Test report | Blackout characteristics

1. Introduction

This test report presents the results of light transmission measurements conducted on various flexible materials by Filcoflex B.V.. These materials are used in a range of applications, including flexible connections, gaskets, inflatable seals, and cover jackets. These tests were performed on 9 May 2025.

The test setup was configured in accordance with the ISB profile, meaning that all surfaces were finished in black to minimize glare and reflections. The distance between the light source and the lux meter was maintained at 300 mm throughout the tests; likewise, the alignment between the light source and the lux meter sensor remained constant During the tests, illuminance was measured using a Voltcraft LX10 lux meter.

The light source used was an LED lamp that was continuously connected to AC power to ensure that battery charge levels did not affect the measurements. The reference tests confirm the consistency of the light source.

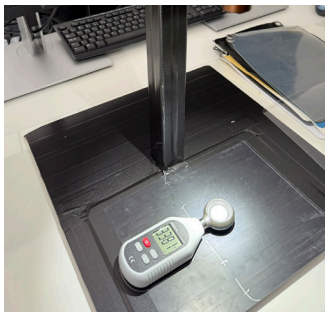
A POMC fixing plate with a central hole was used to press the flexible material against the detector lens of the lux meter. By placing it over the lens in this way, external light is prevented from influencing the test results.

2. Reference tests

The reference tests were conducted to determine the intensity (in lux) of the light source and to assess other potential influences on the measurements. The results show the output of the light source, as well as the contribution of ambient light and ceiling lighting in the room. Please note that the distance and alignment between the light source and the lux meter were identical to those used during the material tests. Figure 1 shows the setup as well as some of the test results.

Test number	Light source	Lux	Picture[1]
Test 1	Room ambience - no LED	148	1441
Test 2	Room ambience - no LED	120	1442
Test 3	Room ambience + LED	39570	1443
Test 4	Room ambience + LED	34130	1444
Test 5	Room ambience + LED	34140	14480
Test 6	Office ceiling light + LED	34100	14481

Because the materials have been tested under the same conditions as tests 3, 4 and 5, the calculated average (35947 lux) of these tests has been used to create the blackout rating[2] system.



Test setup



1442 - Test 2



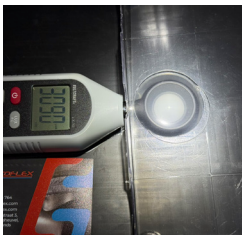
1444 - Test 4

Fig. 1 - Test setup and results

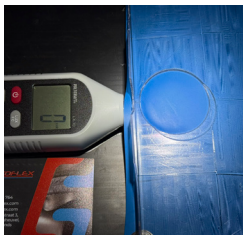
[1] These numbers refer to the pictures taken during the tests. These images are stored in the Filcoflex B.V. database and are available upon request.
[2] The blackout rating is explained on page 5 of this document

3. Poly Urethane

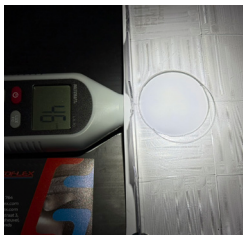
Material	Light source	Lux	Picture[1]	Blackout rating[2]
PU-UF03[3]	Room ambience + LED	34606	-	3,7%
PU-UF05[3]	Room ambience + LED	33743	-	6,1%
PU-UF07[3]	Room ambience + LED	32902	-	8,5%
PU-UF09[3]	Room ambience + LED	32081	-	10,8%
PU-UF1	Room ambience + LED	31660	1446	11,9%
PU-UF15[3]	Room ambience + LED	29626	-	17,6%
PU-UF20[3]	Room ambience + LED	27882	-	22,4%
PU-UF30[3]	Room ambience + LED	24551	-	31,7%
PU-UF3	Room ambience + LED	30900	1447	14%
PU-AS10 Clear	Room ambience + LED	30770	1448	14,4%
PU-AS10 Blue[4]	Room ambience + LED	30770	-	14,4%
PU-MAG08	Room ambience + LED	0	1461	100%
PU-W1	Room ambience + LED	46	1453	99,9%
PU-B05	Room ambience + LED	0	1617	100%
PU-TEX	Room ambience + LED	337	1452	99,1%



1447 - PU-UF3



1461 - PU MAG 08



1453 - PUW1



1617 - PUB05

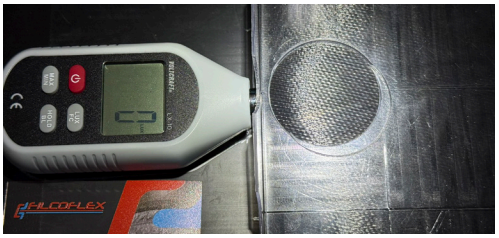
Fig. 2 - Poly Urethane test results

[3] As these materials have not yet been tested, and feature the same composition as PU-UF1 (differing only in thickness), these results are based on calculations derived from the PU-UF1 test data. Consequently, actual results may differ slightly. Once testing is complete, the results will be updated where necessary.

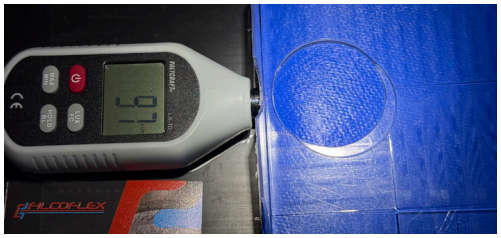
[4] This material is not yet tested, but as it is a blue colored version of the PU-AS10 Clear, this test result is shown being the wordt-case scenario for this material. Once testing is complete, the results will be updated where necessary.

4. PTFE

Material	Light source	Lux	Picture[1]	Blackout rating[2]
PTFE 2120 AS FDA	Room ambience + LED	0	1450	100%
PTFE 2130 Blue FDA	Room ambience + LED	97	1470	99,7%
PTFE 310	Room ambience + LED	23650	1473	34,2%
PTFE TEXcoat	Room ambience + LED	0	1469	100%
PTFE TEXcoat thin grey	Room ambience + LED	0	1471	100%



1450 - PTFE 2120 AS FDA

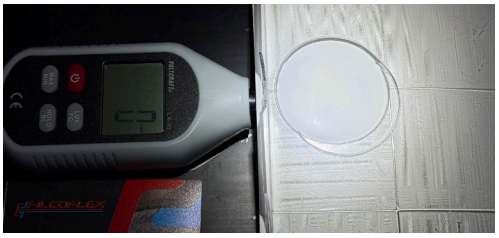


1470 - PTFE 2120 Blue FDA

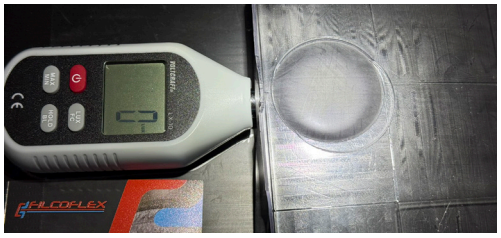
Fig. 3 - PTFE test results

5. Rubber

Material	Light source	Lux	Picture[1]	Blackout rating[2]
EPDM White 1mm	Room ambience + LED	24	1457	99,9%
EPDM White 2mm	Room ambience + LED	0	1458	100%
EPDM White 3mm	Room ambience + LED	0	1460	100%
EPDM AS 1mm	Room ambience + LED	0	1475	100%
EPDM AS 2mm	Room ambience + LED	0	1454	100%
EPDM AS 3mm	Room ambience + LED	0	1455	100%



1460 - EPDM White 3mm

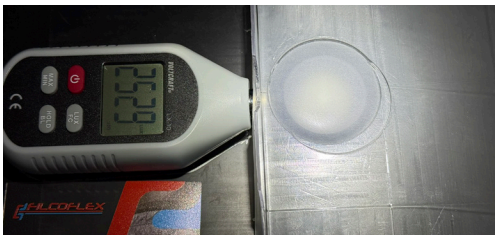


1455 - EPDM AS 3mm

Fig. 4 - Rubber test results

6. Silicone

Material	Light source	Lux	Picture[1]	Blackout rating[2]
Silicone Translucent 1mm	Room ambience + LED	25290	1465	29,6%
Silicone Translucent 2mm	Room ambience + LED	24470	1466	31,9%
Silicone Translucent 3mm	Room ambience + LED	24230	1467	32,6%
PKSR silicone knitted mesh	Room ambience + LED	17810	1468	50,5%

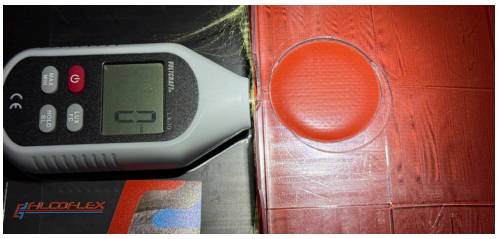


1465 - Silicone translucent 1mm

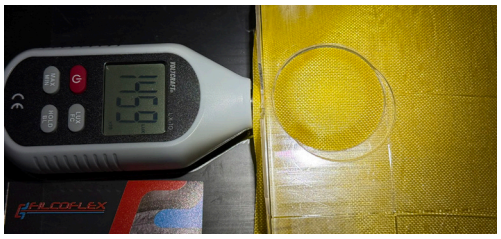
Fig. 5 - Silicone test results

7. Coated textiles

Material	Light source	Lux	Picture[1]	Blackout rating[2]
AWSR	Room ambience + LED	0	1462	100%
Indicado yellow	Room ambience + LED	14590	1451	59,4%



1462 - AWSR



1451 - Indicado yellow

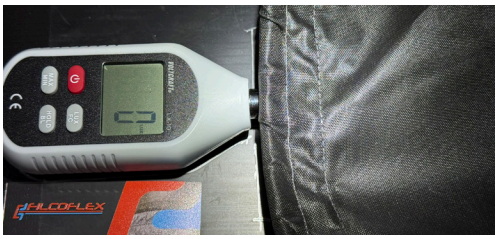
Fig. 6 - Coated textiles test results

8. Air permeable fabrics

Material	Light source	Lux	Picture[1]	Blackout rating[2]
PNV7506 AS FG	Room ambience + LED	5952	1476	83,4%

9. BFM fittings

Material	Light source	Lux	Picture[1]	Blackout rating[2]
BFM Polypropylene black	Room ambience + LED	0	1463	100%
BFM Kevlar yellow	Room ambience + LED	700	1464	98,1%



1463 - BFM Polypropylene black

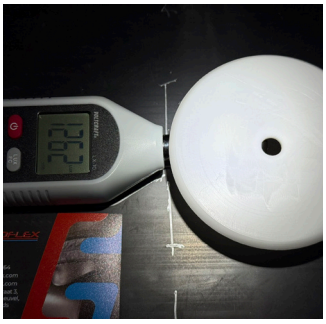


1464 - BFM Kevlar yellow

Fig. 7 - BFM fittings test results

10. Plastics

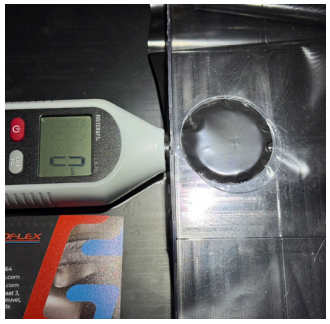
Material	Light source	Lux	Picture[1]	Blackout rating[2]
POM C White 5mm	Room ambience + LED	12620	1474	64,9%
POM C White 12mm	Room ambience + LED	6056	1482	83,2%
POM C Black 5mm	Room ambience + LED	0	1478	100%
PE Film Black packaging	Room ambience + LED	0	1477	100%



1474 - POM C White 5mm



1478 - POM C Black 5mm



1477 - PE film black packaging

Fig. 8 - Plastics test result

11. Others

Material	Light source	Lux	Picture[1]	Blackout rating[2]
Printer paper 80g/m	Room ambience + LED	6031	1479	83,2%

12. Blackout rating

The blackout rating, as shown in the test result tables, is based on the reference tests. As shown in the table below, the amount of lux measured by the lux meter is divided into a five-step rating scale. These ratings can also be found in some product- or material-specific documents.

Icon	Measured lux	Blocked light percentage (Blackout)
	0 lux	100%
	1 - 3594,7 lux	90% to < 100%
	3594,8 - 10784,1 lux	70% to < 90%
	10784,2 - 28757,6 lux	20% to < 70%
	28757,7 - 35947 lux	< 20%

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Date 02/11/2026



Disclaimer

These tests were performed on 9 May 2025, and the information herein is believed to be accurate as of the date of testing. If any of the above-mentioned materials change in composition, this information may no longer be valid.

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