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Test Report No. 1.1 / 11560 / 1199.0.1-2016e

General

Issued : 26 October 2017

Order by : **BPA-GmbH**
Behringstrasse 12
71083 Herrenberg-Gültstein, GERMANY

Material : PVC membrane (transparent) with one sided PP nonwoven (white)
DualProof 1,2 (Werk 1)
(declaration by customer)

Order date : 17 February 2017

Samples delivered : 17 October 2016

| Tests | Standard | Issue | Results as Enclosure No. |
|--------------------------------------------------------|-------------|-------|--------------------------|
| 1. Determination of resistance to hydrostatic pressure | ASTM D 5385 | 2014 | A1 |

The results apply exclusively to the specimens submitted.

The date of testing is reported on the enclosed enclosure/-es.

Results are reported to the accuracy given in the standards. In statistical evaluation, the measured accuracy is taken.

This test report contains 2 pages and 1 enclosure/-es (enclosure/-es A1).
It may not be published in parts.

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Summary of results

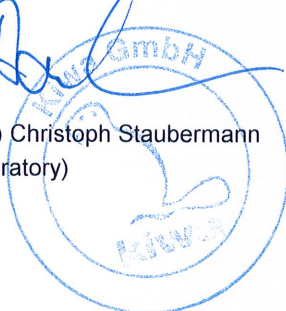
Date / Ref. : 26 October 2017 / mk

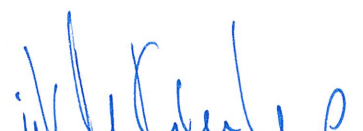
Order by : BPA-GmbH , Behringstrasse 12 , 71083 Herrenberg-Gültstein, GERMANY

Material : PVC membrane (transparent) with one sided PP nonwoven (white)
DualProof 1,2 (Werk 1)
(declaration by customer)

| Test | Standard | Unit | Mean x | Standard- deviation s | Coef. of variation v in % |
|-----------------------------------------------------|------------------|------|-----------|-----------------------------|---------------------------------|
| Determination of resistance to hydrostatic pressure | ASTM D 5385 2014 | m | 69 | - | - |


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(Head of test laboratory)




i.V. Matthias Käsekamp, B.-Eng.
(Deputy head of test laboratory)



Determination of resistance to hydrostatic pressure ASTM D 5385 (2014)

Test Report No. : 1.1/11560/1199.0.1-2016
Company : BPA GmbH
Material : DualProof 1,2 (Werk 1)
Operartor : dw /sh

Date: 26.04.2017

Test parameters

Thickness of membrane : 1,2 mm (declaration by customer)
 Test temperature : 5 °C
 Number of specimen : 3
 Width of kerf : 3,2 mm
 Hydrostatic pressure range : 0 to 690 kPa
 Pressure steps : 103 kPa
 Observation time for each step : 1 h

Results

| Sample No. | Passed hydrostatic pressure step [kPa] | Passed head of water [m] |
|--------------------|----------------------------------------|--------------------------|
| 1 | 690 | 69,0 |
| 2 | 690 | 69,0 |
| 3 | 690 | 69,0 |
| Mean value | 690 | 69,0 |
| Standard deviation | - | - |

No leakage could be detected with a load of 690 kPa for 1 h.
 This correspond to a head of water of 69 m.

Note : -