



Test Certificate No. 9878.1/15-11

Date of test 27.11.2015
Date of expiry 27.11.2018
Number of pages 4 C / B

This Certificate is only valid when complete with all 4 pages.

Applicant Atlantis Products Pvt. Ltd.
1205-1210 GIDC Dholka, Ahmedabad, 382225 India

Test pieces *Flexible Intermediate Bulk Containers - SWL = 1000 kg, SF = 5:1*
Single trip FIBCs for non-dangerous goods acc. ISO 21898

Manufacturer's type designation APPL-03

Design

Dimensions * Sample a : (100 cm x 100 cm) x 100 cm (lowest size)¹⁾ **Volume** 1000 litres **Tare** 1920 g
Samples b + c: (100 cm x 100 cm) x 220 cm (highest size)¹⁾ **Volume** 2200 litres **Tare** 3320 g

Wall fabric Polypropylene 145 g/m² + 20 g/m² coating, white flat woven fabric layers, each with one blue and two orange coloured tapes²⁾

Base fabric Polypropylene 145 g/m² + 25 g/m² coating²⁾

Suspension Four white PP-webbings (40 mm wide, 35 g/m), sewn into the vertical seams in a length of 40 cm / 75 cm (lowest size) resp. 90 cm / 135 cm (highest size)³⁾, anchorage lengths for intermediate sizes see page 4

Details Four vertical seams, four horizontal seams at the bottom / overlock + chain stitching / fabric folded in all the seams / top with filling spout²⁾ / no inliner / edges formstabilized (baffle bag) / discharge spout d = 40 cm³⁾ made of PP- fabric 105 g/m² incl. coating, double seam

Kind of tests *Type Tests according ISO 21898*

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. 95 cm (lowest size) resp. 215 cm (highest size), load application with piston and pressure plate (d = 100 cm), rate of load application 70 kN/min.

Cyclic load and load to failure **Test a** After 30 cycles of load application to **P_c = 20 kN (2040 kg)** no visible damages occurred in the test piece. The load has then been increased until failure. On reaching a load of **P_b = 69,4 kN (7070 kg)** a webbing tore out of its attachment.

Test b After 30 cycles of load application to **P_c = 28 kN (2850 kg)** no visible damages occurred in the test piece. The load has then been increased until failure. On reaching a load of **P_b = 83,4 kN (8500 kg)** a webbing tore at the top seam.

Compression **Test c** After six hours compression by **P_k = 56 kN (5710 kg)** no visible damages occurred in the test piece.

Test result *A safe working load SWL = 1000 kg / SF = 5:1 is allowable.*

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 ¹⁾ This certificate is restricted to FIBCs produced by Atlantis Products Pvt. Ltd..

¹⁾ This certificate covers all FIBCs with heights of between 100 cm and 220 cm

Test diagrams see page 2. Photos of the 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 27.11.2018.

Competent Engineer

Ronald Clews



Head of Institute

Dr.-Ing. Kielbassa