

BioForBois Laboratory

Test report

n° 401/25/107Z/1 of 21/11/2025

Mycology

Insulation product:
“IQ3 CELLULOSE (DAV-SECO 27/08/2025)”

**Assessment of the resistance of insulation products to
mould growth**

Annex F of NF EN 15101-1+A1 standard

Laboratory test

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This document includes 8 test report pages with 3 annexes pages.

1. MANDATE

General information	
Test method	Annex F of NF EN 15101-1 (2013) + A1 (2019) "Method for determining mould fungi resistance"
Customer	PCIM S.A.
Laboratory in charge of the test	BioForBois Laboratory - FCBA

2. DESCRIPTION OF TEST ITEMS

Insulation test product: description ⁽¹⁾ and manufacturer			
Name of the test product ⁽¹⁾	IQ3 CELLULOSE (DAV-SECO 27/08/2025)		
Test product description ⁽¹⁾	Loose-fill cellulose wadding, grey		
Additional information ⁽¹⁾	FCBA reference	Manufacturing date and place	Manufacturing batch
	25/107Z/1.1	27/08/2025, Achêne BELGIUM	SECO-DAV 27/08/2025
	25/107Z/1.2	20/08/2025, Achêne BELGIUM	
	25/107Z/1.3	06/08/2025, Achêne BELGIUM	
Composition of the test product (% m/m) ⁽¹⁾	Newsprint paper ± 89%, boric acid < 4%, magnesium sulfate < 7%		
Active ingredients in the product (% m/m) ⁽¹⁾	Boric acid <4% (CAS n°10043-35-3) Magnesium sulfate <7% (CAS n°7487-88-9)		
Date of supply	08/09/2025		

(1) Information provided by the PCIM S.A. company

3. TESTING METHOD(S)

Test method information	
Test method	Annex F of EN 15101-1 (2013) + A1 (2019)
Control of the cultivability of spores	Growth of mould on filter papers in Petri dishes
Number of insulation test specimens	- 4 test specimens for the final visual assessment - 3 additional test specimens to control moisture content during the mould test - 6 wood specimens (comparative material: Scots pine sapwood)
Conditioning of the test specimens prior to exposure to moulds	At least 4 hours at 28°C (± 2°C) and 95% (± 4%) relative humidity
Species of fungi and strain references (moulds)	- <i>Trichoderma viride</i> (MNHN 88-3354) - <i>Penicillium funiculosum</i> (MNHN 56-1527) - <i>Chaetomium globosum</i> (BAM ATCC 6205) - <i>Paecilomyces variotii</i> (MNHN LCP 79-3210) - <i>Aspergillus niger</i> (MNHN 48-521)
Date of exposure to fungi	07/10/2025
Date of final examination	04/11/2025
Duration of test and climatic test conditions	4 weeks at 28°C (± 2°C) and 95% (± 4%) relative humidity
Type of final assessment	- Observation of mould growth according to the table below ("Intensity of fungal growth") - Mould resistance ranking in accordance with a "BA Class"
Validity of the test	The test is valid as: - Mould developed over the entire surface of the three filter papers after 3 days of incubation (Annex 3) - More than 50% of the surface of the comparative material (Scots pine sapwood) was covered with mould growth visible to the naked eye (Annex 2)
Variation from the test method	Minor variations with no effect on the test results: - The size of paper (controls) was 70 mm in diameter instead of 20 mm x 30 mm (the fungal load was adapted). - The malt agar medium was oat-free because mould sporulation does not require oats. - The fungal species were MNHN references species (Museum reference collection) instead of ATCC species. - Before the test, fungal species were grown between 14 and 28 days before the spore harvesting to optimize the spore production.

This table is added in order to allow the assessment of comparison material specimens:

Mould fungi ranking	Intensity of fungal growth
0	No mould growth visible on the test specimen surface with a microscope with reflected light (50x magnification)
1	No mould growth visible or hardly visible to the naked eye, but clearly visible with a microscope (50x magnification)
2	Mould growth visible to the naked eye: few spots of mould
3	Mould growth visible to the naked eye: intensive development of mould

The interpretation criteria of the results are described in the table below:

Class BA	Intensity of fungal growth in relation to comparative material
0	No mould growth visible on the test specimen surface with a microscope with reflected light (50x magnification)
1	No mould growth visible or hardly visible to the naked eye, but clearly visible with a microscope (50x magnification)
2	Mould clearly visible to the naked eye - considerably weaker than on the comparison material
3	Mould clearly visible to the naked eye - equal or more intensive than on the comparison material

4. TEST RESULTS

Visual assessment of mould growth in the insulation test specimens after 4 weeks exposure at 28°C and 95% relative humidity:

- The visual assessment is the mean value obtained from each test series.

Table: Summary of results

Insulation test product name (and FCBA reference)	Mean visual assessment of mould growth	Class BA
IQ3 CELLULOSE DAV-SECO 27/08/2025 (25/107Z/1)	0	0
Comparative material (Scots pine sapwood)	3	NA

NA: Not Applicable

Detailed results are shown in Annex 1.

5. DECLARATION OF COMPLIANCE

The test results (table above and table in Annex 1) showed that, at the end of the test, there was no mould growth visible with a microscope (ranking 0) on the insulation test product, whereas there was mould growth visible to the naked eye on the comparative material (ranking 3) (Annex 1 and Annex 2).

6. CONCLUSION

When exposed to mould fungi at the climatic condition (28°C ± 2°C and 95% ± 4% relative humidity), the “IQ3 CELLULOSE (DAV-SECO 27/08/2025)” insulation product was found resistant to mould growth.

Test report validation	
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Research Engineer in charge of the test BioForBois Laboratory	Technical manager - Mycology BioForBois Laboratory

Note: The results contained in this test report apply only to the sample of insulation product tested and described in this report.

ANNEX 1: Insulation test product n°25/107Z/1 ("IQ3 CELLULOSE (DAV-SECO 27/08/2025 – Detailed results

Visual assessment of the insulation test product 25/107Z/1 ("IQ3 CELLULOSE (DAV-SECO 27/08/2025)") at the end of the test:

Test specimen FCBA reference	Test specimen customer reference	Visual assessment of fungal growth (mould ranking)
25/107Z/1.1.1	DAV-SECO 27/08/2025 – 27/08/2025	0
25/107Z/1.2.1	DAV-SECO 27/08/2025 – 20/08/2025	0
25/107Z/1.3.1	DAV-SECO 27/08/2025 – 06/08/2025	0
25/107Z/1.1.2	DAV-SECO 27/08/2025 – 27/08/2025	0
Mean		0

Visual assessment of the comparative material (Scots pine sapwood) at the end of the test:

Test specimen reference	Visual assessment of fungal growth (mould ranking)
25/107Z/PS1	3
25/107Z/PS2	3
25/107Z/PS3	3
25/107Z/PS4	3
25/107Z/PS5	3
25/107Z/PS6	3
Mean	3

ANNEX 2: Pictures of the insulation test product and controls at the end of the test at 28°C and 95% relative humidity

Insulation test product "IQ3 CELLULOSE (DAV-SECO 27/08/2025)" (FCBA ref. n°25/107Z/1):

Macroscopic aspect of the insulation product	Microscopic aspect of the insulation product (50x magnification)
	

Comparative material (Scots pine sapwood):

Macroscopic aspect of the control	Microscopic aspect of the control (20x magnification)
	 Controls covered by mould growth (ranking 3)

ANNEX 3: Picture of the filter paper controls after 3 days at 28°C and 95% relative humidity



Controls covered by mould growth (ranking 3)