



Date of test 21.4.2022  
Date of expiry 21.4.2025  
Number of pages 3 B / E

## Test Certificate No. 12383.2/22-4

**This Certificate is only valid when printed in colour and complete with all 3 pages.**

**Applicant** FC Services  
ZI Larrouset, 47600 Nerac, France

**Manufacturer** Karaca Ambalaj San. ve Tic. A.S.  
Cengeldere Caddesi No.: 107 Cavusbasi, 34830 Beykoz-Istanbul, Turkey

**Test piece** *Flexible Intermediate Bulk Container - SWL = 1000 kg, SF = 8:1*  
*Standard-duty re-usable FIBC for non-dangerous goods acc. ISO 21898<sup>\*)</sup>*

**Design** **Manufacturer's type designation** FCS 042-B / HELICO

**Dimensions** (120 cm x 120 cm) x 125 cm **Volume** 2000 litres **Tare** 5120 g

**Body fabric** Double laying Polypropylene 2 x 160 g/m<sup>2</sup>, uncoated<sup>1)</sup>, white flat woven fabric layers, each with six beige coloured tapes, closely woven in the area of the vertical seams

**Suspension** Two white PP-webbing (55 mm wide, 56 g/m) forming four point suspension, running around the bag, sewn between the fabric layers into the vertical seams and sewn crossed at the bottom, length of the short legs 75 cm, free length 150 cm (125 cm sewn together by overlock + chain stitching, 25 cm loops), loops reinforced inside by an additional webbing strip (40 mm wide, 28 g/m). The bag was tested in one point suspension by combining the four loops.

**Details** Four vertical seams, two horizontal seams at the bottom (U-panel design) / overlock + chain stitching / top with skirt<sup>2)</sup> / no inliner / no discharge spout<sup>2)</sup>

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

**Test a** Cyclic top lift test acc. Annex B **Test b** Compression test acc. Annex C

**Test conditions** Charging with plastic granules (filling height approx. 120 cm), load application with pressure plate (d = 120 cm) and a tie-rod through the granules and the bottom of the container, rate of load application 70 kN/min.

**Cyclic load and load to failure** **Sample a** After 70 cycles of load application to  $P_c = 60$  kN (6120 kg) no visible damages occurred in the test piece. The load has then been increased until failure. When reaching a load of  $P_b = 101,8$  kN (10.370 kg) the fabric tore at a vertical seam and a webbing tore at the top seam.

**Compression** **Sample b** After six hours compression by  $P_k = 60$  kN (6120 kg) no visible damages occurred in the test piece.

**Test result** *A safe working load SWL = 1000 kg / SF = 8:1 is allowable.*

<sup>\*)</sup> The FIBCs tested fulfil the test requirements for Heavy Duty FIBCs. But because of their design and materials used they remain classified as Standard Duty FIBCs.

**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  
**It is the responsibility of the Manufacturer and the Operator to comply with the requirements stipulated in Helicopter Rules FH-SY.**

**Notes** **This Certificate is restricted to FIBCs produced by Karaca Ambalaj.**  
All material weights are minimum weights and may not be lower than the values shown.  
Test diagram and photo of a test piece see page 2. This certificate expires on 21.4.2025.

<sup>1)</sup> Raw material: Pure virgin polypropylene (statement of the manufacturer)

<sup>2)</sup> "Directions for use referring to this certificate" see page 3.

**Competent Engineer**

*J. Bartel*

Jorg Bartel



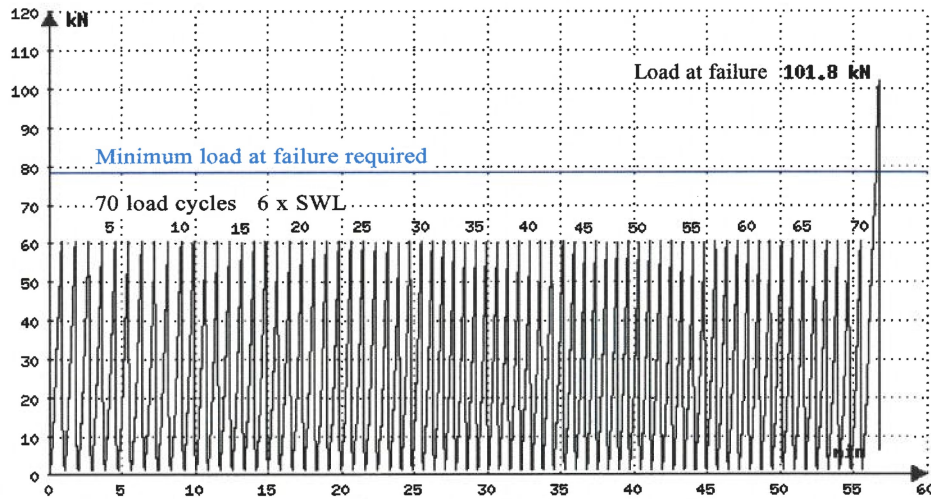
**Head of Institute**

*Dr. Herbert Kielbassa*

Dr. Herbert Kielbassa



FIBC cyclic top lift test - test diagram 12383.2/22 - 4



Project data

Applicant : FC Services  
Test piece : FIBC 120 cm x 120 cm x 125 cm  
Safe working load : SWL = 1000 kg  
Safety factor : SF = 8 : 1

Test data

Test date : 21.4.2022  
Test Standard : ISO 21898  
Load at failure : Pb = 101,8 kN = 10.370 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.

<b>Allowed</b> (covered by this certificate)	<b>Not allowed</b> (not covered by this certificate)
	Base with discharge spout
Base dimensions of between <b>120 cm x 120 cm</b> and <b>132 cm x 132 cm</b> provided the same geometry is maintained	Base dimensions smaller than <b>120 cm x 120 cm</b> Base dimensions larger than <b>132 cm x 132 cm</b>
Bag height <b>125 ± 2 cm</b>	Bag heights diverging from <b>125 ± 2 cm</b>
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: <b>21.4.2025</b>

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

## 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 (Certificate Holder's) Name & Address and Logo Manufacturer's (Certificate Holder's) Reference (unique to the hereby certified FIBC type)	
<b>SWL    1000 kg</b>	<b>Safety Factor    8 : 1</b>
Your logos etc.	<b>Test Certificate No</b> 12383.1/22-4
	<b>Test Certificate Date</b> 21.4.2022
	<b>Approved Laboratory</b> LABORDATA
	<b>Test Standard</b> ISO 21898
	<b>FIBC Class</b> Standard-duty re-usable
	<b>Date FIBC manufactured</b>
Handling Recommendations / Pictograms (proposals see <a href="http://www.labordata.com">www.labordata.com</a> )	
Supplier's Name & Address (if required)	