LABORDATA®
International Materials Testing Institute

Test House accredited by European Flexible Intermediate Bulk Container Association
Authorized Laboratory for Packagings and IBCs of Dangerous Goods. Authorized Third Party Inspectors

Test Certificate No. 7120.1/08-6

Date of test 19.6.2008 / C

Applicant Structure-flex Ltd.
Peacock Way, Melton Constable, Norfolk, NR24 2AZ, England

Test pieces ***Flexible Intermediate Bulk Container*** - ***SWL = 1815 kg, SF = 8:1***
Heavy-duty re-usable FIBC for non-dangerous goods acc. ISO 21898 ***SWL = 4000 lbs, SF = 8:1***

Design specification

Manufacturer's type designation 10580

Dimensions (d = 119 cm) x 127 cm + 15 cm / (d = 47") x 50" + 6" conical bottom

Tare 13.220 g

Body fabric Polyester 260 g/m² + 640 g/m² coating, green coated layers

Suspension Four green Polyester-webbings (50 mm wide, 167 g/m) forming top loops and bottom loops. Triple laying reinforcing flaps, 20 cm x 95 cm, welded at the wall fabric, webbings sewn flat at two layers of the reinforcing flaps in a length of 2 x 20 cm. Top loops protected by sleeves (cross corner design). Two additional stevedore webbings (50 mm wide, 167 g/m, length 115 cm), each running through two top loops. The top lift test has been performed by using the 4-point suspension (in accordance with instruction stevedore suspension not tested)

Details One vertical seam at the body (welded joint 4 cm overlapping), conical bottom attached by one horizontal seam (welded joint 6 cm overlapping) / open top*) / a double laying webbing (50 mm wide, 2 x 157 g/m) running through four bottom loops / discharge spout d = 37 cm (14,5")*) made of Polyester-fabric 180 g/m² + 450 g/m² coating, with six-petal closure

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

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

Test conditions Charging with plastic granules (filling height approx. 125 cm), load application with piston and oval pressure plate (d = 110 cm), 70 cycles of load application to 10.890 kg and subsequent unloading, then final test cycle to failure, rate of load application 70 kN/min.

Cyclic load and load to failure

Test a After 70 cycles of load application to P_c = **10.890 kg** (24.000 lbs) no visible damages occurred in the test piece. Then the load has been increased up to failure. When reaching a load of P_b = **18.450 kg** (40.675 lbs) the test has been stopped automatically before reaching failure.

Compression

Test b After six hours compression by P_k = **7260 kg** (16.000 lbs) no visible damages occurred.

Test result ***A safe working load SWL = 1815 kg (4000 lbs) is allowable.***

The safety factors required SF = 4:1 (compression load), SF = 6:1 (cyclic load) and SF = 8:1 (load at failure) are realized.

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 Test diagram and photo of a test piece see on page 2.
*) "Directions for use referring to this certificate" see on page 3.
A test piece is kept in our store for three years. This certificate expires on 30.6.2011.

Competent Engineer

i. V. Jorg Barte

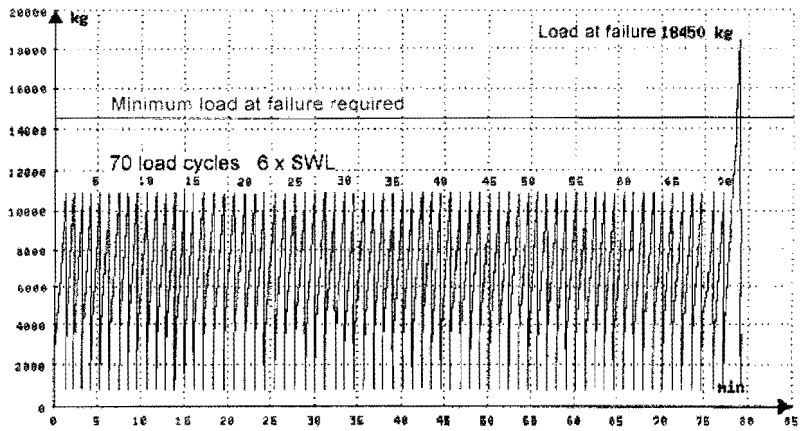
LABORDATA International Materials Testing Institute

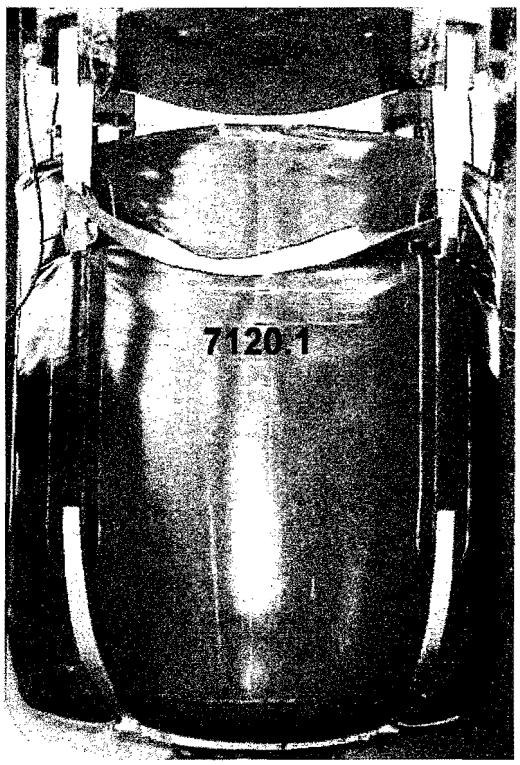
Head of Institute

Dr.-Ing. Kielbassa

LABORDATA International Materials Testing Institute GmbH
Wilhelm-Bode-Strasse 3, D-38104 Braunschweig, Germany
Phone +49 531 3390-11
Telefax +49 531 3390-13
e-Mail labordata@labordata.com
Internet www.labordata.com

FIBC cyclic top lift test - test diagram 7120.1/08-6





Project data		Test data	
Applicant	: Structure-flex Ltd.	Test date	: 19.6.2008
Test pieces	: FIBC d = 119 cm x 127 + 15 cm d = 47" x 50" + 6"	Test Standard	: ISO 21898
		Load at failure	: Pb = 18450 kg = 40675 lbs
Safe working load	: SWL = 1815 kg (4000 lbs)		
Safety factor	: SF = 8 : 1		

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.

Allowed (covered by this certificate)	**Not allowed** (not covered by this certificate)
Diameters of discharge spout smaller than **37** cm (**14,5"**)	Diameters of discharge spout larger than **37** cm (**14,5"**)
Base without discharge spout	
Base dimensions of between d = **119** cm (**47"**) and d = **131** cm (**51,5"**) provided the same geometry is maintained	Base dimensions smaller than d = **119** cm (**47"**) Base dimensions larger than d = **131** cm (**51,5"**)
Bag height **127** cm (**50"**) + **15** cm (**6"**) conical bottom	Bag heights diverging from **127** cm (**50"**) + **15** cm (**6"**) conical bottom
Re-use of the FIBCs*)	Use after expiring date of this certificate: **30.6.2011**
Repair of damaged FIBCs*)	
Open top or any other design of top construction	

*) *Before re-use the FIBCs should be thoroughly examined for damage. When damage affecting the strength of an FIBC it should be taken out of service immediately or repaired in such a way that the tensile strength across a repair is as great as that of the original.*

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 1815 kg (4000 lbs) **Safety Factor 8 : 1**		
Logos of memberships etc.	**Test Certificate No**	**7120.1/08-6**
	Test Certificate Date	**19.6.2008**
	Approved Laboratory	**LABORDATA**
	Test Standard	**ISO 21898**
	FIBC Class	**Heavy-duty re-usable**
	Date FIBC manufactured	
Handling Recommendations / Pictograms (proposals see www.labordata.com)		
Supplier's Name & Address (if required)		