



Test Certificate No. 9483.1/15-1

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 = 1250 kg, SF = 6:1*
Standard-duty re-usable FIBCs, Category 3.2.2, EFIBCA-Standard 001

Design **Manufacturer's type designation** QPIC-USS-1250 KG 6:1

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 004*

004 § 4.1 Cyclic top lift plus final load to failure (tests a - d)
004 § 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 = 1250 kg / SF = 6:1 is allowable.*

Statement of conformity The FIBCs tested comply with the requirements of EFIBCA-Standard 004. 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

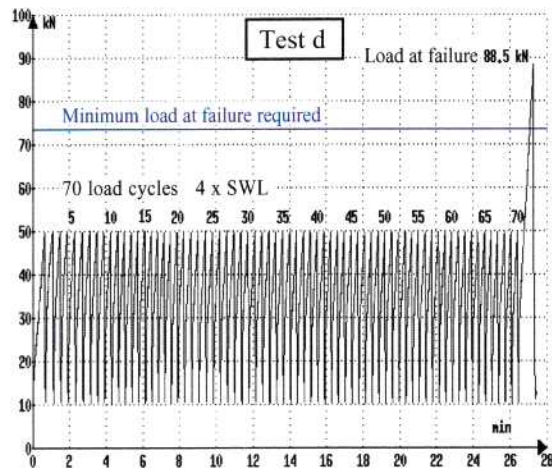
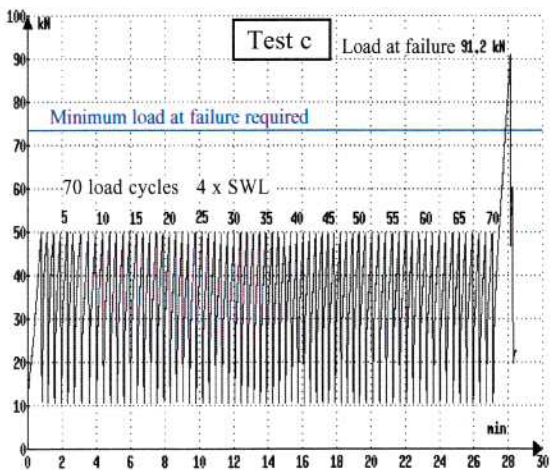
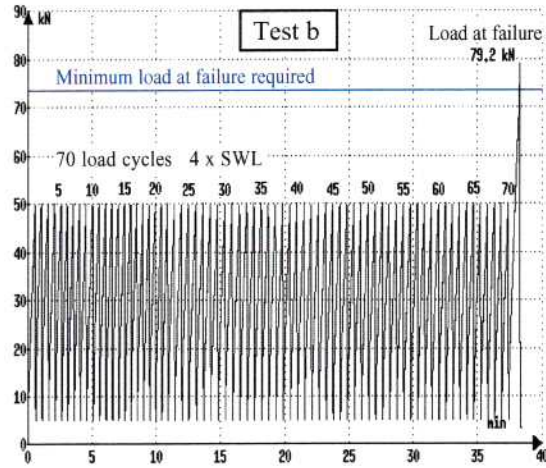
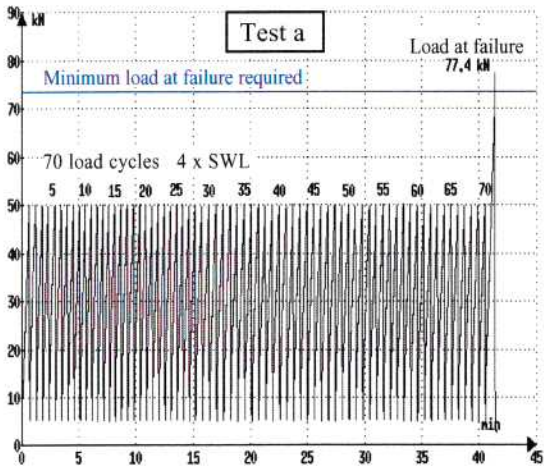


Head of institute

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



FIBC - Cyclic top lift tests Test diagrams 9483.1 a, b, c, d / 15 - 1



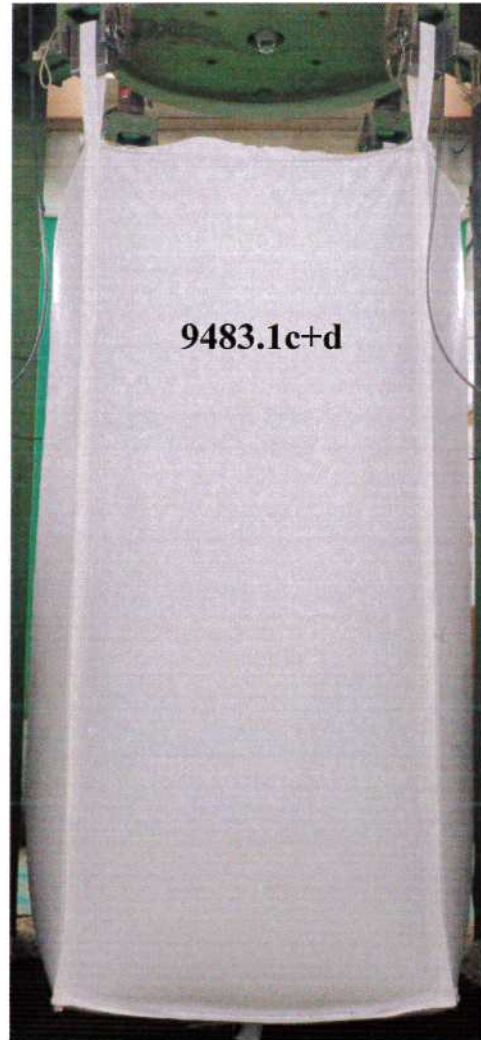
Project data

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 = 1250 kg
 Safety factor : SF = 6 : 1

Test data

Test date : 19.1.2015
 Test Standard : EFIBCA 004
 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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Test piece a + b : FIBC 90 cm x 90 cm x 90 cm
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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 |
| Re-use of the FIBCs*) | Re-use or repair of damaged FIBCs |
| Open top or any other design of top construction | Manufacture after expiry date of this certificate: 19.1.2018 |

*) Before re-use the FIBCs should be thoroughly examined for damage. When damage affecting the strength is discovered, the FIBC should be taken out of service immediately.

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 1250 kg | Safety Factor 6 : 1 |
| Your logos etc. | Test Certificate No 9483.1/15-1 |
| | Test Certificate Date 19.1.2015 |
| | Approved Laboratory LABORDATA |
| | Test Standard EFIBCA 004 |
| | FIBC Class Standard-duty re-usable |
| | Date FIBC manufactured |
| Handling Recommendations / Pictograms (proposals see www.labordata.com) | |
| Supplier's Name & Address (if required) | |