



Test Certificate No. 7160.1/08-8

Applicant	Al-Matin Group, P.O.Box 1191, Homs, Syria	
Test pieces	<i>Flexible Intermediate Bulk Container - SWL = 1000 kg, SF = 5:1 Single trip FIBC for non-dangerous goods acc. ISO 21898</i>	
Design specification	<p>Manufacturer's type designation - - -</p> <p>Dimensions Test a : (90 cm x 90 cm) x 70 cm (lowest size) Tests b + c: (90 cm x 90 cm) x 230 cm (highest size)</p> <p>Tare 1300 g (lowest size) / 2360 g (highest size)</p> <p>Body fabric Polypropylene 140 g/m², uncoated, white flat woven fabric layers without coloured characterization*)</p> <p>Suspension Four black/white PP-webbings (45 mm wide, 35 g/m), sewn into the vertical seams in a length of 35 cm / 65 cm (lowest size) resp. 50 cm / 120 cm (highest size)**)</p> <p>Details Four vertical seams (overlock + chain sewings), two horizontal seams at the bottom (overlock sewings) / U-panel design / fabric folded in all the seams / top with skirt***) / without inliner / double laying discharge spout d = 35 cm***) made of PP- fabric 2 x 60 g/m², uncoated</p>	
Kind of tests	<i>Type Tests according ISO 21898</i>	
	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. 65 cm (lowest size) resp. 225 cm (highest size), load application with piston and pressure plate (d = 90 cm), 30 cycles of load application to 20 kN (test a) resp. 30 kN (test b) and subsequent unloading, then final test cycle to failure, rate of load application 70 kN/min.	
Cyclic load and load to failure	<p>Test a After 30 cycles of load application to $P_c = 20 \text{ kN}$ (2040 kg) no visible damages occurred in the test piece. Then the load has been increased up to failure. When reaching a load of $P_a = 56.1 \text{ kN}$ (5710 kg) the short leg of a webbing tore out of its attachment.</p> <p>Test b After 30 cycles of load application to $P_c = 30 \text{ kN}$ (3060 kg) no visible damages occurred in the test piece. Then the load has been increased up to failure. When reaching a load of $P_b = 60.5 \text{ kN}$ (6160 kg) a webbing tore at the top seam.</p>	
Compression	Test c After six hours compression by $P_k = 40 \text{ kN}$ (4080 kg) no visible damages occurred in the test piece.	
Test result	<i>A safe working load SWL = 1000 kg is allowable.</i>	

The safety factors required SF = 4:1 (compression load), SF = 2:1 (cyclic load) and SF = 5:1 (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 This certificate covers all FIBCs with heights of between 70 cm and 230 cm**).
Test diagrams see on page 2. Photos of the test pieces see on page 3.
*) Raw material: Pure virgin polypropylene (statement of the manufacturer)
**) "Directions for use referring to this certificate" see on page 4.
The test pieces are kept in our store for three years. This certificate expires on 31.8.2011.

Competent Engineer

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