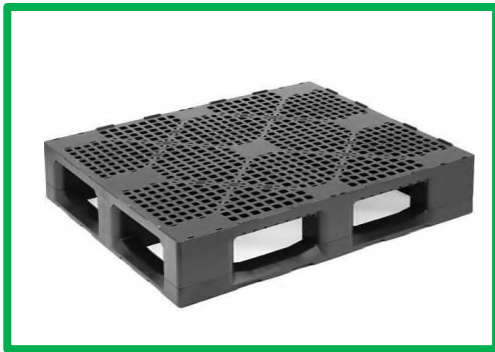
ABC - Company 10 Downing Street London Tel. 0044. 1234.5678910 Fax. 0044. 1234.5678911		 FIBC type: LK 0815/1000/5
SWL 1000 kg Safety Factor 5 : 1		
 	Test Certificate No	201234.1/01-6
	Test Certificate Date	11.06.2001
	Approved Laboratory	Labordata
	Test Standard	EFBCA 005
	FIBC Class	Single trip
Date FIBC manufactured		06 / 2001
 no no yes no yes Use all four loops! 30° max Avoid sharp edges!		
XYZ - Company, 40 Camphill Road, Dundee, Scotland UK Tel. 0044. 9876.543210 Fax. 0044. 9876.543211		



Polymers Trading International AG

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All material packed in big bags must be placed on either plastic or wooden pallets:



Material placed on pallets made of pressed wood or two-way pallets **will not be accepted during unloading:**



Additional requirements for Wooden Pallets

The *International Plant Protection Convention* (IPPC) requires that pallets crossing national borders must be made from materials that cannot transmit plant diseases or pests. These requirements are defined by the ISPM 15 standard:

- Pallets must be marked with the official IPPC symbol.
- Pallets made from untreated wood do not meet the requirements of this standard. Therefore, all pallets delivered to Retal factories must be heat-treated and confirmed by the HT marking.
- The use of chemicals such as pesticides, fungicides, wood preservatives (including chlorinated or brominated phenol mixtures and halogenated phenols) is strictly prohibited.
- The moisture content of the wood must not exceed 22%, including crossbars, lengthwise planks and bricks/blocks.



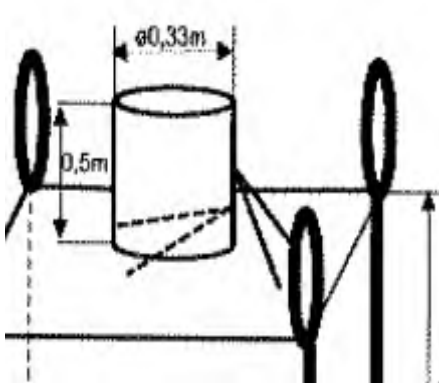
Annex 1. Polymers Trading International AG requirements for packaging - big bags - Flexible intermediate bulk containers (FIBCs) for non-dangerous goods (rev. 2025.10.08)

Specification	REGULAR SHAPE	CIRCULAR SHAPE
Product-packaging comply with packaging standard EN ISO 21898	Compliance with the standard is indicated on the label as specified in ISO 21898 point 7 - Marking.	Compliance with the standard is indicated on the label as specified in ISO 21898 point 7 - Marking.
Bag Size (OD)	95 × 95 × 145 cm	95 × 95 × 140 cm
Bag Size (ID)	91 × 91 × 141 cm	95 × 95 × 136 cm
Main Fabric	U panel style, laminated fabric, 180 GSM	Circular laminated fabric, Main body made from 200 GSM incl. RF area
Top Spout	33 × 50 cm, made from 60+20=80 GSM	33 × 50 cm, made from 60+20=80 GSM
Bottom Spout	33 × 50 cm, made from 60+20=80 GSM	33 × 50 cm, made from 60+20=80 GSM
Top Panel	Made from 60+20=80 GSM fabric	Made from 60+20=80 GSM fabric
Lifting Loops	25 cm above, side corner, color selectable, soft fabric	X corner: 30 cm on bag, 35 cm above bag, color selectable, soft fabric
Liner Size	192 cm × 345 cm × 50-micron, top and bottom shaped cylindrical. Stitching - double chain stitch	200 cm × 340 cm × 50-micron, top and bottom shaped cylindrical. Stitching - double chain stitch
SWL (Safe Working Load)	1200 kg	1100 kg
SF (Safety Factor)	5:1	5:1
Pouch	1 pouch	1 pouch
Label	1 label	1 label
Label Material	Supplier's name	Supplier's name



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Specification	REGULAR SHAPE	CIRCULAR SHAPE
Printing	2 sides, 2 color	2 sides, 2 color
Declaration of conformity (attached)	Yes, signed	Yes, signed
Handling instruction	Yes	Yes
Instruction for big bag folding		
Position of the inner and outer tie strings		



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Specification	REGULAR SHAPE	CIRCULAR SHAPE
Position of the label		