

Certification 403113-19-0422



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Certification of one liner as Type L2 according IEC 61340-4-4: Edition 3.0: 2018

Summary

The liner (marked STAT-FCB) meets the requirements for a liner **Type L2 configuration 1** according IEC 61340-4-4: Edition 3.0: 2018.

The surface resistivity of both sides of the liner are between $1,0 \times 10^9 \Omega$ and $1,0 \times 10^{12} \Omega$.

The determination of the breakdown voltage is not necessary.

Date: September 2, 2019

Our reference: KU

This Document consists of
2 Pages.
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Detailed information on the sample, test parameters and test results are shown on the next pages.

The results in this report refer exclusively to the submitted samples. The sample name as well as additional data corresponds to the information provided by the customer. A further verification was not made. Copies of the entire report are permitted, whereas excerpts as well as its use for advertising purposes requires the express written approval of TÜV SÜD Schweiz AG.

Head of Testing

Christian Kubainsky

September 2, 2019

The results in this test report are based on measurements of samples given to the test laboratory. The total test report may be copied but not parts of it.

This classification certificate for a FIBC design shall be valid for a period of three years from the date of issue.



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Test Report 403113-19-0422

Test Object

No	Sample	Sample Description	Receiving Date
1	Liner	20 sheets of plastic film, ~80µm marked "front/back" colour: transparent	August 15, 2019

The sample name corresponds to the information provided by the requester. A further verification was not made.

Applied Testing Procedure

SOP-No: 201 (Measuring of the surface resistance)

Test set-up

The tests were carried out in the electrostatic lab of the TÜV SÜD Process Safety in Basel.

For the surface resistance the Megohmmeter was used with the circle electrode according IEC 61340-2-3. For the conversion to resistivity values the following equation are used:

$$\rho_s = R_x (d_1 + g) \cdot \pi/g$$

where

ρ_s is the surface resistivity (W);

R_x is the measured surface resistance (W);

d_1 is the diameter of the inner contact electrode (m);

g is the distance (gap) between the contact electrodes (m).

For the used electrode, the factor $(d_1 + g) \cdot \pi/g = 10.455$

The surface resistivity test was done inside a climatic chamber with a temperature of 23°C and 20% relative humidity. The measuring voltage was 100V.

End of experimental part: August 30, 2019.

Results

Table 1: Results of the surface resistance measuring

Climate	23°C / 60% rh		23°C / 20% rh	
	100		100	
Voltage [V]	100		100	
Sheet #	Front	Back	Front	Back
1 [Ω]	3.2E+09	4.1E+09	4.6E+10	3.6E+10
2 [Ω]	2.5E+09	2.6E+09	3.1E+10	3.6E+10
3 [Ω]	3.0E+09	4.4E+09	2.8E+10	3.3E+10
4 [Ω]	3.7E+09	3.4E+09	3.2E+10	2.6E+10
5 [Ω]	5.2E+09	4.4E+09	3.0E+10	3.0E+10
6 [Ω]	4.1E+09	5.6E+09	2.6E+10	2.7E+10
7 [Ω]	2.4E+09	5.8E+09	2.7E+10	3.0E+10
8 [Ω]	3.6E+09	6.6E+09	3.9E+10	3.9E+10
9 [Ω]	3.4E+09	4.7E+09	5.5E+10	5.3E+10
10 [Ω]	2.9E+09	3.9E+09	6.6E+10	3.1E+10
Mean	3.4E+09	4.6E+09	3.8E+10	3.4E+10
Surface resistivity	3.6E+10	4.8E+10	4.0E+11	3.6E+11