



Test Certificate No. 9483.3/15-1

Date of test 19.1.2015
Date of expiry 19.1.2018
Number of pages 4 C / B

Applicant Qatar Polymer Industrial Company
P.O. Box: 33195, Doha, Qatar

Test pieces *Flexible Intermediate Bulk Containers - SWL = 1500 kg, SF = 5:1*
Single-trip FIBCs, Category 3.2.3, EFIBCA-Standard 001

Design **Manufacturer's type designation** QPIC-USS-1500 KG 5:1

Dimensions Tests a + b: (90 cm x 90 cm) x 90 cm (lowest size)¹⁾ **Volume** 800 litres **Tare** 1090 g
Tests c + d: (90 cm x 90 cm) x 200 cm (highest size)¹⁾ **Volume** 1800 litres **Tare** 1910 g

Body fabric Polypropylene 140 g/m², uncoated, white flat woven fabric layers, each with one yellow coloured tape²⁾

Suspension Four white PP-webbings (45 mm wide, 38 g/m), sewn into the vertical seams in a length of 50 cm / 70 cm (lowest size) resp. 50 cm / 160 cm (highest size)³⁾, 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 top²⁾ / no inliner / discharge spout d = 45 cm²⁾ made of PP-fabric 70 g/m² + 20 g/m² coating, double seam

Kind of tests *Type Tests according to EFIBCA-STANDARD 005*

005 § 4.1 Cyclic top lift plus final load to failure (tests a - d)
005 § 4.2 Compression test (tests e - h)

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

Cyclic load Tests a - d After 70 cycles of load application to P_c = 50 kN (5100 kg) no visible damages occurred in the test pieces. The load has then been increased until failure.

Load to failure

Test a	P _b = 77,4 kN (7880 kg)	the fabric tore at a vertical seam.
Test b	P _b = 79,2 kN (8070 kg)	" " "
Test c	P _b = 91,2 kN (9290 kg)	a webbing tore out of its attachment.
Test d	P _b = 88,5 kN (9020 kg)	the short leg of a webbing tore out of its attachment.

Compression Tests e - h After compression by P_k = 60 kN (6120 kg) no visible damages occurred in the test pieces.

Test result *A safe working load SWL = 1500 kg / SF = 5:1 is allowable.*

Statement of conformity The FIBCs tested comply with the requirements of EFIBCA-Standard 005. FIBCs of this design type are in a condition for safe operation.

Notes

- ¹⁾ This certificate covers all FIBCs with heights of between 90 cm and 200 cm. Test diagrams see page 2. Photos of two 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 19.1.2018.

Competent engineer

J.O. Bartel
Jorg Bartel

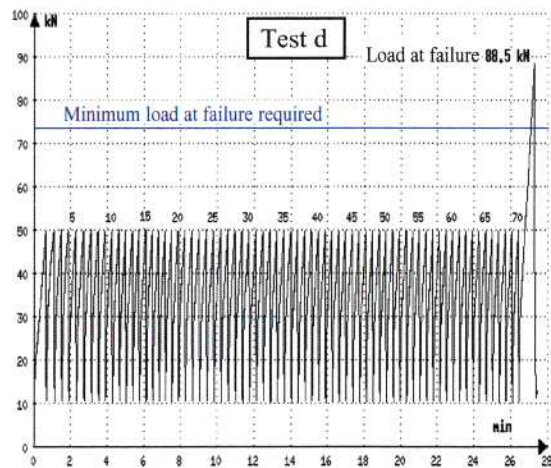
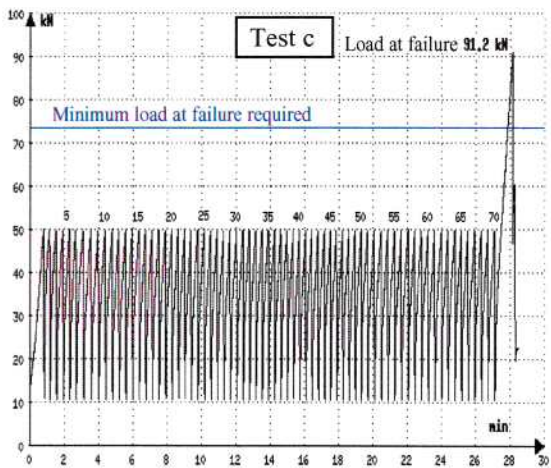
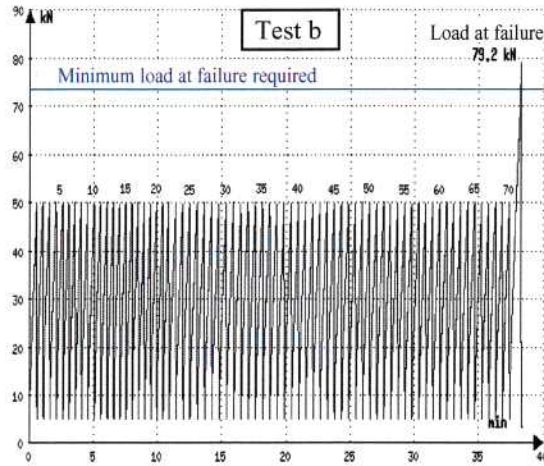
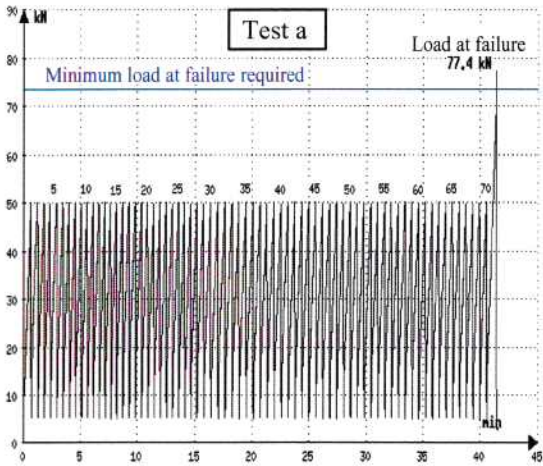


Head of institute

Dr.-Ing. Kielbassa
Dr.-Ing. Kielbassa



FIBC - Cyclic top lift tests Test diagrams 9483.3 a, b, c, d / 15 - 1



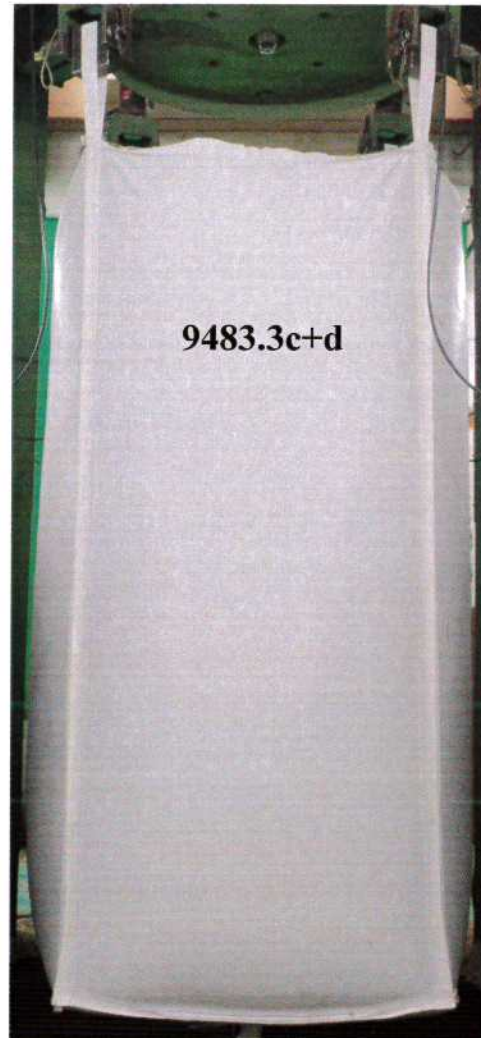
Project data

Applicant : Qatar Polymer Industrial Company
Test piece a + b : FIBC 90 cm x 90 cm x 90 cm
Test piece c + d : FIBC 90 cm x 90 cm x 200 cm
Safe working load : SWL = 1500 kg
Safety factor : SF = 5 : 1

Test data

Test date : 19.1.2015
Test Standard : EFIBCA 005
Load at failure, test a : $P_b = 77,4 \text{ kN} = 7880 \text{ kg}$
Load at failure, test b : $P_b = 79,2 \text{ kN} = 8070 \text{ kg}$
Load at failure, test c : $P_b = 91,2 \text{ kN} = 9290 \text{ kg}$
Load at failure, test d : $P_b = 88,5 \text{ kN} = 9020 \text{ kg}$

FIBC - Cyclic top lift tests Photos of two test samples



Project data

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Load at failure, test d : $P_b = 88,5 \text{ kN} = 9020 \text{ kg}$



**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 45 cm	Diameters of discharge spout larger than 45 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: 19.1.2018

Anchorage lengths of the webbings

Bag height (cm)	90	100	110	120	130	140	150	160	170	180	190	200
Short leg (cm)	50	50	50	50	50	50	50	50	50	50	50	50
Long leg (cm)	70	78	86	95	103	111	119	127	135	144	152	160

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 1500 kg	Safety Factor 5 : 1
Your logos etc.	Test Certificate No 9483.3/15-1
	Test Certificate Date 19.1.2015
	Approved Laboratory LABORDATA
	Test Standard EFIBCA 005
	FIBC Class Single trip
	Date FIBC manufactured
Handling Recommendations / Pictograms (proposals see www.labordata.com)	
Supplier's Name & Address (if required)	