



Date of test 20.9.2022
Date of expiry 20.9.2025
Number of pages 4 B / B

Test Certificate No. 12535.1/22-9

This Certificate is only valid when printed in colour and complete with all 4 pages.

Applicant BulkPack Exports Ltd.
"507", "B" Block, 5th Floor, Corporate House, RNT Marg, Indore – 452 001 (M.P.), India

Test pieces *Flexible Intermediate Bulk Containers - SWL = 1000 kg, SF = 5:1*
Single trip FIBCs for non-dangerous goods acc. ISO 21898

Manufacturer's type designation N/A

Design

Dimensions	Sample a : (90 cm x 90 cm) x 90 cm ¹⁾	Volume 800 litres	Tare 940 g
	Samples b + c: (90 cm x 90 cm) x 200 cm ¹⁾	Volume 1800 litres	Tare 1640 g
Body fabric	Polypropylene 125 g/m ² , uncoated ²⁾ , white flat woven fabric layers, each with one red, one blue and one yellow coloured tape		
Suspension	Four white PP-webbing (40 mm wide, 28 g/m), sewn into the vertical seams in a length of 35 cm / 75 cm (lowest size) resp. 70 cm / 115 cm (highest size), anchorage lengths for intermediate sizes see page 4		
Details	Four vertical seams, two horizontal seams at the bottom (U-panel design) / overlock + chain stitching / fabric folded in all the seams / open top ³⁾ / no inliner / discharge spout d = 35 cm ³⁾ made of PP-fabric 90 g/m ² + 20 g/m ² coating, double seam		

Kind of tests *Type Tests according ISO 21898*

Tests a + b Cyclic top lift tests acc. Annex B **Test c** Compression test acc. Annex C

Test conditions Charging with plastic granules (filling height approx. 85 cm (lowest size) resp. 195 cm (highest size), load application with piston and pressure plate (d = 90 cm), rate of load application 70 kN/min.

Cyclic load and load to failure

Sample a After 30 cycles of load application to $P_c = 20$ kN (2040 kg) no visible damages occurred in the test piece. The load has then been increased until failure. On reaching a load of $P_b = 54,5$ kN (5550 kg) the fabric tore at a vertical seam.

Sample b After 30 cycles of load application to $P_c = 20$ kN (2040 kg) no visible damages occurred in the test piece. The load has then been increased until failure. On reaching a load of $P_b = 61,9$ kN (6300 kg) a webbing tore at the suspension frame.

Compression

Sample c After six hours compression by $P_k = 40$ kN (4080 kg) no visible damages occurred in the test piece.

Test result *A safe working load SWL = 1000 kg / SF = 5:1 is allowable.*

Statement of conformity The FIBCs tested comply with the requirements of ISO 21898.
FIBCs of this design type are in a condition for safe operation.

Notes

This Certificate is restricted to FIBCs produced by BulkPack Exports Ltd.

¹⁾ This certificate covers all FIBCs with heights of between 90 cm and 200 cm.

All material weights are minimum weights and may not be lower than the values shown.

Test diagrams see page 2. Photos of the test pieces see page 3. This certificate expires on 20.9.2025.

²⁾ Raw material: 30 % Recycled Polypropylene (30 % rPP) (statement of the manufacturer)

³⁾ "Directions for use referring to this certificate" see page 4.

Competent Engineer

Jorg Bartel

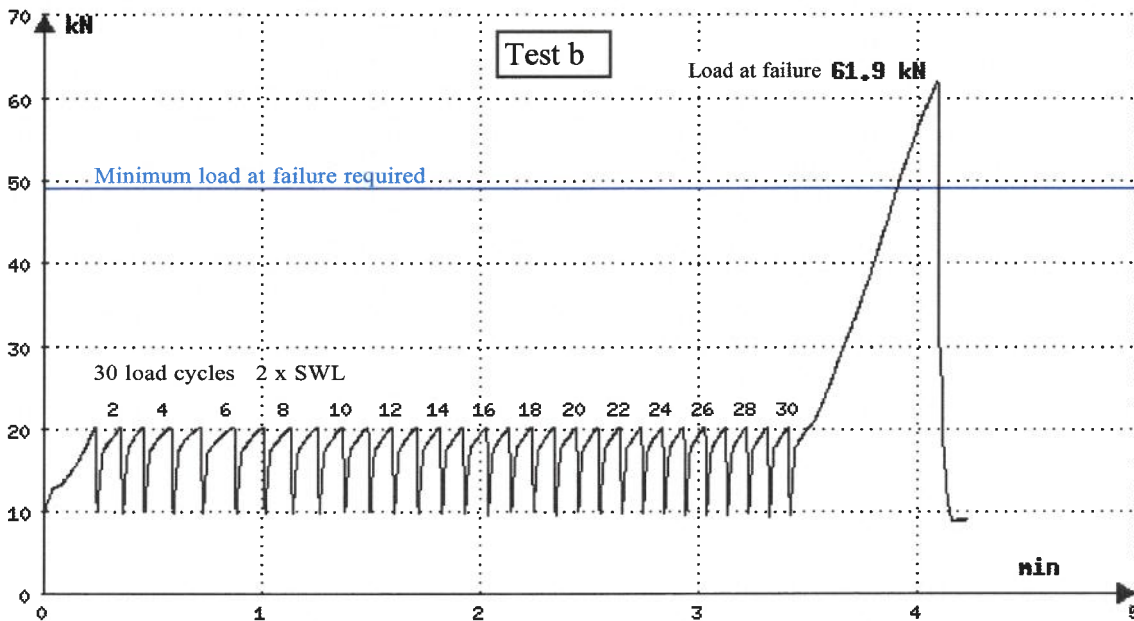
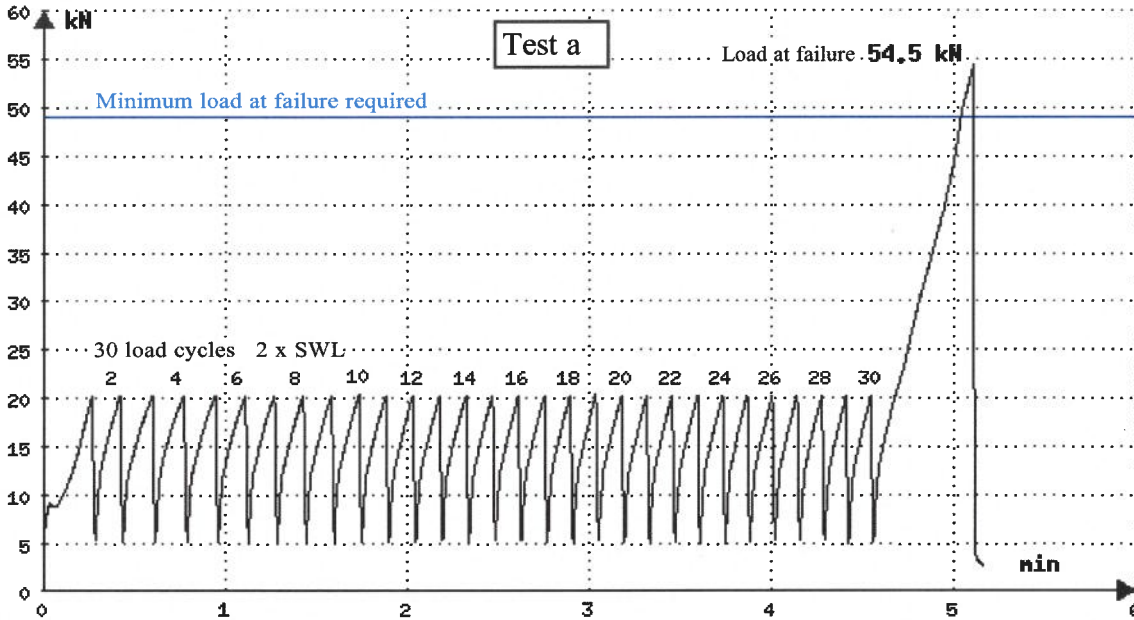


Head of Institute

Dr. Herbert Kielbassa



FIBC - Cyclic top lift tests Test diagrams 12535.1 a + b / 22 - 9



Project data

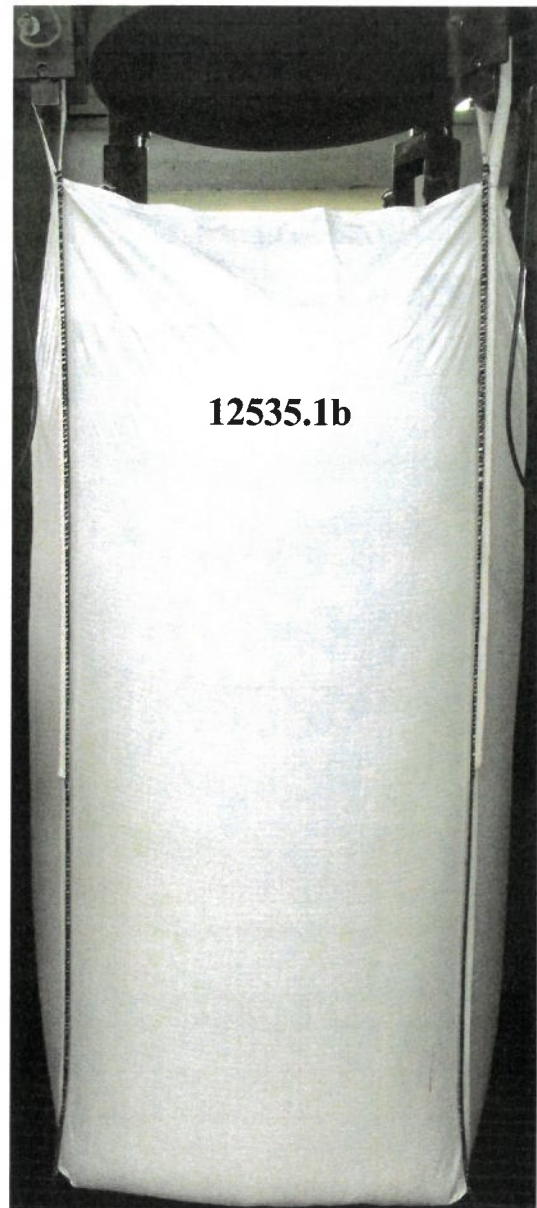
Applicant : BulkPack Exports Ltd.
Test piece a : FIBC 90 cm x 90 cm x 90 cm
Test piece b : FIBC 90 cm x 90 cm x 200 cm
Safe working load : SWL = 1000 kg
Safety factor : SF = 5 : 1

Test data

Test date : 20.9.2022
Test Standard : ISO 21898
Load at failure, test a : $P_b = 54,5 \text{ kN} = 5550 \text{ kg}$
Load at failure, test b : $P_b = 61,9 \text{ kN} = 6300 \text{ kg}$

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FIBC - Cyclic top lift tests Photos of the test samples



Project data

Applicant : BulkPack Exports Ltd.
Test piece a : FIBC 90 cm x 90 cm x 90 cm
Test piece b : FIBC 90 cm x 90 cm x 200 cm
Safe working load : SWL = 1000 kg
Safety factor : SF = 5 : 1

Test data

Test date : 20.9.2022
Test Standard : ISO 21898
Load at failure, test a : Pb = 54,5 kN = 5550 kg
Load at failure, test b : Pb = 61,9 kN = 6300 kg



Directions for use referring to this certificate

This certificate covers FIBCs of like design, manufactured using like materials and methods of construction as set down in this certificate and showing dimensions as listed below and in the certificate. The use of other methods or components may render the certificate invalid. It is the responsibility of FIBC manufacturers to ensure the samples tested are representative of the production.

Allowed (covered by this certificate)	Not allowed (not covered by this certificate)
Diameters of discharge spout smaller than 35 cm	Diameters of discharge spout larger than 35 cm
Base without discharge spout	
Base dimensions of between 90 cm x 90 cm and 99 cm x 99 cm provided the same geometry is maintained	Base dimensions smaller than 90 cm x 90 cm Base dimensions larger than 99 cm x 99 cm
Bag heights of between 90 cm and 200 cm	Bag heights smaller than 90 cm Bag heights larger than 200 cm
Use for one filling and one discharge only	Re-use of the FIBCs
Open top or any other design of top construction	Manufacture after expiry date of this certificate: 20.9.2025

Anchorage lengths of the webbings

Bag height (cm)	90	100	110	120	130	140	150	160	170	180	190	200
Short leg (cm)	35	38	41	45	48	51	54	57	60	64	67	70
Long leg (cm)	75	79	82	86	90	93	97	100	104	108	111	115

Label

All FIBCs shall be durably marked by means of a permanently attached and easily visible and readable label. The layout of the label referring to this certificate shall be as shown below with the following data:

Manufacturer's Name & Address and Logo Manufacturer's Reference (unique to the hereby certified FIBC type)	
SWL 1000 kg	Safety Factor 5 : 1
Your logos etc.	Test Certificate No 12535.1/22-9
	Test Certificate Date 20.9.2022
	Approved Laboratory LABORDATA
	Test Standard ISO 21898
	FIBC Class Single trip
	Date FIBC manufactured
Handling Recommendations / Pictograms (proposals see www.labordata.com)	
Supplier's Name & Address (if required)	