Date of test 26.7.2016
Date of expiry 26.7.2019
Number of pages 4 C / B

This Certificate is only valid when complete with all 4 pages.

Test Certificate No. 10185.4/16-7

Applicant "DIV-Trades" d.o.o.
Novosadski put 21, 21400 Backa Palanka, Serbia

Test pieces ***Flexible Intermediate Bulk Containers - SWL = 1750 kg, SF = 5:1***
Single trip FIBCs for non-dangerous goods acc. ISO 21898

Manufacturer's type designation PP-91x91x100(200)-U-1750-5:1

Design

Dimensions Sample a : (91 cm x 91 cm) x 100 cm (lowest size) [1] **Volume** 900 litres **Tare** 1310 g
Samples b + c: (91 cm x 91 cm) x 200 cm (highest size) [1] **Volume** 1850 litres **Tare** 2100 g

Body fabric Polypropylene 180 g/m², uncoated, white flat woven fabric layers, with one green, one blue and five black coloured tapes, closely woven in the area of the vertical seams [2]

Suspension Four white PP-webbings (50 mm wide, 48 g/m), sewn into the vertical seams in a length of 40 cm / 85 cm (lowest size) resp. 50 cm / 145 cm (highest size) [3], anchorage lengths for intermediate sizes see page 4

Details Four vertical seams, two horizontzal seams at the bottom (U-panel design) / overlock + chain stitching / side panel fabric folded in the bottom seams / open top [3] / no inliner / discharge spout d = 40 cm [3] made of PP-fabric 70 g/m² + 30 g/m² coating, single seam

Kind of tests ***Type Tests according ISO 21898***

Tests a + b Cyclic top lift tests plus final load to failure **Test c** Compression test

Test conditions Charging with plastic granules (filling height approx. 95 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 70 cycles of load application to P_c = **50 kN** (5100 kg) no visible damages occurred in the test piece. The load has then been increased until failure. On reaching a load of P_b = **86,3 kN** (8790 kg) the short leg of a webbing tore out of its attachment and the discharge spout fabric tore at the spout seam.

Sample b After 70 cycles of load application to P_c = **50 kN** (5100 kg) no visible damages occurred in the test piece. The load has then been increased until failure. On reaching a load of P_b = **88,8 kN** (9050 kg) the fabric tore horizontally below two webbing attachments, at a bottom seam, and vertically from the discharge spout seam.

Compression

Sample c After six hours compression by P_k = **70 kN** (7140 kg) no visible damages occurred in the test piece.

Test result *A safe working load SWL = 1750 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 "DIV-Trades" d.o.o.
[1] **This certificate covers all FIBCs with heights of between 100 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.
[2] Raw material: Pure virgin polypropylene (statement of the manufacturer)
[3] "Directions for use referring to this certificate" see page 4.
Two test pieces are kept in our store for three years. This certificate expires on 26.7.2019.

Competent Engineer

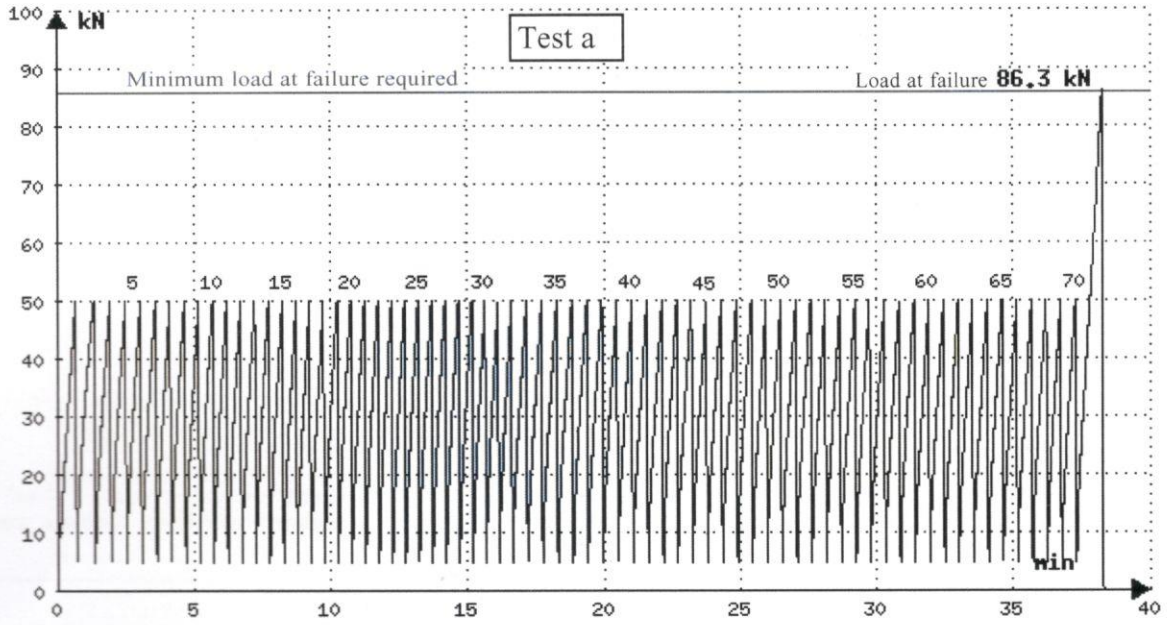
Ronald Clews

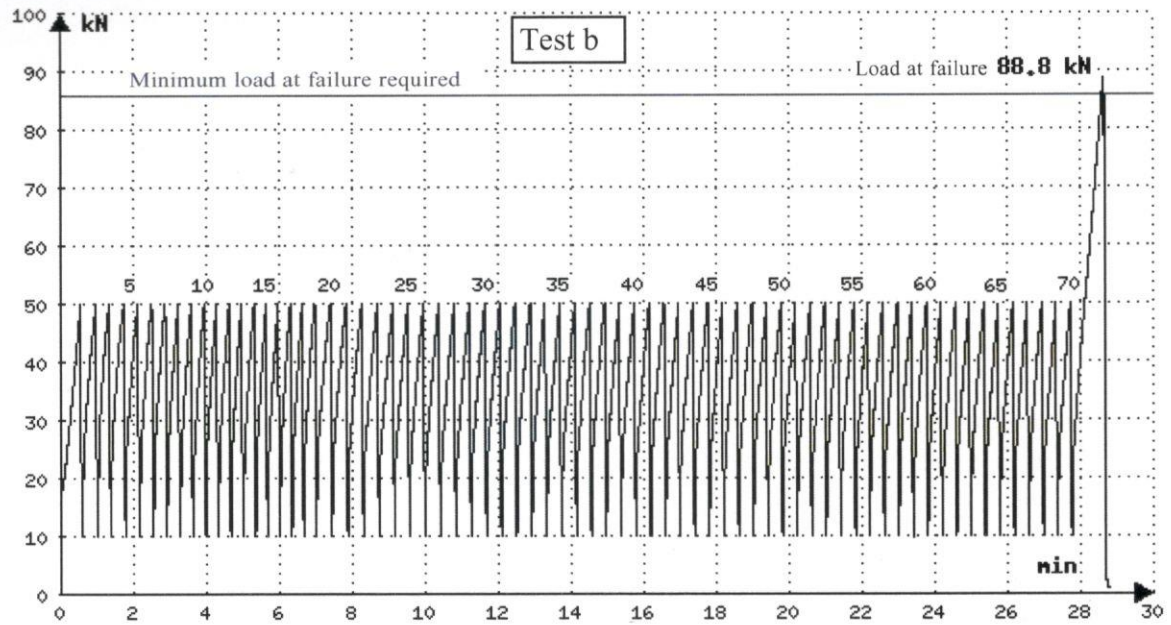
LABORDATA International Materials Testing Institute

Head of Institute

Dr.-Ing. Kielbassa

FIBC - Cyclic top lift tests
Test diagrams 10185.4 a + b / 16 - 7





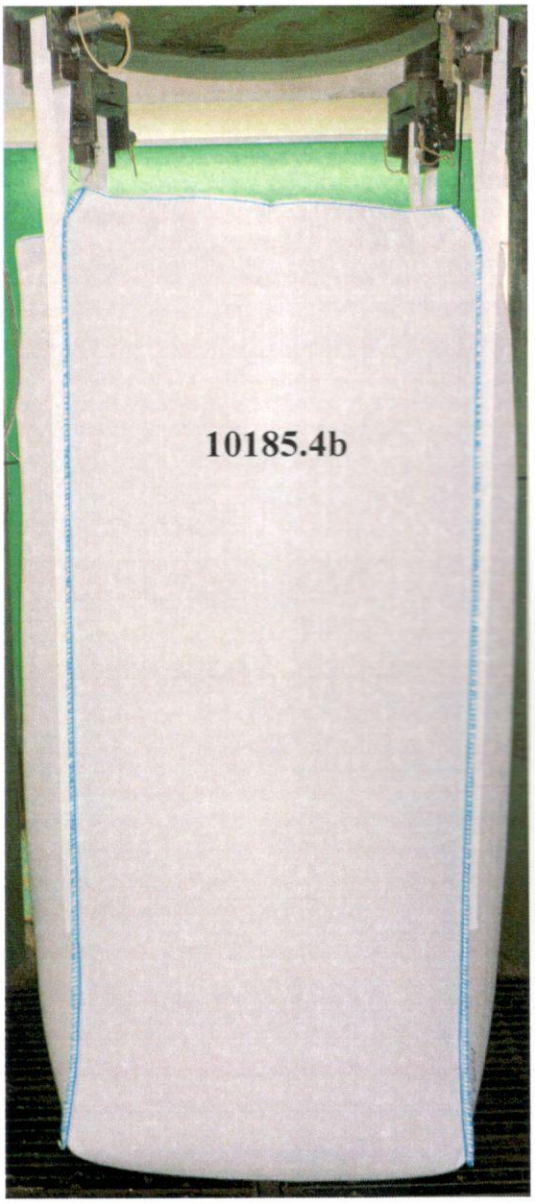
Project data

Applicant	: "DIV-Trades" d.o.o.
Test piece a	: FIBC 91 cm x 91 cm x 100 cm
Test piece b	: FIBC 91 cm x 91 cm x 200 cm
Safe working load	: SWL = 1750 kg
Safety factor	: SF = 5 : 1

Test data

Test date	: 26.7.2016
Test Standard	: ISO 21898
Load at failure, test a	: Pb = 86,3 kN = 8790 kg
Load at failure, test b	: Pb = 88,8 kN = 9050 kg

FIBC - Cyclic top lift tests
Photos of the test samples



Project data

Applicant	: "DIV-Trades" d.o.o.
Test piece a	: FIBC 91 cm x 91 cm x 100 cm
Test piece b	: FIBC 91 cm x 91 cm x 200 cm
Safe working load	: SWL = 1750 kg
Safety factor	: SF = 5 : 1

Test data

Test date	: 26.7.2016
Test Standard	: ISO 21898
Load at failure, test a	: Pb = 86,3 kN = 8790 kg
Load at failure, test b	: Pb = 88,8 kN = 9050 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 **40** cm	Diameters of discharge spout larger than **40** cm
Base without discharge spout	
Base dimensions of between **91** cm x **91** cm and **100** cm x **100**cm provided the same geometry is maintained	Base dimensions smaller than **91** cm x **91** cm Base dimensions larger than **100** cm x **100** cm
Bag heights of between **100** cm and **200** cm	Bag heights smaller than **100** 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 by "DIV-Trades" d.o.o. after expiry date of this certificate: **26.7.2019**

Anchorage lengths of the webbings

Bag height (cm)	100	110	120	130	140	150	160	170	180	190	200
Short leg (cm)	40	41	42	43	44	45	46	47	48	49	50
Long leg (cm)	85	91	97	103	109	115	121	127	133	139	145

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 1750 kg **Safety Factor 5 : 1**

Your logos etc.

Test Certificate No	**10185.4/16-7**
Test Certificate Date	**26.7.2016**
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)